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# GARDENER's REMEMBRANCER

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BEST ADAPTED FOR

*THE CULTURE OF PLANTS,*

AND PRODUCTION OF

FRUITS, FLOWERS, AND ESCULENT VEGETABLES,

IN THE

NATURAL AND IN THE FORCING WAY;

THE

CAUSES AND SYMPTOMS

OF

DISEASE AND BARRENNESS IN TREES OF EVERY KIND;

WITH MEANS OF PREVENTION AND CURE.

TO WHICH IS PREFIXED

A VIEW OF MR. FORSYTH's TREATISE ON TREES.

BY JAMES McPHAIL,

TWENTY YEARS GARDENER TO THE EARL OF LIVERPOOL.

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1807.

*Published by the same Author,*

1.

A TREATISE

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2.

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## ERRATA.

PAGE

6, line 6, for *artificial*, read *forcing*
116, line 8, for *laving*, read *leaving*
133, line 21, dele *more*
157, line 2, after *in*, add *the*
188, line 27, for *applied*, read *planted*
218, line 14, for *metod*, read *method*
240, line 14, dele *with fruit*
263, line 20, for *weeds*, read *seeds*
275, bottom, for *mowed*, read *hoed*
370, line 7, for *pot*, read *pit*
373, line 17, for *picked*, read *pricked*
428, line 25, for *in*, read *for*
544, line 28, for *halmeas*, read *kalmeas*
551, line 20, for *warn*, read *warm*
563, line 16, for *frameats*, read *frames at*
576, line 22, dele *that*
582, line 16, after *from*, add *one*

# ADVERTISEMENT.

AUTHORS, particularly Mr. Forsyth and Mr. Speechly, who have lately written on the culture and management of trees, &c. pretending to exhibit superior new methods of their own invention, are lavish in condemning what they call "the common erroneous methods," but each have been careful not to censure, nor even to quote the parts of the works of Authors, who hold forth methods contrary to those of their own recommending. Such conduct is unjustifiable, because authors differ more widely in recommending, than professional men do in practising, and the methods of practical gardeners are not so easily, nor so generally known, as the sentiments exhibited by authors. These authors, it seems, adopt this mode of depreciation, with a view of exalting their own merit above all other gardeners; and

for fear, I suppose, of being publicly exposed, for taking to themselves undue merit, they individually avoid condemning the methods recommended by authors differing from themselves, while they censure severely the methods which they tell us are followed by practical gardeners. For instance, Mr. Speechly says, he is far from meaning to depreciate the labours of persons who have written; but that he does not hesitate to condemn what he stiles the "customary method" among gardeners, is evinced by his writings, which I shall have occasion to examine hereafter.

Persons cannot differ more widely in hypothetical ideas, or in practical recommendations, than Mr. Forsyth and Mr. Speechly; but although these authors have published alternately, they have not so much as mentioned the difference of opinions subsisting between themselves. Mr. F. recommends cutting off the decaying branches of trees close to the stem. Mr. S. recommends leaving them as "a peg or wooden pin." The former believes in the circulation of the sap, the latter does not; but

but though he boasts of having free access to the "noble library" of the Duke of Portland, and of the assistance of his "learned friend" Doctor Hunter, yet he affirms that vegetable mould is "devoid of earthly particles." Had he studied vegetation so far only, as to have tolerably understood the nature of the food of plants, or diligently searched the volumes of the Noble Duke, surely he would have received information, that, not only vegetable mould, but even water, which apparently is a more pure body, contains earthy particles.

Keeping these observations in view, I intend to publish, without reserve, my opinion of the erroneous sentiments exhibited by some modern writers on gardening, together with the ideas I have formed on that science in general, and the methods practised by myself for the production of fruits and vegetables of all sorts, brought to maturity in Britain, leaving without censure, though perhaps differing from my own, the methods of practical private gardeners, although in this respect, my knowledge is probably not less extensive

than that of the two authors already mentioned; and

After treating on the methods of culture best adapted for the production of some choice fruits and flowers in the natural and artificial way, I purpose to give monthly directions for the management of the kitchen, fruit, and flower garden.

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THE

THE

# GARDENER's REMEMBRANCER.

## *A View of Mr. Forsyth's Treatise on Trees and Compositions.*

HAD Mr. Forsyth's boasting of his own great merit, above every other Gardener, been attended with no worse consequences than the obtaining from the public a pecuniary reward for that, which, in the nature of things can never benefit mankind; he might have been permitted, at least by his brother gardeners, to enjoy his ideal acquirements of knowledge peaceably. But his depreciation of every method of pruning and training, except that which he calls his own; his attributing the cause of the diseases and decay of trees to carelessness and unskilful management, and his many positive assertions, "that wherever his composition shall be properly applied by proprietors of gardens, orchards or woods, it will be productive of all the advantage that can be derived from restoring as well as preserving vigour and fertility in

all kinds of fruit trees, and prevent decay, promote health, and make sound timber in every species of foreſt trees," is, instead of a composition, an imposition on the public, and the means of creating discord between gentlemen and their gardeners. Such ill effect, when a failure of crops of fruit is experienced, is only a consequence naturally resulting from the reading of Mr. F's book, if gentlemen are not habituated to the study of the progress of vegetable life, with the variations in climate and soil, which affect the health and fruitfulness of trees.

The natural efforts of vegetable life, to cover with bark the disbarked parts of trees, and which is distinguishable in a greater or less degree in different sorts of trees, and in various climates and soils, Mr. F. attributes to the virtue of his composition. This seems to be taking to himself the praise which ought to be ascribed to him who causes all things to ſubsist.

Boasting of his own pretended meritorious methods, and undervaluing those of all other gardeners, which he calls the common, Mr. F. says, "In all old gardens and orchards throughout the kingdom, the greater part of old trees hardly bear fruit ſufficient to pay the expence of gathering, but if his method of pruning, &c. were practised, the fruit would be much finer, and the owner would have five times the quantity." He therefore "hopes gentlemen and others will not

continue

continue blind to their own interest, but give his practice a fair trial, which, if properly executed, will not fail to turn out to their satisfaction;" for then, instead of having only "a few hard and kernelly fruit, they will have the pleasure of seeing fine healthy clean trees, loaded with large, beautiful and well flavoured fruit." "It has been," he ſays, "the general practice to train wall trees in the form of a fan, so that scarcely one quarter of the wall is covered with bearing wood." He then recommends horizontal training, and in caſe his language should not be strong enough to convince of the superiority of his pretended invention in this respect, "above the common," Mr. F. gives plates of both, figuring the apricot, peach, cherry, and plumb trees.

Now, if any person who has been acquainted with the methods practised the last thirty years, of pruning and training trees, will examine theſe plates, he cannot but be convinced of the ignorance or subtilty of the author. Still, however, if possible going a step farther, Mr. F. says, "the succeſs of his new method is demonstrated by the trees in Kensington Gardens, which, upon examination, have convinced all those that viewed them of the practicability of producing the finest, cleanest, and most prolific branches from stumps in a state of decay." Here are high sound-

sounding words, which, however, do not well accord with his language in page 54, where he says, " I am sorry that many who have seen the improved ſtate of the fruit trees in Kensington Gardens, still have their own managed according to the old method of pruning." But notwithstanding all that Mr. F. has advanced respecting his own inventions, it does not appear to me that he has found out, or published any methods distinct from those recommended and practised long before his time. For a proof of this, though other authors might be quoted, I refer only to Evelyn, on Forest Trees; Hitt, on Fruit Trees, and Langley's Pomona.

There certainly are among gardeners different ways of pruning and training fruit trees, and, perhaps it would be difficult to determine which is the best, when every part of the wall is overspread with bearing branches. That there are unskilful pruners and trainers I mean not to controvert. Indeed, the keeping wall trees in good order requires so much skill, attention, and labour, it is no wonder so many are in a state which admits of improvement. But it would have been more becoming of Mr. F. to have searched for, and pointed out the true causes of the failure of fruit at the " master's table," than, in order to exalt his own ingenuity, to have ſtigmatized gentlemen's gardeners who follow not his

his directions of losing "a few hours sleep," to rub into growing pears, "cow dung and wood ashes."

With regard to what Mr. F. says relative to preventing gardeners from spending their money in a public-house, most of them are not overburdened with it; the wages and clothing of a footman costing gentlemen in general, more money than the wages they allow to procure a good gardener. The industrious man, however, will attend well to his mafter's business without losing his sleep, or labouring "after his men have left work," unless it be for his own amusement, or to spare a day occasionally for improvement in viewing the ingenuity and success of others. It is a credit to Mr. F. to be reformed "from spending his money in a public-houfe, or in some trifling amusement," though on that account he ought not to be lifted up in pride above his fellows.

The nurserymen about London, according to Mr. F's. declaration, are much indebted to him for having taught them "to head down their trees after the season of drawing for sale is over." Whether Mr. F. justly takes to himself the merit of inventing this method, I pretend not to determine, but in the year 1775, when I came to London, it then was, and ever since has been, the constant practice in nursery gardens. Respecting the method fo strongly recommended by Mr. F. of heading fruit trees of all sorts and

sizes

sizes that are cankered, or do not produce good crops, though in some cases the practice may be requisite and commendable, yet the considerate man will not rashly adopt. It is allowed, even by Mr. F. that some trees of the same sort are better bearers than others; and I say, a tree may be partly barren of fruit for several years, and the fault not essentially in the tree, nor in the management of it, but in the seasons, which no man can alter. Supposing then, unkindly seasons to be the only cause of unfruitfulness, surely it would be more prudent, patiently to wait for favourable seasons, than to head down trees capable of producing good crops of fruit.

Trees become diseased and unfruitful, because they are not sufficiently supplied with wholefome nourishment from the earth in which their roots grow. Let a tree, for instance, in such a state be headed down, and treated in every respect according to Mr. F's. prescriptions, it will perhaps make strong shoots, which may retain their health for three or four years; but if the food of such tree be not increased, its branches will certainly soon return to a similar state of disease, as those that were taken off by heading. The case is clear to a person possessed of philosophy; for the plant being divested of that, for which the roots could not obtain sufficient wholesome nourishment, and the remaining part of it still supplied with the same quantity of nutritive food as the

the whole plant received before lopping, enables it to shoot vigorously, and to continue apparently healthy till its requirement of good nourishment is greater than its supply.*

In kindly seasons, trees, though infected by the canker, do produce plentiful crops of good fruit. Indeed, if they did not, there would be but little fruit in England, nor peaches, nectarines, or apricots in Kensington Gardens. Thefe are facts which cannot be juftly denied by any who have a knowledge of the diseases of trees; those, therefore, who have the superintendance of gardens and orchards, would do well to deal gently with their fruit trees, and not too hastily divest them of their bearing branches, in expectation that Mr. F's. plaster can work wonders on them.

It has long been acknowledged by practical men, that judicious pruning and cutting away decaying parts of trees, are attended with good consequences, for these are the means of permitting the sun and air more effectually to evaporate the morbid noxious juices, contracted either from over-abundant moisture, bad soils, or density of air. The spring and summer are

* Mr. F. in page 97, says, he put his Majesty to great expence in taking out the old mould from the borders against the walls, "but it had no good effect." How irreconcileable is this with page 6—102—253, where he advises fresh mould to be added "to the roots of the trees."

the

the best seasons in which to perform this work, because, then the juices rise copiously, and all the vegetative powers are in the greatest state of activity to perform the unalterable laws, which nature pursues in the formation and growth of vegetables.

Mr. F. is often at variance with himself. The canker in trees he maintains is only incidental, brought on by injudicious pruning and bad management, but never proceeds from the ground in which trees are planted. To try to convince his 'esteemed friend' of this hypothesis, he made Sir Francis Drake's gardener open the ground round an apple tree, much infected with the canker, and found, he says, its roots perfectly sound.* This is a weak proof indeed, and the only proof or argument brought forward to substantiate his prejudiced opinion of the origination of the canker in trees. Could Mr. F. have made it appear from facts, demonstrated by experience and sound reasoning, that the canker is never communicated to a tree by the medium of its roots, he would at least have paved the way to lead to a hope, that some external application might be invented to effect a cure or become a

* The roots of fruit trees run a greater length in the ground than many writers seem to be aware of; they may appear sound three or four feet distance round a large cankered tree, but if its roots were minutely traced to their utmost extent, they doubtless would be found diseased.

pre-

preventive. But instead of having recourse to philosophical disquisitions in support of his hypothetical chimera, he repeatedly affirms, "that the canker always proceeds from the branches and stem to the roots, and never from the roots to the tree." Supposing Mr. F's hypothesis to be a just one, in this respect, it would overthrow his own weak argument, for if the canker really proceed from the branches and stems to the roots of trees, the roots of his much infected tree would consequently not have been found perfectly clear of canker. And on the other hand, supposing it possible, for the roots of a cankered tree to continue found, it could not be proved, or even infered from thence, that fuch roots through which the tree receives its nourishment, did not draw up into the stem and branches unwholesome corroding juices, which the efforts of nature endeavouring to cast off by perspiration might cause the canker and other diseases in fruit trees.

If the canker really proceeded from the causes Mr. F. assigns, and if it had that effect on trees as he maintains, there would, I apprehend, have been few fruit trees alive in Kensington gardens, or in any other place, for him to try experiments on. "Whenever an incision is made even for budding or grafting, from that moment (Mr. F. says) the canker begins. This disease, if no remedy be applied, will totally kill the tree." According

cording therefore, to Mr. F's doctrine, a sound fruit tree cannot be procured from any nurseryman whatever, excepting from those who use his plaster; and I am assured, many of the nurserymen round London have not yet used it, and some of them who have tried it are not convinced of its efficacy above the common clay used in grafting.

Comparing these observations with page 246, another proof of the inconsistent ideas of Mr. F. may be seen. There he says, "it is common when young trees do not thrive, either to blame the nurseryman for sending bad diseased trees, or to attribute their unthriving state to the nature of the soil, whereas the fact is, that this arises from the inattention or mismanagement of the person who plants and superintends them." Can language be uttered which would have a greater tendency than this, to make gentlemen believe, that when their trees are unfruitful, or not in a vigorous, healthy state, the fault is to be entirely attributed to the inattention or unskilfulness of their gardeners, when perhaps the fault is in climate, or soil, or because the gardener has not labourers or materials sufficient to assist him in paying that attention to his business, which is required to make his laboriousness successful.

That vegetables as well as animals are subjected to diseases and to death, no reasonable person will deny. And there is in some respects an ana-

logy

logy between plants and animals, though the life in each is continued in motion apparently by different causes. An animal has the faculties of life and motion in itself; but the motion of the life of a vegetable depends on the effeet of other bodies, such as earth, heat, water, and air. The fruitfulness, therefore, and health of a tree, depend on the different degrees of power communicated to it by these bodies, and if these do not harmonize, or if their force be either too great or too little in communicating to the tree the powers of motion, the sap will be prevented from performing its natural effects, consequently, disease, barrenness, and death, will ensue. The truth of these observations is clearly demonstrated by the conſtant practice and experience of every practical intelligent gardener, otherwise, they would not take such methods, and use the art they do to place plants in the various soils and climates which are thought best adapted to their respective natures.

Having, myself, long studied the causes of the motion of vegetable life in the production of plants, and the various effects produced in trees, by being planted and transplanted into different soils, and growing in different climates natural or artificial, and by attentively observing the consequences resulting from wounding, heading down, lopping, pruning, and cutting out the cankered parts of trees, I am fully persuaded

 that

that none of these manual operations are the causes of the canker, or of other diseases, but that diseases do arise from the sources I have already hinted; namely, the nature of soils, and the influence of the temperature of various climates co-operating with the morbid habit of the plant itself. Indeed, pruning and heading down of trees, instead of breeding diseases, have a contrary effect, which is evinced not only by fruit trees in gardens, but by pollards in hedges, and trees in woods, whose branches being cut off at certain periods, is the means of making them live longer than those trees left in a natural state.

I have taken from poor gravelly soil fruit trees, whose branches and roots were in a very cankered state, and planted them in good soil, in a wholesome climate, the natural one being assisted by art; this process has been the means of healing their diseases, and of enabling them to produce good crops of well flavoured fruit, which, doubtless, they will continue to do for many years, provided the supply of nutritious food be equal to the impairment sustained in consequence of the increase of the size of the tree, and the quantity of fruit produced; for the same causes operating on the same materials will bring forth the same effect. These methods of planting fruit trees in soils adapted to their respective natures, and assisting the climate where

where the natural one is insufficient, I would recommend, as being far preferable to all the physical nostrums invented, or that ever can be invented by Mr. F. or any other man.

Cutting out the cankered parts of trees, as Doctor Hales observed, many years ago, is the means of preventing farther decay; but, that a plaster composed of any ingredient whatever, should become, as Mr. F. says, "a stimulant," or provocative to work wonders in the vegetable world, is not to be credited but by those who believe that the sap in vegetables circulates as the blood does in animals. Mr. F. speaks often of "the obstruction of the circulation of the juices" of trees, and, as he asserts, that his composition heals their wounds, causing the new and old wood to incorporate in a similar way as the new and old flesh does in the healing of a wound in an animal; of course, he believes in the circulation of the sap in trees *. The opinion of Mr. F. relative to this essential principle is, doubtless, a mis-conception, which has led him to maintain, and try to support that which he never can prove.

The sap in vegetables does not circulate as the blood in animals, therefore the wounds, cuts, or disbarked parts of trees, cannot be healed by

* Page 96. "The sap always finds its way first to the extremities of the shoots, and the spurs only receive it in a small proportion as it returns from the ends of the branches."

plaster or medicine, but only by the proper influence of those bodies which set vegetable life in motion. Vegetable sap, when not dormant, flows regularly, though slower or faster, according as it is more or less acted upon or affected by the virtual influence of the bodies, already mentioned, from the roots to the extremities of the branches, and returns not again to the roots, but passes off by perspiration. The solution of this proposed principle is easy. A tree, by means of its roots, draws all its food from a mixture of earth, moisture, and air. Deprive the earth, in which the roots of the tree extend, of moisture, and the tree will wither, although its stem branches and leaves have the opportunity to embibe as much moisture as its nature prompts it to do. This is clearly proved by the scorched state we see plants in gravelly soils in hot dry weather.

Mr. F. affirms, that after the bark of a tree is destroyed, the application of his composition will soon cause it to acquire "a fresh one, with improved health and vegetation." If any composition or medical external application, whatever, could effect such a change in the improvement of the vegetable economy, it would be reversing the invariable law which nature pursues in the formation, growth, and extension of all the parts of a tree. It is evident to every acute observer of the nature of the growth of trees, that

that they live and grow by the ascent of the sap in or between the bark and the wood; for, between the inner bark and the wood there is a whitish rind or substance, which is converted imperceptibly into the woody part of the tree; and, if a circle be drawn round a tree, by incision, and the bark totally taken off, the tree will, unavoidably, die; but if a part, only, of the bark in that circle be left on sound, or even if the half of the stem, together with the pith, be cut completely away, between the roots and that part of the stem where the branches begin to spread, the tree will continue to live and grow, and if it be a young healthy plant, the bark at each side, and with it new wood, will, as it were, come rolling annually over that part of the tree bare of bark, till it meet, and so unite, that the ſtem of the tree shall become round again.

Thus the wounded or disbarked parts of a tree are covered over gradually with annual layers of new bark and new wood united, but bark alone can never be formed or generated immediately on the parts of trees totally diveſted of bark, and of the living rudiments of bark and wood. To carry proper nourishment from the roots to the branches of trees, there must, of necessity, be a continuation of living bark and living wood closely united.

Mr. F. says, the "application of his compo-

sition fills up with new wood large hollow trees, even those, out of whom cart loads of rotten wood are taken, and that a great many trees which had wounds ten feet long and two feet broad, are already entirely filled up by the efficacy of his admirable plaster."

To fill up, by any means whatever, large hollow trees with new wood, is impossible, though nature will, indeed, make efforts to do it, for where there is an opening in the fide of the trunk new bark with new wood will keep moving on upon the bare wood to the hollow inside, and if the trunk or stem of a lively hollow tree be divided, by judicious cutting, into several roundish stems, leaving a sound piece of bark and wood to each, new bark with new wood proceeding from the old living bark and living wood, will gradually cover every one of these stems.

By the powerful imperceptible force of vegetation, with the assistance of careful pruning, all these things are effected without the least help of plaster, covering, or besmearing, of any kind.

But Mr. F. says, he can with his composition restore trees in a decaying state, "if there be only an inch or two of bark to carry on the circulation of the vegetable economy." In this he is no less mistaken than in his hypothetical assertions, respecting the circulation of the sap, for I have already proved, that there must be living wood united to living bark to convey the nutritive

tritive sap through the roots, to the stem and branches of trees. Even if bark and wood be dis-united, it is impossible to cause them to unite again, if either of them be deprived of the rudiments of bark and wood, both alive. This will appear evident, if the nature and effects resulting from the budding of trees be duly considered. In performing that operation, the bark of the stock is raised, and a leaf bud, with a piece of bark to it, is taken from the shoot of another plant and applied closely to the wood of the stock underneath the raised bark. Now in the performance of this operation, a part of the whitish rind or substance, between the bark and wood of the tree, which is converted annually into layers of wood, adheres to the disbarked part of the stock and piece of bark which contains the bud. This lively rudimental principle enables the bud and stock to unite. The want or destruction, by any means, of this vital substance in stock or bud, is the reason, in budding of trees, why sometimes, the bud and stock do not unite; and, as I before hinted, the want of this vital substance in that part of the wood of a tree which has been cut in pruning or lopping, is the reason that new bark or wood can never be united to it, though, in process of time, bark and wood together grow on, or roll over it.

Wood, when cut asunder, will not unite again: but by means of the union of barks, and the co-

verings of annual layers of wood proceeding from the barks; the parts of wood once separated, are pressed together with such powerful force, that it becomes not an easy matter to distinguish where the separation took place. The truth of these observations is clearly evinced by the effects arising from the operation of grafting, and are farther convincing refutations of Mr. F's. assertions, that the wounds of a tree can be healed by plaster.

Again. Mr. F. maintains, that his composition "prevents the sun and air from exhaling the sap of fruit trees, so that trees very much loaded with fruit are not hurt, while trees treated in the common way, are often killed by bearing great crops." Was there ever such an absurdity maintained by a practical gardener? Being, myself, many years in the practice of trying to bring to perfection fruits from plants and trees, natives of the four quarters of the world, I do maintain, that if it were possible to prevent by external dressings of any kind, or by plaster composed of any sort of ingredients, the natural perspiration, bleeding, or oozing, excited in trees by the efficacy of the sun and air, instead of benefiting them, it would be the certain means of their destruction. To bring fruits to perfection, instead of trying to check the natural exhalation of the juices, they are to be assisted and promoted by methods, not contrary, but

but agreeable to the nature of the plant from which fruit is expected.

Trees have no other way of evacuating their superabundant and excrementitious parts but by bleeding and evaporation, consequently, if these natural evacuations are stopped, or retarded by means contrary to its natural functions, the plant will be destroyed or hurt.

Mr. F. says, "as the vine is very porous, it soon imbibes the wet and moisture, which brings it quickly to decay," unless plastered with his composition. If this be true, what is the reason that there are vine plants in England now alive, which are, upwards of an hundred years of age, "flourishing in all the vigour of youth," and, to which no plaster has yet been applied? Again, he asserts his powder will stop the bleeding of vines: whereas, by repeated experiments, and from the nature of plants which I have studied, I am persuaded, nothing short of the effects of vegetable life, or the destruction of the plant, can stop the effusion of the sap when the plant is inclinable to emit it.

Vines, in climates where their fruit ripen, live to a great age, and are not easily killed by pruning.

The bleeding in them stops gradually, as they begin to put forth shoots.

Practical gardeners in general, deem the wounded or cut parts of a plant healed, when the

the artery canals cease to emit the sap, or when the cut parts of the wood become dry. Experience juſtifies us in thus concluding, for these effects are sure indications that the plant is in a growing state.

From the observations I have already made, I believe no unprejudiced person will hesitate to conclude, that Mr. F's. composition, the virtues of which he so highly extols, is of no more use in healing the diseases, or promoting the vegetation of trees, than common clay or white wash; and that those methods which he calls new and of his own inventing, have even been less or more practised before his time. Here then for the present, might my animadversions have ended, had not Mr. F. referred the state of the trees in Kensington Gardens, to those who probably will never have an opportunity of seeing them, and to others not competent judges. Hearing that Mr. F. had invented a plaster to cure the diseases of trees, and being desirous of learning, I went in 1790, of my own accord to Kensington Gardens, where I viewed trees on which much labour had been bestowed in cutting and plastering, but it did not appear to me, that more progress had been made in their growth, than would have taken place had no plaster been applied. I saw some trees alive which Mr. F. acknowledged he could not "renovate." He told me government had proposed to give him a reward to induce him

him to divulge his secret, but thought he could have made more money of it by subscription. I expressed myself to be of a different opinion.

After a reward out of the public purse had been obtained by Mr. F. for telling people how to make a plaster of cow dung, wood ashes, and lime rubbish, I had to give for this receipt two shillings, which is more than I have yet gained by it.

In the year 1791, the Earl of Liverpool told me, he desired I would follow Mr. F's. directions in the management of his fruit trees, and that Mr. F. would come to Addiscombe Place to instruct me; accordingly he came in a post-chaise, like a gentleman; and without much hesitation, I told him I understood he was deputed to teach me how to cure the diseases in fruit trees, and as his Lordship's trees were much infected and hurt by the mildew, I would be obliged to him to tell me a method, either to cure or prevent that disease. Mr. F. replied, that his composition was for healing the wounds and curing the canker, but not the mildew. Not giving credit to the enthusiastical assertions of Mr. F. relative to the efficacy of his composition, I did not use it. Had I been the servant of some of his "much esteemed friends," probably I would have got myself dismissed for my incredulity.

The rumour of the wonderful virtues of the "com-

"composition" had nearly become dormant till near the year 1802, when the treatise in question appeared. That year, in the month of May, I again journeyed to Kensington Gardens to view the fruit trees said to be renovated by the efficacy of the composition now recommended by Mr. F. to be used, not as plaster, but "reduced to the consistence of paint," with the additional ingredients "of urine and soap-suds." I found the trees in a state nothing superior to those I saw in gentlemen's gardens round London. The stems of many of them were painted with the plaster. I did not observe a peach, nectarine, or apricot tree perfectly clear of the canker or gum. They were shown to me by the foreman, who directed my attention to some trees which he said the bark had been off, and that the composition had brought it on again. I told him he had better tell such unaccountable wonders to those not so well acquainted as me with the nature of trees.

At this time Mr. F. invited me to call and see his trees and fruit in the autumn, which I did, when many of his trees were in a healthy state and good fruit on them, but not better than I saw in many gardens round the metropolis, where the composition has not been used. He had but a scanty crop of pears, and few of his grapes ripened. He also directed my attention to trees which he said the bark had been off, and

and the composition had caused it to grow on again. I told him plainly, that it evidently appeared to me he was mistaken. The outer bark had, indeed, been peeled or cut off, but the inner bark containing the whitish rind or substance had not been damaged, so as to prevent it from being converted into the woody part of the tree, or to form again an outside rough bark. Such a process is very discernible in the grape vine plant; for if it be divested of all the outside bark, which being tough, is easily peeled off, in that state, an unexperienced person would think the bark totally gone, and the plant destroyed; but the inner whitish bark or rind containing the rudiments of bark and wood being left entire, the plant receives no damage.

The walling in Kensington Garden is extensive, and some of it sixteen feet high, which in sunshine reflects a great heat. The soil is yellowish, of a loamy nature, well adapted for the growth of most sorts of fruit trees. There is no regular garden of consequence, but long slips or borders, nor are there hot or forcing houses of any kind, only some old shabby melon and cucumber frames.

Mr. F. told me that peach and nectarine trees in Kensington gardens, are older than himself, and he appears to be a man not less than sixty years of age. Doctor Anderson says, fruit trees there " that are known to be about eighty years of

of age, are at this moment flourishing in all the vigour of youth." These are certainly undeniable proofs, "drawn from" Mr. F. and his friend, that trees did formerly prosper without the aid of "the composition," for it is not twenty years since Mr. F. "took them in hand." But to prevent disease and death "wherever the knife has been used," the composition, according to Mr. F's. directions, must be applied to the cut and wounded parts of trees, with as great haste and circumspection, as the agents of the Humane Society would apply to a drowned person the means of restoring suspended animation.

The persons whose testimonies are adduced to substantiate the utility of Mr. F's. composition, are certainly respectable, but they are all noblemen and gentlemen in the highest ranks of society, and therefore cannot be supposed sufficiently conversant with the consequences naturally arising from cutting, pruning, or wounding of trees, so as to be able minutely to distinguish the effects of vegetative growth, from that which Mr. F. artfully ascribes to the efficacy of his plaster.

Had those deputed by the House of Commons, carefully examined trees exposed to the depredations of cattle and other accidents in parks, and by road sides, before they made their report, probably they would have hesitated in drawing

drawing up such a favourable account of the utility of the composition.

The congratulatory letter by Mr. Guthrie from St. Petersburgh, contains not the least proof of the efficacy of the "unguent" plaster; and if it be considered, that the writer of this letter holds the opinion of the "circulation of the vegetable juices" in trees, and that it came from a society which could have no other criterions to form a judgment on, but the report of the gentlemen deputed by the House of Commons, and Mr. F's. own high encomiums, it can be no wonder that such a letter was transmitted.

The letter of John Wedgewood, Esq. proves only that cankered neglected trees, being transplanted from a bad, into a good climate and soil, with proper pruning, effectually cures the canker and some other diseases.

Healing "a craze in the side of an oak" mentioned by Thomas Davis, Esq. could only be the effect of the power of vegetative life, frequently seen in large oaks, beeches, &c. This gentleman says Mr. F. "may at any time refer to him for proofs if he want them." Before intelligent practical men can be persuaded, that the virtue of his composition is able "to restore a decayed tree, at the verge of destruction, to as high a degree of health and vigour, as ever any tree of the same sort has been known to possess," Mr. F. must produce another guinea and a half treatise,

tise, and have all the proofs Thomas Davis, Esq. can bring forward, together with the farther advocacy of his "much esteemed friend" and eloquent orator Doctor Anderson.

To try to substantiate the merit of Mr. F. as being the inventor of new methods, relative to the management of trees, or to certify to the efficacious qualities of his composition, neither the attestations of chymists or of practical gardeners are adduced. Stronger circumstantial evidence than this, of the fallacy of Mr. F's. assertions respecting the efficacy of his composition, and priority of inventions in pruning and training of fruit trees, cannot be brought forward—for observe, he says, "a number of instances of the success attending my method of pruning and training might be adduced," though only three practical men are by him referred to, who, he says, have become successful on account of having adopted his methods. These are Mr. Aberdeen, gardener at Richings, near Windsor; Mr. Suart, gardener, at Woodland-House, Blackheath; and Mr. Williams, gardener, at Comb-bank, Kent. Now the want of the testimonials of these three respectable practical gardeners, clearly prove, that they are not able from experience, to validate the utility which Mr. F. ascribes to his composition, nor to attest that the methods of pruning and training recommended by him, may equitably

equitably be attributed to his originality of invention. To be sure, Mr. F. says, Mr. Stuart candidly confessed to him and John Wedgewood, Esq. that the cause of his great success in the production of fruits is in consequence of going to Kensington Gardens and afterwards adopting Mr. F's. method of pruning and training. If Mr. Stuart be not a dunce, why does he not speak for himself? Whether he is one of them who, Mr. F. says, were sent to him for instructions I do not know, but I have frequently been in the garden which Mr. Stuart superintends, where I have seen good crops of grapes, but the vines were not trained in the form which Mr. F. says will not fail to secure plentiful crops of fine fruit.

The cause of producing large crops of fruit in the gardens of John Julius Angerstien, Esq. or in any other place whatever, arises chiefly from the nature of climate and soil, and not from any superior or uncommon methods of pruning and training adopted by Mr. Stuart, or invented by Mr. Forsyth, Mr. Speechly, or any other emulous authors now existing. In the garden just mentioned, I saw, last year, a vine tree which covered a part of a South wall about 90 feet long, 12 feet high. In the garden, a short distance from this vine, the ground for building on lay open about four feet deep; the upper part appeared common loamy soil, under which was a layer of earth more gravelly, and beneath it

soil of a soft crumbly nature, (resembling fuller's earth,) in which, no doubt, the roots of this vine grow vigorously.

## On the CULTURE of the PINE APPLE.

Among all the fruits of the production of the earth the pine apple is reckoned the most delicious. It is pyramidal in shape, somewhat resembling the cones of the pine tree, whence it is supposed to have taken its name. It is produced from an herbaceous plant whose leaves appear a little like those of the aloe. There are many varieties of this fruit. Those most worthy of cultivation are distinguished by the names of the Queen, the Sugar Loaf, the Black Antigue, the Ripely, the Black Jamaica, and the Montserrat.

The pine apple is a native of Africa, and of South America, and if cultivated will come to perfection in what is called the three first climates, or within 20 degrees of latitude on either side of the equinoctial line, where, on a medium, the heat of the air all the year, in the shade, is about 80 degrees of Fahrenheit's thermometer. Under the equator and within 5 degrees of latitude to the north or to the south of it, the length of the day and night is nearly equal, the sun being

being, in this climate, about twelve hours daily above the horizon, consequently, there is less variation here, in the uniformity of the heat, than in any other climate, for the thermometer, in the shade, is constantly not lower than 70 in the morning, nor higher in any part of the day, or in any season of the year, than 90. In this climate of the world the rains fall plentifully, and the pine apple is produced in the greatest perfection.

At a greater distance from the equator, and even in parts of the world without the tropics, the heat, sometimes, is much more intense; the thermometer rising to upwards of 100. In these hot regions, the heat at the surface of the earth in hot days, is as high as 140, and the common springs and the internal parts of the earth, on a medium all the year, about 80. To the north or to the south of the 50th degree of latitude, the medium heat of the air from that to latitude 60, doth not exceed 50 degrees of the thermometer. It therefore requires ingenuity, expence, and much attention to bring the pine apple to perfection in a climate where in the course of one year there is a deficiency of natural heat for its culture, of not less than ten thousand degrees of Fahrenheit's thermometer.

The general heat and moisture of the climate in which the pine apple grows spontaneously, being ascertained, give an idea of what is requi-

site to bring it to maturity in countries where the natural heat is not sufficient.

In England, the pine apple has been cultivated more than one hundred years, being mostly planted in pots of earth plunged in tanner's bark, leaves of trees, or well prepared dung, in houses whose roof to the south is covered with glass frames, and in cold weather the air of the house is warmed by fires made on the north side. And although some houses are better adapted for the culture of this fruit than others, I have not seen any which might not answer the purpose if their flues were properly constructed and kept in repair. If tan is used, the flues had best not be nearer to any part of the wall of the pit than twenty inches or two feet. The fire places and flues should be kept in good repair at all times, and cleared of soot at least once in two years.

The pit for the tan in the hot house need not be deeper than three feet six inches, and to admit large fruiting pine plants, its surface will require to be five or six feet from the glass. When a pit is to be filled wholly with new tan, it would be best to let the tan lay a considerable time, particularly if late in the autumn, or in winter, till its noxious qualities are somewhat evaporated by fermentation.

One hundred degrees or about milk warm is heat enough for the roots of the pine plant to grow in. The depth, whether of tan leaves or dung

dung, put into the pit, ought to be therefore proportioned according to the goodness or badness of these materials. If the air in the house be sufficiently warmed, the roots will grow in a heat of 80 degrees, so that it is better to have the pots, for a time, in such a warmth than in a heat of upwards of 100 degrees. But it should be understood, that the heat of the tan bed, particularly from the surface, to about one foot downward, will increase and decrease in uniformity, with the variations of the heat of the air in the hot house; and that I mean, that the heat of the tan at the bottom of the pots when the roots are extended there, had best not be much warmer than blood heat, especially in the winter months, when, if the roots at the bottoms of the pots be destroyed, there is not a kindly warmth in the air of the house to cause new roots to spring from the stems of the plants to sustain them sufficiently.

Though the pine apple plant is of such a nature that it will live longer than six months without earth or water, yet to bring its fruit to good perfection a plentiful supply of both these elements is required. It will flourish and grow well in any rich moderately light earth taken from a quarter of the kitchen garden, or in fresh loamy soil, not of a binding quality, from a common, sufficiently mixed with very rotten dung. If a small portion of soot be mixed among

among the earth it will prevent worms from destroying the roots and promote vegetation.

Succession pine plants do well in pits with glass frames, linings of warm dung being made against the outside of the wall on the north side in cold weather. The north wall of a pit for this purpose had best be only about three or four feet above ground; and if about two feet high of this part of the wall just above ground is built in the form of the wall of the cucumber bed which I invented, the air in the pit would require less strength of dung-heat to warm it than when the wall is built solid. The linings of dung applied to the outside wall, need not in their foundation, be lower than the surface of the tan in the inside, in which the pots of plants are plunged; and, as during the winter the heat of the air in the pit, exclusive of the influence of sun shine, is not required to be higher, on a medium, than from 50 to 65 degrees, large linings are not wanted. One against the north-side wall kept up generally to the height of the brick work, will be sufficient, for in very cold weather, a covering of hay, straw, or fern, may be laid on the glass frames in the night time. The cucumber-bed of my inventing, answers exceedingly well for small succession plants, and a pit built on the same construction, but of larger dimensions, without cross flues, is suitable for the growth of plants of any size, for by gentle

gentle linings of dung only, the air in it, can, by due attention, be kept to a degree of heat sufficient to grow and ripen the pine apple, as well as it is possible to do by the assistance of fire heat.

It appears, from what I have already written, that to bring the pine apple to the greatest perfection, the plant requires a natural annual medium temperature of heat, to its roots and to its leaves, of not less than 80 degrees of Fahrenheit's thermometer, in the shade *. Now let it be observed, that to bring the fruit of this plant to perfeetion in the British climate, artifical heat is applied to the roots and also to the leaves, or that part of the plant which springs out of the ground, I am therefore of opinion, that if it were possible to keep the earth, in which the roots grow, constantly to a warmth of 90, and the air of the house surrounding the plant to 75

* In the Island called Sumatra, which is immediately under the equator, where the night and day is annually of equal lengths, the medium heat, in the shade, is upwards of 80 degrees. "Here pine apples grow in great plenty, without culture, except sticking the plants in the ground. Some think them inferior to thofe produced in Europe. but probably because their price is no more than two or three pence. With the same attention, they, doubtless, would be superior, and there variety is great." *Marsden's History of Sumatra.* "The Malacca pine apple is accounted the best in the world, for in other places, if they are eaten to excess, they are apt to give surfeits, but thofe of Malacca never offend the stomach." *Harres's Voyage,* p. 294, Malacca lies in lat. 2, 12 north. long. 101 east.

degrees;

degrees; the thermometer hanging excluded from the rays of the sun, with other proper requisites, such as air, and water of a suitable temperature, fine fruit would be produced in latitudes where the natural heat of the air is not sufficient.

Having, by reading of books, imbibed the ideas herein held forth, relative to the nature and culture of the pine apple, and in consequence of the many years experience I have had in the practice, of its cultivation, I will now give a general description of the methods I pursue in the management of it, leaving a more particular detail of its culture, for my monthly directions.

The fruit being partly over, and a pit prepared for the crowns and suckers, not struck root; toward the end of August, or about the beginning of September, I plant them in rich earth, in pots suitable to the size of the plants. The pots are then plunged to the rim in the tan bed, in which is a heat about the temperature before described. The lights are shut close down, and as strong a degree of heat kept in the air of the pit as the influence of the sun doth raise. If the sun shine bright, without being interrupted by clouds, the plants are shaded from the fierceness of his rays for a short time, about noon, with thin mats. In this state the plants are suffered to remain till they are well rooted, when, in warm days a little air is admitted and gentle waterings given them in

in greater or less quantities according as they appear to stand in need.

About the end of October or beginning of November, if the state of the bed require it, fresh tan is added, and if the plants by growth have become crouded, some of them are removed into another pit, in which situation they are continued till February or March, when the heat of the tan bed is of course recruited by an additional supply of fresh bark, and the plants set in it at proper distances one from the other. Here they rest till the end of May or beginning of June, at which period they are shifted into larger sized pots with the balls of mould about their roots entire, and if at this time the tan bed be properly mixed with new bark, it retains a sufficient warmth till August or September, when the plants with their roots unhurt are put into pots of a large enough size, in which they remain till the fruit is ripened; and if at this last shifting of the plants, the bed be well made of fit materials, it retains heat so long that probably the plants require not to be moved again before February or March, when the bed gets another augmentation of fresh bark, which in general is the last addition required for bringing the fruit to perfection.

Having thus briefly mentioned the method I

generally follow with plants capable of producing fruit at the age of two years, I would just observe, that when plants require three years growth to bring good sized fruit, which late crowns and suckers, together with some of the larger sorts, such as the black Antigua and Jamaica do, in the spring or beginning of summer of the second year after planting, I shake the earth from them, and divest them of part of their roots, leaving those roots only that are young and growing ones, and plant them in good earth in clean pots, managing them afterwards in the same manner, till they begin to grow, as I do unrooted crowns and suckers.

Suckers and crowns taken from the parent plants after the month of October, I generally plant not before the succeeding month of March, when they make roots freely, which they would not do in the winter months. From the time these are taken off the parent plants, till they are planted, I have them hung up in the hot house, not too near the flues.

The pits in which I grow succession pine apple plants are very close, the crannies between the lappings of the glass being filled with putty, the moisture that perspires out of the plants, or which arises by evaporation from the tan bed is caught by the glass frames, and drops from thence on the

the plants, but contrary to the assertion of fome modern authors* it does not hurt them.

No fermentable vegetable substances or materials, that I know, retain heat so long, nor heat less violently, than the bark of the oak tree after it has been broken small and used for the purpose of tanning skins, it is therefore well adapted for helping to cause the pine apple plant to grow vigorous. Where tanners bark cannot be procured, well prepared dung or leaves of trees, make the best substitutes that I am acquainted with. Oak and beech leaves are best, because they are of a hard dry texture, and therefore more durable than many other sorts, but where these cannot be had plentifully, a mixture of different sorts of tree leaves will do, provided they be collected when they are not too wet. They should be put together in a heap as soon as possible after they fall, and if they happen to be too dry to ferment, they may be watered.

* "In winter, when water by accident falls into the centers of the pine apple plants, it should immediately be drawn out by the help of a tin pipe three feet in length."

*See Speechly on the Pine Apple.*

Experience has taught me, and indeed it is but reasonable to suppofe, that there is no necessity for such tedious nicety in the management of the pine apple plant, inasmuch as it is endued with properties capable of disposing of water accidental or artificial without hurting it.

When they have fermented two or three weeks they will be in a fit state to put into the hot house. In putting them into the pit, they should be well trodden, which will prevent them from heating violently, and make them settle more level. If their heat happen to decline, it may be recruited by stirring them, and if leaves are scarce, well prepared horse dung should be mixed with them.

To prepare dung either for mixing with leaves or alone for a bed to grow pine apple plants, it should only be as moist as to make it ferment well, and shaken over every five or six days till it become sweet and the straw in it not much longer than oak leaves.

A difference of opinion respecting the durability of the heat of tanners bark compared with that of leaves, may be observed to subsist between me and Mr. Speechly, who says "the heat of oak leaves is constant, whereas tanners bark generally turns cold in a very short time after its furious heat is gone." The reason why tanners bark heats violently, is either because too great a quantity of it is put together in a body, or the flues too close to the tan pit, and when its natural moisture is hastily exhausted by means of furious internal heat, of necessity its warmth will not be durable, for it must lose its heat in as hasty

a proportion

a proportion as it is deprived of its moisture by violent fermentation.

Again Mr. Speechly says "it used to give him much concern during the time he used nothing but tan, that no effectual means could be found to remove the over-heating* of the tan bed." Can a man be well qualified to give instructions for the culture of the pine apple plant in Britain, where its fruit cannot be brought to good perfection without constant artificial warmth to its roots, who is not able to give sufficient directions to prevent a tan bed from being too warm for the roots of a plant to grow in? Withhold the cause, and the effect will not be produced. If a bed for pine apple plants be made and managed in the manner I intend hereafter to direct, with one or two additions of fresh tan, it will be prevented from heating too violently, and will retain sufficient warmth twelve months for the growth of the pine apple or of any other exotic plant whatever.

If pine apple plants be retarded in their growth for want of a sufficiency of heat, or not duly at-

* The Duke of Portland's hot house, which Mr. Speechly managed, is better adapted for leaves than tan, because the flues are close to the pits, which according to his plan are four feet deep. It is therefore the less surprising that Mr. S. could never prevent a tan bed from over-heating, for a less body of tan than of leaves will raise a sufficient heat for the pine apple.

tended to in the application of that necessary article, water, of a fit temperature, given to their leaves as well as to the earth, from whence the roots draw to the plant that kind of nourishment requisite for its sustenance, good fruit cannot be produced; therefore I endeavour from the time that the plants are set till they perfect their fruit, to keep them constantly in a growing state, and if the plants are thus managed, they seldom fail to fruit when they are grown to a proper size. For these reasons I use no methods contrary to the nature of the plants to make them fruit at certain periods, nor would I recommend to gardeners, for that purpose, methods which have a tendency to hinder the plants from continuing in a growing state, but so to treat them that at the time they wish them to fruit the pots in which they are planted may be well filled with roots.

The methods recommended by me in this case, as also in similar ones which may probably occupy a future consideration, differ from that advised by Mr. Speechly, who says "that in some hot houses it is found difficult to get plants of the Antigua and sugar loaf kinds to fruit at a proper age, and in that case he advises the sheaving off the roots on the outside and reducing the balls of them at the last shifting."

From long experience in cultivating the pine apple,

apple, I am convinced that cutting off the roots at an improper time, or destroying them by any means whatever, instead of making the plants shew fruit, is the most effectual means, that I know, to prevent them from fruiting at a proper season.

The pine apple fruit, in the centre of the plant, is formed probably not less than eight or ten weeks before it becomes perceptible to the eye of man, consequently if a plant be divested of its roots either totally or partially, as Mr. Speechly advises to do to make it fruit, its growth to appearance will be stopped, till new roots of some length are sent, or spring forth from its stem again, when it will begin to appear to grow quickly, and if before the roots were cut off the fruit had been formed in the hidden centre of the plant, it comes up with but little or no apparent growth of the leaves. This I apprehend might be the reason which induced Mr. Speechly to conclude, that cutting off the roots causeth the plant to fruit sooner than it otherwise would do.

When pine plants are set in rich earth, they grow luxuriantly to a great size, and do not fruit so soon as they do when planted in a less rich, hungry, or stiff soil. If plants designed for fruiting the ensuing year, be planted late in the autumn in pots which their roots fill not well, or do not become matted round the sides

of them, before the month of January, they wil. probably not shew fruit till late in the spring or summer months; it is for this reason adviseable, in some seasons, not to shift the plants into larger pots in the autumn, but to let them remain unshifted till after the fruit appear on them in the spring, and then to put them into pots large enough, so that the balls of earth about their roots be left unbroken.

### *On the Means of destroying Insects that infest the Pine Apple Plant.*

Great ravages in every age of the world have been committed in the vegetable kingdom by numerous tribes of various kinds of insects, and authors have treated largely on the means of preventing their depredations. In describing those insects only which naturally infest and injure the pine apple plant, and in giving recipes for their destruction, the late Mr. John Kennedy published twenty-six, and Mr. William Speechly forty-five pages of octavo. The recipes and methods recommended by these two authors as effectual, have not yet effected the desired end, nor is it indeed likely that they ever will, because to put in practice their prescriptions, much labour is necessary, and they must be performed with such precision, that after they may have been

been used the effect must remain doubtful, for the insect, commonly called the mealy pine bug, creeps into every part of the hot house, and infests not only the pine apple, but the grape vine also, as well as many other sorts of plants, and at certain seasons it lodges numerously in the pots of earth in the tan bed, and in the crevices of the walls and joints of the wood work.

That the pine plants cultivated by Mr. Speechly and other gardeners became free of insects, I have no reason to disbelieve, though probably the destruction of the insects in the hot houses managed by them, might be effected by causes of another nature than that of those nostrums prescribed by Mr. Speechly or any other quack plant doctor, whose prescriptions I have become acquainted with. The method prescribed by Mr. Speechly and held forth by him as being perfectly efficacious for cleansing pine apple plants, is merely an oily mercurial soapy liquid composition, in which the plants being totally divested of all their roots, are to be steeped and washed several times, and at the same time the hot house must be perfectly cleansed by carrying out all the tan, painting all the wood work, and fumigating it with charcoal and sulphur; and in a no less laborious way is Mr. Kennedy's method to be put in practice, for the plant, both stems and leaves, are to be, according

cording to his method, well rubbed with a mixture of brimstone, Scotch snuff, and walnut tree leaves dried and ground to a powder.

Many such recipes as these have been held forth publicly as never failing remedies. I shall however, at present mention only one more, which is called "Major's receipt for destroying insects on pines;" it is as follows: "to every gallon of water that is used, add one quart of urine, then with a large water pot, with the rose on it, filled with the composition, stand upon the curb of the pit and give the plants a good wash all over their leaves. This may be repeated as often as the plants want water; you may if you please add to it a little water in which soot has been steeped. If any insects remain dry on the under side of the leaves, it will be necessary to have a squirt to wet them with. A few dressings will destroy the insects, but as the plants are so fond of it and thrive so much with it, I should recommend the use of it all the summer."

I will not attempt to describe the nature of human urine, nor its effects when applied to plants; but those who think this recipe useful may apply it; they have it cheaper than I had, for I was obliged to pay down a guinea as the purchase price of being privileged even to read it.

It is upwards of twenty years, since I went to look

look at a gentleman's garden in Hampshire, where I saw a hot house full of clean healthy pine apple plants but no fruit on them; a labouring man was at that time entrusted with their management, this man informed me that before he had the care of them they were much infested and hurt with insects, and that in the management of them he used the method which he saw practised by a gardener who had been discharged, as he said, for not being a good one, excepting only in the mode of watering the plants, which (instead of pouring it into the pots of mould) he constantly gave all over their leaves in the manner he was accustomed to do in watering cabbage plants, but what became of the insects which used to injure the pine plants he could not tell. In a similar way, and perhaps with as little knowledge of the true cause, probably Mr. Speechly, and some other gardeners, might have had the pine apple plants under their management freed from all sorts of hurtful insects—for

After having studiously observed the nature and causes of the vigorous growth and healthfulness of plants and fruit trees of different kinds, I have been induced to believe that a plant or fruit tree of any sort, requires nothing but proper cultivation in a good soil and genial climate adapted to its nature, to prevent it from being

being injured by insects or blights, and to enable it to produce abundant crops of well flavoured fruit*—but

The natural open air is often filled or impregnated with certain qualities healthful to insects but not conducive to the health of vegetables, and so also no less frequently are the qualities of the air in a hot house, though somewhat excluded from the changeableness of the external atmosphere. Methods however can be adopted in a hot house, which cannot take effect in the open air, to impregnate the air in it with properties or particles, not uncongenial to vegetables, but destructive to animals.

Animals of all kinds are, I apprehend, possessed of the faculty of respiration, but vegetables are not. The blood circulates in animals, and by opening certain blood vessels in them, the whole of their blood issues forth and they unavoidably expire, because the nutritive food of the animal cannot be digested fast enough, so as to supply

* I wish it not, however, to be understood that I disapprove of using means to destroy insects which are injurious to plants of any kind, but I conceive all methods, used for that purpose, ought to be ſuch as are conducive to accelerate the growth of plants, by having a tendency to purify the air and make the circumambient atmosphere about the plants congenial to their nature, unless where the destruction of the inſects can be effected by manual labour.

the

the hasty impairment which its body sustains in consequence of the quick diminution of blood.

The sap in vegetables does not circulate, nor can it be drawn forth from them by incision so as to destroy them, because they have a power of supplying themselves with nutritive juices from the earth, as quickly as it is possible to impair them by the emission of sap.

Living things have a greater power of resisting heat and cold, than things have that are destitute of life, for no animal that I know, can live after every part of it hath been made hard by the influence of cold frosty air, but many sorts of vegetables are not in the least injured, though all their parts be frozen, and continue in a perfectly congealed state for months together.

An animal can live a short time in a greater heat than that of the natural warmth of its own body, but if the blood, in which is the life, be raised to a higher degree than that of the heat of its own body, which is nearly 100 of Fahrenheit's thermometer, its existence in such a state will not be of long continuance.

The sun is able to heat a dead tree to a degree which would destroy a living tree, for the sun is not able to communicate to a living plant so great a heat as it can to a dead plant, because a living plant is continually receiving from the earth a supply of moisture, colder than the heat of

of the rays of the sun, which moisture necessarily and constantly fill its pores as fast as the influence of the sun turns the juices into the natural texture of the plant, or causes them to perspire into the open air, but a dead plant, having lost the power of sucking moisture from the earth, has no means of resistance.

To ascertain what degree of heat a pine apple plant can endure, I filled four vessels with hot water; the water in the first vessel was 135 degrees hot; that in the second, 140; that in the third 145; and that in the fourth 150. Into each of these vessels I put a plant divested of its roots, and suffered each of them to remain immersed nearly an hour. The plants which had been immersed in water heated to 140 and 145 degrees, were a little hurt in the extremity of their leaves, but after being well dried in the hot house they were planted, and grew as vigorously as if they had not been put into hot water. The plant put into water of 135 degrees was not injured, but that which was among water heated to 150 was totally destroyed.

Having by this experiment proved that a vegetable can, for a certain time endure a heat of 140 degrees, a heat which I am inclined to believe no animal is able to resist, I determined to try what effect great heat and water would produce on pine plants in a growing state much infested

fested with that insect called the white mealy creeping pine bug. For this purpose, in the month of June, I selected about twenty large plants, some of which had green fruit on them, and their leaves, fruit, and roots, were partly covered with insects. These plants I set in a tan bed, in a pit about twenty feet long, five feet wide, and the weather happening to be warm, with much sunshine, I watered the plants often and plentifully all over their leaves with water about milk warm, keeping the lights constantly close shut down. In this pit I had no thermometer, but the heat was, probably sometimes about noon, upwards of 120 degrees. This great heat and much moisture, made the plants grow most vigorously, and having subjected them to the said mode of management for a few weeks, the insects in the course of that time were totally destroyed, and lay dead on the leaves and fruit. In the spring season, before the performance of this operation, the plants had been strewed with sulphur, which is at least a harmless dressing to plants of any kind, and perhaps may be of some use in preventing insects from breeding so numerously, or the means of depriving them of part of their natural food. I mention this circumstance because from experiments which I have tried since then, and which I intend to relate hereafter, it is probable that the effluvium arising from flour of sulphur

sulphur being scattered on the leaves of plants or about in the hot house, in conjunction with heated moist air, will more suddenly destroy insects than heat and moisture alone. But it ought to be remembered, that if sulphur be by any means set on fire, it will either destroy the plants or greatly injure them.

Being satisfied with my success, and assured by experience of the efficacy of the method I had taken, in having destroyed the insects on the plants without hurting them, I did not hesitate to begin to water the whole of my pine apple plants, whenever they wanted it, all over their leaves and fruit with water about eighty five degrees warm. This process I continued nearly twelve months, during which time I do not recollect that the thermometer was often below 70, and in sun shine in summer, it sometimes was raised to 110 degrees. The plants by this easy method of management became perfectly free of insects, grew vigorously, and the fruit were well swelled, handsome, and fine.

Having communicated my success to a neighbouring gardener, he sent me twelve pine apple plants, much infested with insects; these I set in a pit among my clean plants, and by managing them in the way I have related, they were cleansed in about two months.

I had some pine plants from the West India islands

islands which were full of insects, these I potted and set them in tan in a brick cucumber bed, and had a lining of hot dung made round it, which, together with the influence of the sun, raised the heat of the air in it to 120 degrees. This heat, continued a few days with plenty of moisture, destroyed the insects, and made the plants grow vigorously after they had ſtruck root.

In the year 1802, the Earl of Liverpool had forty-eight pine plants sent him from abroad. These had been put moist into a hamper, and during the voyage they had grown, and became ſimilar in colour to blanched cellery. I immediately, in the month of September, potted them, and put them in a pit into tan, and with the aid of a lining of warm dung, I got the heat of the air raised sometimes to upwards of 120 degrees, and I often watered these plants with water heated to 120 of Fahrenheit's thermometer. The consequence of this treatment was, that it deſtroyed the insects, which were numerous, on them, and made them grow, and turn from a whitish to a natural green colour. They are now, 1803, in a healthy, prosperous state.

Many gardeners, perhaps, may think, that the pine-apple cannot bear to be watered all over its leaves in winter, because it is of a succulent nature, and able to live long in a hot-

house, without being planted in earth, or set in water. The house-leek is of a very succulent, juicy nature, and will bear the greatest heat of a dry summer, on the tiles of a house; but it is well known, that this plant thrives best when it gets occasional showers of rain. The case is exactly similar respecting the pine-apple plant. In regard, however, to the best method of cultivating it, every person has a right to hold their own opinion, respecting the different ways and seasons of watering it. They may here read my opinion, which is founded on practice, that there is not the least danger in watering plants plentifully all over their leaves, at any time of the year, provided the tan-bed and the air in the hot-house be kept sweet, and to proper degrees of heat.

Indeed, it is evident, that the most able writers on the pine-apple have wanted the experience which may be obtained in its culture. Even Mr. Speechly, who lately published a volume in giving directions for its management, says, " It would be so difficult to keep the pine-apple in any part of this island, throughout a severe winter, without the assistance of fire, that I believe I do not assert too much, when I say it would be impossible." But notwithstanding this assertion, practical ingenious gardeners have found that pine-apple plants require nothing but a gentle

a gentle heat, in tan to their roots, and the air about their leaves, on a medium warmth of 60, to keep them throughout the most severe winters in England; and to maintain such a degree of heat, without fire, by the assistance of horse-dung, or leaves of trees, is no difficult matter; for a dry heat is not necessary to preserve the plants in health. In the pits where I keep succession pines all the year without the aid of fire-heat, the sun, during the winter, never shines on some of them, and their leaves are continually moist, and water standing in their centres constantly.

On this subject, at present, I have only to observe, that by repeated experiments, some of which I have already mentioned, it is evident, that in the process of managing and cultivating the pine-apple, all injurious insects may be destroyed by an artful application of the elements necessary, though in a less degree, for the production of any vegetable whatever. That this is really a fact, may be evinced by referring to the state of fruits and vegetables, growing either spontaneously, or assisted by cultivation, in the British climate, without the aid of artificial heat or air; such, for instance, as the strawberry, raspberry, pease and lettuce in gardens, and the different sorts of corn and grass in the open fields. These, in unkind seasons, are affected by

blights and insects, which prevent their productiveness. But in propitious seasons, when the winds generally blow gently from wholesome climes, the earth being refreshed occasionally by plentiful showers of mild rain, which again partly ascend by evaporation, into the atmospherical air to sweeten it, they are cleansed or preserved from insects and blights, and enabled to produce abundant crops for the use of man and beast.

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## On the CONSTRUCTION of HOT-HOUSES.

Hot-houses are builded not only for the purpose of forming an artificial climate, to bring such fruits to maturity, as the natural heat of our own country is not able to effect, but also to produce and to ripen some kinds of vegetables and fruits, at a more early period of the season, than the heat of the open atmosphere, in which we live, can do.

Various, indeed, are the constructions, external and internal, of these houses, and men of talents and learning have exercised their minds in

in contriving, erecting, and managing them, at great expence. But as the ingenuity of man will never be able to make a natural climate for plants and vegetables, to grow and come to maturity in, all that he can do is to assist the deficiency of natural heat, in a small compass, by an application of that which we call artificial elements. Therefore, to accomplish this, light being as necessary as warmth, glass windows, or glazed frames, have been successfully employed; for wooden frames, properly filled with pieces of glass, made a part of the houses I am now speaking of, not only admit light copiously, and to a certain degree shelter plants from inclement weather, but glass being transparent, instead of interrupting the genial fructifying rays of the sun from the plants, seem to increase their influence.

It appears to be the pretension of some of those, who publicly tender their services to construct hot-houses for gentlemen, to excel in planning buildings of this kind, which they aver to be superior to all others for rearing the pine-apple, and fruits of a similar nature; and as it not unfrequently happens, that hot-houses constructed according to the plans of these builders, do not answer the expectation of the proprietors, it is only natural for the architect, in trying to justify the inefficacy of hot-houses

designed by himself, to attribute the cause of their failure to the incapacity of the gardener. Fuel too, in some parts of the country, being an expensive article, for supplying the deficiency of the heat of the sun, in the management of hot-houses, many complicated theoretical schemes have been exhibited for constructing those cavities or flues, which are necessary to conduct into these houses fire-heat, to warm the air about the plants in cold weather; and on examination it will clearly appear, that some modern projectors, who profess superiority of ingenuity in inventions of this description, maintain, that if their plans and methods, which they say are "patent" ones, be adopted, the plants will be benefited, considerable expence to the gentleman or proprietor saved, and much of that attentiveness required of the gardener in managing common hot-houses, safely dispensed with. This is certainly holding forth such advantageous consequences, as may probably induce gentlemen and inexperienced gardeners to approve and to adopt their plans, without due consideration. I will, therefore, as it is doubtless within my province, take a view of the schemes of two modern pretenders to original invention; who seem to be monopolizers, inasmuch as they have taken out patents, to endeavour to exclude all men, without their permission

mission, from building hot-houses and flues of a certain construction, and particularly so in as far as they have appropriated to themselves inventions, or parts of inventions, in practice before they had judgement to discriminate the difference between a hot-house and a warm pig-stye.

In May 1801, Dr. Anderson published an advertisement, in which he says, "having contrived a mode of constructing hot-houses upon an improved plan, by which, besides a saving of fuel, to an inconceivable amount, the health of the plants will be promoted in an uncommon degree, diseases obviated, the necessity of attention diminished, and the risks that are the consequences of negligence guarded against, he deems it proper, while the letters patent are about being prepared, to specify the nature and effects of the improvements proposed. These extend to hot-houses of all descriptions, including every degree of temperature.

"In every kind of temperature, if the works are to be erected from the foundation, few cases can occur in which they may not be so placed as that the whole heat required may be obtained, without the expence of one shilling for fuel, but in the most unfavourable cases, the expenditure of fuel will not amount to one-tenth part of

what is now universally employed, for producing similar effects.

" Where grapes are required to ripen in April or May, some artificial heat will be wanted, but the quantity of fuel, even in this case, will be so inconsiderable, that in a house that shall produce, on an average of years, under ordinary good management, not less than ten thousand full-sized bunches of grapes, and fifteen hundred pits of strawberries, the consumption of fuel will not exceed half a London chaldron of coals.

" In the pinery and stove, the expenditure of fuel will be diminished in a proportionate degree, while the use of bark, or of steam as a substitute for the heat of tan, will be entirely dispensed with. These savings will be effected without any detriment to the pines and other plants, but with great advantage to them all, for in consequence of these improvements, those diseases which so much weaken and often destroy the most valuable plants, will be entirely removed, and vermin in a great measure annihilated. The plants too, in consequence of ventilation, that may at all times be given them at pleasure, without varying the temperature from that degree which shall be deemed most salutary to the plants, at the same time that it

may

may be changed at will, from moist to dry, or the reverse, may be kept in a state of perpetual health and luxuriance, that has been hitherto unknown in these repositories, which may in general be styled the purgatory of plants.

" All these effects," the Dr. says, " will be produced by such a simple apparatus, and that so adapted as to moderate, of itself, extremes of every sort, that it will become a matter of much less nicety and trouble to the gardener than at present, as he may safely be absent for a much longer time, and thus the accidents which originate from negligence, will less frequently occur."

This is only a part of Dr. Anderson's advertisement. In the sequel he informs us that, " as it is not his intention to enter upon the business of constructing hot-houses himself, but to resign his patent to some person qualified for it, upon liberal terms, he invites architects and others, who have been in the habit of conducting operations of that nature, and who wish to engage in an undertaking that promises to be at the same time honourable and lucrative.

" In consequence of the above invitation, various applications were soon made to Dr. Anderson, who, after some time to deliberate, made choice of Mr. David Stewart, gardener" (to J. J. Angerstein, Esq.)" and hot-house-builder, Woodlands,

lands, Blackheath. The patent having been expedited, and the principles explained to Mr. Stewart, the Dr. says, he declared himself "perfectly satisfied of the efficacy of the plan proposed."

That Dr. Anderson, who appears by his writings to be a gentleman of ingenuity and fertility of mind, should conceive and announce to the public such theoretical improvements and acquisitions in the science of gardening, is not greatly to be wondered at; but when myself and other practical men were informed, that Mr. Stewart, who since he became a head gardener, has adopted the inventions, and been guided by the methods of other gardeners,* had commenced patentee, and had actually begun to erect on the premises of Mr. Angerstein, his master, a patent hot-house; we were not only somewhat surprised, but of course our curiosity was excited to get a sight of such a superstructure, for till now we had never heard so much as the suggestion of an attempt having been made to procure a patent to prevent people from following any method or pattern of hot-houses, which they might have seen invented and erect-

* "Mr. Stewart, the gardener, candidly told me, that he had been at Kensington-gardens, where he saw my method of pruning and training, and had adopted it with great success."
*Forsyth on Trees.*

ed

ed by any person, on a plan supposed to be better adapted than others for bringing exotic fruits to maturity in our country. Consequently in April, 1802, a neighbouring gardener and myself went to Woodlands, where we saw Mr. Stewart, who permitted us to see the gardens, in which we viewed the foundation of a house built not on a simple, but on a very complicated construction. This foundation was sunk into the ground about three or four feet deep, and was then built up full as high as the surface of the earth around it, and a subterraneous passage was then forming from it to offices at a little distance. In some part of this passage, I understand the stove for the fire was to be placed, so that it appeared to be intended, that the person, whose business it is to attend the fire, is to pass and repass in this subterranean passage, without being seen from the patent house.

In the summer of 1803, Dr. Anderson published a treatise, in which he at large describes his patent hot-house, and gives directions for the management of different kinds of plants in it. This patent hot-house is directed to be made two story high, wholly of glass frames. The roof of the lower chamber in which the plants are to be placed, is flat like the ceiling of a room. This flat roof is the floor of the upper chamber, whose roof is sloped to throw off the rain. Between

tween the two chambers there is a communication by means of a pipe. The lower chamber is the hot-house, and the upper chamber for obtaining and containing heated air to warm the hot-house without the use of fuel. The superfluous heated air necessarily thrown out of the hot-house in the day-time, instead of being dissipated into the atmosphere, the Doctor says, is to be received into the upper chamber; " and when the hot-house or lower chamber is ſhut up close at night, by leaving the pipe that forms the communication between the two chambers unclosed at the top, it, he says, must follow, that no sooner will the vacuum, by the condensation of the air be experienced in the house, than a supply of heated air from the upper chamber will be drawn back into the hot-house, so as to keep up the heat for a long time without any sensible abatement." The Doctor says, " there can be no doubt but that a very short time of sun-shine, during any day in the year, will serve to accumulate a sufficient quantity of heat for the space of twenty-four hours, without any artificial aid whatever." A self moving valve is to be placed in the hot-house, which the Doctor says will regulate the heat " without any attention from the gardener." Wind, he says, is to be raised in the hot-house, " without altering the temperature of the air in the smallest degree, by

by means of an apparatus on the principle of the fan of the winnowing machine."

When the heat collected in the air chamber from the influence of the sun, is not sufficient to warm the hot-house, an Argand lamp is to be kindled; and as this lamp consumes oil, smoke, and every thing else that is put into it, it is to warm the house three months in winter for seven shillings and six-pence. With respect to flues, he affirms, that they appear to be at best such trifling palliatives, as to render it expedient to abandon them altogether, and to convey the heated smoke into a chamber placed under the hot-house, extending nearly the whole of its width and length.

As to the culture of the pine-apple, Dr. Anderson says, " it vegetates with as much vigour during the summer months in Britain, as in those countries of which it is a native; and it undoubtedly preserves its health better in that situation than in the hot house." The pine-apple plant, he maintains, is so hardy, as to survive even in the open air in most winters in this country; the forcing heat is only necessary to accelerate its growth, to bring it into fruit, and ripen it. The proper management of the plant then, he says, is to leave it without doors during the good weather in summer, where, if allowed to spread its roots in rich mould without being confined

confined in pots, it will advance with great vigour. At the approach of winter, two men, having circular mouthed spades, are to dig up the plants, and place them at once in large pots, without hurting their roots, and set them on a stage in the hot-house. With regard to a ground heat for the roots, by means of tan, dung, or leaves of trees, the Doctor says, it is evident upon the slightest reflection, that it must be hurtful to every species of plants, " and nothing but the impossibility of supplying the necessary heat without this aid, would ever have introduced it into practice, a practice which is pernicious in the extreme."

After reading what I have already related, surely there is no person who is in the least acquainted with the nature of the pine-apple plant, or with hot-houses for its cultivation, but will readily perceive that Dr. Anderson is only a theoretical writer on this subject; and before they adopt or venture to recommend to others his inventions in this respect, they will look for proofs of their utility from ocular demonstration. But if it be granted that this is really a just statement of the case, how then, it may be aſked, is the conduct of Mr. Stewart, the gardener, to be accounted for, who has so publicly approved of, and given his sanction to Dr. Anderson's patent

patent hot-houses, by having undertaken to be a builder of them.

We are publicly informed by Dr. Anderson, that Mr. David Stewart hath erected a patent hot-house, on what he deems an improved plan; "and though it is in part borrowed from his, yet these parts are so applied, as to make him utterly to disclaim the whole as on his plan." But as it bears the name of patent hot-house, and is erected by a person who is authorized to build under his patent, Dr. Anderson judged it necessary to take notice of it publicly, to prevent the consequences to him "that might eventually result," in case his patent hot-house should be confounded with Mr. Stewart's patent hot-houses. This advertisement enables us to account for the conduct of Mr. Stewart in this business: for being in the first place, "perfectly satisfied of the efficacy of the plan proposed" by Dr. Anderson, and without doubt having attempted to put it into practice on the premises of Mr. Angerstein, he must, by experience, have ascertained, that it would not answer his expectation, and therefore to endeavour to save his credit, he immediately, with "part borrowed," sets about constructing a hot-house which he could call "patent," that might perhaps be somewhat better adapted for the

the culture of the pine-apple than that constructed and recommended by Dr. Anderson.

Now in all this hot affair, it does not appear that Dr. Anderson has acted dishonourably, because, though in constructing hot-houses "partly borrowed," and in giving directions for cultivating the pine-apple, he certainly has discovered himself to be a theorist, yet there is no good ground to suppose otherwise than that he published his ideas on these subjects under a conviction of the efficacy of the methods he has exhibited. As Mr. Stewart is a practical gardener, I am sorry not to be able, without partiality, to enter into such a justification of his conduct; for as he has taken out a patent for altering flues, and erecting hot-houses, which are partly the plans of Dr. Anderson, and partly the inventions of other men, there is no telling to what lengths he may aspire; he may even get a patent for erecting cucumber beds with pigeon holes in them, by borrowing a part of such from my plan. But whatever way he may act in this respect, certainly it is long since he adopted my plan and methods in his master's garden. In this, however, he was perfectly justified, because I had given every person, who had the power and inclination, leave to do the same thing.

Dr. Anderson has not described what constitutes the difference between his own patent hot-house,

house and that patent hot-house erected by Mr. Stewart, but a friend of mine has favoured me with an extempore plan of those built on the premises of J. J. Angerstein, Esq. by the direction, as I am informed, of Mr. Stewart his gardener; according therefore to this plan, and to other information obtained, I will give a description of them.

The house, whose foundation I have already mentioned, is similar in shape to Dr. Anderson's, for it is higher and wider in the middle than at each end, and above the ground it is all made of glass windows and glazed frames. It is paved in the inside and round about the outside with stone. Under the pavement of the floor is an artificial cavern, made perhaps in imitation of Dr. Anderson's smoke chamber, for in this cavern the flue, to conduct the smoke and heat from the fire, makes several returns under the paved stone floor, similar to the flue at Hampton Court which is built on the surface of the paved floor in the house where the large grape vine grows. The frames of the roof are fixed; and to convey air from the open atmosphere, under the paved floor through the middle of the house lengthwise, there are cavities, into which the air is designed to enter at the surface of the outside pavement by grates at each end of the house. At equal distances, in the middle of the highest

 part

part of the house, stand three trunks or tubes which communicate with the cavities under the floor to convey the cold air before it spreads, or circulates, to the higher regions in the house. Air is admitted also at doors and windows in each side. This house has been built at great expence, and is calculated only for preserving green house plants in winter; and in summer it is appropriated for a banquetting house in which to entertain nobility and gentry sumptuously.

That which Mr. Stewart calls his patent hot-house for pine apple plants is only about thirty feet long fifteen wide. It is situated, as Dr. Anderson advises, so as to front the east and west. The sides, ends, and roof of it are entirely windows and glazed frames. At one corner stands the fire place, from which the flue is carried once round about the inside, leaving a path between it and the tan pit which is in the centre of the house. On each side of the brick work of the fire place walls of brick are carried up, leaving between them and the fire place a vacuity, and by joining these walls together above the fire place by means of an arch or iron bars, a cavity is formed round the fire place to retain the air that may happen to be warmed by the brick work of the fire place. In that side of the house where the flue for the fire enters, on the top of the principal, or fire flue, another flue

flue is built, which terminates with an open end in the opposite end of the house. This upper flue is termed an air one, and is meant to conduct the heated air which may accumulate about the fire place to that end of the house at the greatest distance from the fire. Mr. Stewart, I understand, pretends, that by this contrivance the influence of the fire will warm the air in the most distant parts of the house from the fire, as soon as it is warmed in that part of the house where the fire immediately enters. The glazed frames on the roof are fixed, and instead of giving air at the roof it is admitted at the door and upright windows. In this house too there is a cavity or funnel called a cold air flue, carried lengthwise under the tan bed, which has, by means of grates at each end and in the outside of the house, a communication with the atmospherical air to be drawn, before it gets leave to circulate, to the upper regions of the hot-house by the medium of three cast iron tubes erected at equal distances from each other in the tan pit, their lower ends communicating with the cold air flue.

Having heard a report of a fine garden and hot-houses the property of a wealthy gentleman in the county of Surrey, in October 1803 I went to look at them, and on that same day Mr. Stewart's patent hot-house operator, or flue

 builder,

builder, with other bricklayers, had just begun to take down the flues of one house for the purpose of erecting a patent flue in their stead. I was informed that these hot-houses were planned by Mr. Aiton, gardener to the King, at Kew, and they are on a good construction, though at first building the flues might perhaps have been constructed on a more œconomical plan, yet as there were two fire places to each house, to which Mr. Stewart has appropriated only one, I am persuaded no good or substantial reason could be given for altering them. The fire places were indeed too small, but they, at a very small expence, might have been made larger without making any alteration in the construction of the flues. It is my opionion, as well as the opinion of the best and most experienced gardeners, that rather than to be obligated to make violent hot fires in one fire place to keep the air in the houses to a proper degree of heat, it is better for the plants, and less expensive, to have two gentle ones. Mr. Speechly, late gardener to the Duke of Portland, says " some persons who give designs for the building of hot-houses allow a fire place to work a larger space than I recommend, in order to make it appear that the expence in fuel will not be so great, whereas in fact the case is quite the reverse, for I can venture to assert that one fire place

place worked violently will consume more fuel than two that are worked moderately."

After an elapse of three weeks I returned to the place just before mentioned, where in one hot-house Mr. Stewart's patent fire place and flue was completed, and as it happened to be a rainy day the fire had been kindled in the morning and was burning, therefore as the gardener behaved very civil to me I could not have had a better opportunity at one time of examining and ascertaining the operation and effect produced on the air of a hot-house by that which Mr. Stewart calls his patent flue. The fire place which is built by his directions at this place is in an open shed on the north side of the hot-house. The fire is made in a large cast iron stove with two doors, and it is set in the centre of a pile of brick work about six feet square above ground, the brick work is built in the manner I have already described in page 74. The fire flue which conducts the smoke and heat of the fire through the house, runs along close by the front side and ends of the tan pit, leaving a narrow vacuity between it and the side of the tan pit, and it makes a double return against the back wall, leaving a path at that side of the house between it and the pit. Its sides, the length and width of the pit, are built of bricks four inches thick besides the plaister. The flue designed to conduct into

the house the heated air collected about the fire place extends from the fire place to the opposite end of the house, where it terminates with an open end, and it rests on the fire flue on brick supporters, so that by means of tiles on brick on edge cavities are left between the lower and upper flues to prevent in some degree an obstruction of the heated air from rising from the fire flue. These flues and fire places which I have described differ in their mode of construction from those in Mr. Stewart's patent hot-houses at Mr. Angerstein's; such deviations prove to a demonstration that he does not conform himself to his original, or to one patent plan of construction, it therefore may be reasonably concluded that Mr. Stewart is only yet trying experiments at the expence of gentlemen who may chuse to employ him, or else his patent must be a general one, authorising him to erect, and prohibiting every person besides, unles they obtain his leave, from building hot-houses and flues of any shape or size with borrowed parts of plans which may proceed from his fluctuating imagination. But worse consequences than these will in all probability attend or accrue from Mr. Stewart's extraordinary officious employment of forming gentlemen's hot-houses according to his patent plans; for every good gardener capable of managing hot-houses properly, is able, with the

the assistance of a good bricklayer, to make such alterations in hot-house flues, as from experience he finds necessary; it is therefore not likely that gardeners will submit to be guided by the directions of Mr. Angerstein's gardener in the way he is offering to give them, even supposing they believed them to be somewhat useful. Most gentlemen's gardeners are, indeed, like other men, apt to learn and to adopt any real improvement, which they think will turn to their master's interest, but being also like men in other stations very jealous of their honour, for fear of losing their places, they greatly dislike to appear in the eye of their masters deficient in the knowledge of the business they profess and covenanted to be capable of performing. Hence then in such cases it is likely disagreements may happen to arise, to the no small vexation and detriment of industrious gardeners, as well as to the inconvenience and the loss to gentlemen, whose interest it cannot be to change their gardeners often.

I conceive, that all the air that can be warmed by the outside of a well constructed fire place, is not worth the expence that must be incurred in building and keeping in repair a separate extraordinary flue to convey it into the hot-house. The fire flue built by Mr. Stewart's direction, when I saw it, was heated to a degree sufficient to warm the air in the house properly, but, at

the same time in that flue which rests on the fire flue no heat could be felt or perceived either in its sides or issuing forth at its open end.

Mr. Stewart's avowed motive for contriving and building his extraordinary air flue, is to carry the air collected about the fire place to that end of the hot-house at the greatest distance from the fire, to operate there first, and to endeavour to effect that, his air flue lies open to the external air by holes at each side of the fire place; but, instead of heated air being drawn into the house from about the fire place by the medium of these holes, I felt warm air issuing forth from them into the open shed over the fire. Such an effect is easily accounted for by intelligent gardeners who have studied the operations of air in hot-houses, for

By nature atmospherical air is every where continually in motion, consequently warm and cold air not obstructed are ever changing places and intermixing with each other. Heat causes an expansion of air, therefore as the air in a hot-house becomes warm, it spreads and presses to every vacuity or hole in the house, to burst forth and intermix with the cold air of the external atmosphere, while at the same instant of time cold atmospherical air is pressing all round the outside of the house with much greater force, and will, if there be any vacuity, necessarily and

con-

constantly fill the vacuum in the house occasioned by the issuing forth of the air as it becomes warmed. This accounts for the going forth of the warmed air in the hot-house by the medium of the air flue, which Mr. Stewart designed to convey warm air into it, and of necessity cold air by the same conductor, or by some other conveyance, was then intermixing with the warm air in the house.

But supposing this air flue to operate in the way Mr. Stewart intends it should, that is, that the external cold air may force, by the medium of the holes at each side of the fire place, the air which the outside of the bricks of the fire place warms, into the house, what then would the result necessarily be? The cold air, in a greater quantity than the air warmed about the fire place, would flow copiously into the house, and of course it must follow, that the air flue would in such case do more harm than good. But even to effect such an operation, there must be some opening or communication between the air in the house and that of the atmosphere, in another part of it, to let air out to make room for that forced in. Other detrimental effects and expensive inconveniencies besides these are likely to occur, where Mr. Stewart's patent plans are put in practice; for when the sides of the fire places and smoke flues require to be repaired or cleaned

of

of soot, these matters cannot be done as they ought to be without taking down the air flue; and as the upper part of the smoke flue is hidden by the air flue, probably the house filled with smoke may be the first indication that the flues or fire places stand in need of repairing.

To warm a chamber for the accommodation of people in winter, no scheme has ever been attempted to hinder the fire from casting its radiant unsmoky heat into the chamber as quickly as possible. The method of warming the air in a hot-house ought to operate exactly similar, though on a different principle: but Mr. Stewart's scheme of warming hot-houses is, that the fire may act diametrically the reverse to this, for by his plan the heat of the fire is not to influence the air in the house as soon as may be done, but it is to be suppressed to a considerable distance from the fire by a thick opaque body of brick-work.

That Mr. Stewart's patent hot-houses and air flues are partly borrowed from Dr. Anderson's theoretical schemes and ingenious reasonings, no doubt can now be entertained; and if he will duly consider the philosophical observations on air, published by the learned doctor, it is not improbable but he may be induced to lay aside recommending to gentlemen the adoption of his complicated hot-houses and cold air flues, and offer

offer as a substitute something on a more simple and less expensive plan. Indeed I have no hesitation to announce, that I am persuaded his patent hot-houses, air flues, funnels, vent-holes, or by whatever name he may chuse to call them, are altogether superfluous; and in short, without going further into philosophical disquisitions, it is only a wasting of fuel to attempt to cause heated air to arise first in parts of the hot-house farthest from the fire: this however is what Mr. Stewart aims at, not by means of his air flue alone, but likewise by building the sides of his fire flue to a considerable distance from the fire place four inches thick.

With respect to the other parts of Mr. Stewart's patent hot-house, though it is no new scheme to erect hot-houses all of glazed frames, I do not approve of the plan. Such may do for curiosity and elegance, and in warm situations like that in which stands the garden under the superintendance of Mr. Stewart, but they require too much fuel and attendance to keep them to a proper degree of heat. It can however be no difficult task for Mr. Stewart, with the number of hot-houses on different common constructions in his management at Mr. Angerstein's, to keep his patent hot-house well stocked with good pines, and thereby make it appear to the inexperienced that his patent house is a superior one.

one. Other advantages besides these he is also privileged with in the service of Mr. Angerstein; for it appears, that no expence is spared there to bring fruits of delicacy to perfection, and not the situation alone, but the soil in and about the garden is certainly superior in goodness to that of many other places. It lies on the banks of the beautiful River Thames, about six miles from London, between Woolwich and Greenwich, in a valley where a deep rich loamy earth is to be found, well adapted for the growth of most kinds of fruit trees.

## On the best CONSTUCTION of HOT-HOUSES.

Heat being one of the most essential things for the growth of plants, and maturation of choice exotic fruits, when a hot-house is about to be erected, the first object of consideration ought to be to build it in a sheltered warm situation, not shaded by trees, walls, or mountains from the rays of the sun in the spring, summer, and autumn months. During six or eight weeks in the dead of winter, after we pass the

the 50th degree of latitude from the equator, sunshine generally has little or no effect on vegetation. And as a hot-house is designed merely to assist nature in the formation and production of fruits, it ought to be constructed in such a manner that as little artificial heat as possible may be wanted. To accomplish this end, then, the best method is, in my opinion, to make it into one or more divisions of about 40 feet long, 16 feet wide, and it should stand fronting to the south. If of brick, the front wall should be built up five feet high, in pillars of about four feet long nine inches thick, leaving five openings of about four feet each; and if the house be designed for rearing the pine apple or other fruits or flowers that require a ground heat, when the brick and timber work, excepting the flues, are completed, these five openings are to be built up four inches thick in a parallel line with the inside of the pillars, leaving a small aperture at the top just under the timber beam in the center of each, to admit grape vines to be trained into the house. The back or north wall should be about twelve feet high, and on the front wall upright sliding sashes are to be placed, which, together with the timber work, will raise it to nearly eight feet in height to the cornice; according to these dimensions, the rise in the

roof

roof above the front cornice will be about four feet.

If the earth on the spot where the hot-house is to be erected be of a good quality, and at least four feet deep for the roots of the grape vine, peach, nectarine, or apricot to run in, the walls of it should be sunk into the ground four feet deep; but if the earth on the spot be not of a quality well adapted for the growth of these sorts of plants, the foundation walls ought to be laid as near to the surface of the earth as a sure foundation can be obtained, which will give an opportunity of making a border of good earth round about the house sufficiently deep for plants of any kind to grow in.

Supposing a hot-house built in the form and according to the dimensions I have given, and the border of earth prepared and made to its proper height in the front and at both ends of the house, the brick work ought to stand above the surface of the border in these parts not more than six inches. If the house be eighty feet long, a door may be made in the middle in the north side wall into the shed, and one in each end parallel with the path in the back side. The surface of this path will lie on a level with the thresholds of the doors at each end, and about four feet above the level of the front path, consequently

sequently in each end of the house there must be steps up from the front path to the back one.

The roof fronting to the south, and both the upright ends and the partitions, if there be any, should be made of glazed frames. The timber work ought to be made neat, not clumsy, and planed in such a way that no water can lodge on it. Let each light be made not more than four feet wide, and the glass put into the frames of the roof cut into pieces about seven inches by eight, and in putting it in, it ought not to be strained down with brads, but only bedded in putty all round its edges, filling up the crannies between the glass close, which will keep the cold air out, and prevent the frost from breaking it. A hot-house glazed in this manner, being very close and easily warmed either by sun or fire heat, due attention will be required in admitting a proper mixture of sweet external air into it at all times when the weather is mild, or when the sun shines; therefore all the frames must be made and adjusted in such a manner as that they may be opened and shut easily and regularly.

A hot-house thus constructed of eighty feet in length will require two fire places, which should be placed on the north side, one at each end, under an enclosed shed not less than ten feet wide, the length of the house, and as high in the upper part of its roof as the north wall.

This

This shed will not only prove very useful for sheltering the hot-house from cold northern winds, but will also be convenient for many other purposes, such as shifting the plants in cold weather, and holding garden utensils. If the house be designed for the growth of the pine apple, the flue in each division should be carried round about the inside, stretching from the fire place across the end, and along between the path and the front wall, leaving a cavity of four or five inches wide between the flue and the wall, to admit the heat to rise freely, and to prevent the roots and stems of the vines planted in the border against the front wall from being too much heated. At that end of the division farthest from the fire, after going across the house under the back path, the flue rises above the path, and goes along close against the back wall, communicating with the chimney which stands at the end corner of the wall just above the fire place.

The flue from the fire place along the front wall to the opposite end of the house is to be made nearly three feet deep, seven inches wide, and when it rises above the back side path against the back wall to the chimney, it should not be less than three feet six inches deep, of brick on edge two inches thick, besides the plaistering, and covered with inch thick tiles,

closely

closely cemented with fine mortar, to prevent the smoke from getting into the house among the plants. The mouth of the fire place should be about sixteen inches wide, twelve inches deep, and the door and its posts may be made of cast iron. The grate should be thirty inches long, and its bars of uncast iron, made to take out at will. Some are at the expence of having fire places wholly of cast iron, one or more inches thick, in form of a square funnel, about three feet in length. This is a good method, because such keep in repair several years, whereas the sides of fire places built of brick require repairing yearly.

Hot-houses constructed in the way I recommend, and built in a sheltered situation, will not be very expensive in building, in keeping in repair, nor in fuel, and they will be found useful for rearing the pine apple, grapes, French beans early, &c. and by altering the position of the flues, in the manner I intend hereafter to point out, they may be advantageously employed for producing peaches, nectarines, and other fruits of a similar nature in greater perfection, and with more certainty than can be done against walls of the best construction in the open air in any part of England. And as the flues are directed to be built in a simple and most commodious way, without a return, no dif-

ficulty will ever occur in cleaning of them, for by taking off tiles of the covering, here and there, a person with a wooden hoe can readily clear them of soot whenever they require it; and if they be cleaned only once in two years, the fires will constantly draw well, which is a matter of the first consequence for warming the air easily, and for helping to cause a sweet, healthful, atmospherical climate to arife in the house for the growth and nourishment of the plants.

That a hot-house of such a description can be easily and regularly warmed, without making violent fires, will appear evident, if it be considered, that in a house of eighty feet long sixteen feet wide, there is a surface of about one thousand superficial feet of brick work heated by the influence of two fires; and as the flue of each division passes across the house exactly in its centre, separated only by a four-inch wall, the heat rises nearly as strong in the middle of the house as it does at each end, where the heat of the fire immediately begins to influence the air in the house.

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*A fur-*

## *A further View of* Mr. Forsyth's *Treatise on Trees and Compositions.*

Mr. Forsyth begins the Preface to his second edition, with boasting of the high honour conferred on him, by the Public having, in little more than eight months, purchased 1500 copies of his Treatise; but if he would duly consider only his title-page, dedication and conclusion, it might be the means of humbling him a little in his own sight. His book is dedicated to one of the greatest and best Kings in the world, and his title-page announces that his treatise is "published by order of Government,"—a government which is allowed to be one of the wisest and ablest that ever governed a nation. The titles he gives himself by "initials," which, according to his own account, have "often brought on the destruction of a tree," I am not able to decipher, consequently, such unlearned people as myself may think that F. A. S. and F. S. A. have a reference to a man of great acquisitions in the learned languages, inasmuch as at the end of his book he says, it is "now translating into French, under the inspection of the Author." A book ushered into public view, under such circum-

stances, could hardly fail of having a good sale among the people of the imperial dominions of the King of Great Britain. But the British Government, I am authorised to say, did not order his Treatise on Trees to be published; it only, twelve years ago, ordered the publication, in the Gazette, of his recipe, for making the plaster composed of cow-dung, lime rubbish, sand, and wood ashes, which indeed was pronounced to be a discovery "highly beneficial both to individuals and the public:" but, after twelve years trial, it has been found to possess no more efficacy, and is, all things considered, of less utility to the public, than common grafting clay. The sale, therefore, of Mr. Forsyth's book has certainly been occasioned more by the annunciations I have mentioned, than by any merit of his own, above other gardeners, in regard to his public profession.

In the year 1801, T. A. Knight, Esq. who appears by his writings to be a gentleman of some practical knowledge of the nature of vegetation and management of trees, published a Treatise, in which he says, "he, by the desire of Sir John Sinclair, went to Kensington to see the trees which had been the subject of Mr. Forsyth's experiments. He was shewn some trees of the golden pipin, whose branches had been taken off, and whose ſtems had been plastered; but in these

these it did not succeed, and he never saw that fruit in a lower state of debility than at Kensington; and he does not place much confidence in any topical application to the wounds or diseases of vegetables." In consequence of these remarks, a public correspondence took place between Mr. Knight and Dr. Anderson, who endeavours to prove, that Mr. Forsyth's plaster is endued with such wonderful efficacy in healing the diseases and promoting the growth of vegetables, that fruit-trees in Kensington Gardens, "in such a state of decay, as to have been all rotted, except about one inch of bark," have been restored by the application of the composition. Mr. Knight, after making some pertinent philosophical observations, asserts, "that no tree in that state ever was or can be restored to health, or even preserved alive, by all the composts that Mr. Forsyth ever did or can apply to it." Mr. Forsyth, in replying to the accusations of Mr. Knight, instead of using sound philosophical arguments to confute him, and to try to substantiate the efficacy of the composition, denies, in angry language and strong asseverations, the charges brought against him by Mr. Knight; and he pledges his "character, as a man graciously honoured in being the servant of his Majesty, that the suspicions and insinuations" of Mr. Knight are absolutely unfounded:

and in the sequel of his preface he says, "he shall from that moment cease to notice any similar attacks from Mr. Knight, contenting himself with opposing to the ungenerous, unjust and unprovoked charges of an individual," the letters published in his treatise. This language of Mr. Forsyth used to any one, especially to a gentleman of the rank, knowledge and reputation of Mr. Knight, is certainly very unbecoming; for no doubt can now be entertained, by people of well-informed minds, as I shall presently prove from his own confession, but that Mr. Forsyth, in regard to the efficacy of his composition, has, through some fatality of conception relative to vegetable economy, been deceived, and consequently his imbecility has prompted him to impose upon the more credulous part of mankind; for had he not been possessed of imperfection in his ideas of the nature and effects of vegetative life, even the reasonings I used with him privately, upwards of ten years ago, ought to have influenced him to have laid himself open to conviction long before this time.

Mr. Forsyth says, "of books he never availed himself, farther than as they might tend to assist in perfecting his catalogue of fruits; for at a time when he once did begin to read, with a view to the improvement of his practice, he soon found himself more bewildered than instructed, and

and has never since resumed the task." Here is certainly a plain proof of the vanity and imbecility of his mind, relative to his supposed superiority of ingenuity; for it is a well-known and an acknowledged fact, by men of the best abilities, that some books, even theoretical ones, instead of bewildering people in the improvement of the practice of horticulture, have been of very great utility in stimulating men to discover good practical methods. But if books bewildered Mr. Forsyth in his practice, why did he not benefit by experience, and refrain from bewildering thousands of credulous inexperienced people by his own books, that hold forth inventions and methods which, according to the nature of things, can never effect such nor any revolution in the vegetable kingdom, as he has peremptorily maintained they are capable of doing?

Since the publication of my View of Mr. Forsyth's Treatise, he announces a third edition of his work; and in a postscript to it, he says, "I have been fortunate enough to have derived an accession of most respectable testimonials, tending to remove any doubts that may have arisen in the public mind respecting the verity of my statements on the subject of my composion:" he then subjoins a letter of the testimonialists, of which the following is a true copy;—

 "Sir,

"Sir,—As you had the goodness lately to give us an opportunity of examining several trees, in Kensington Gardens, in the various stages of renovation or filling up with new wood; and as reports have been circulated, tending to discredit the efficacy of your process, we feel it an act of justice not only to you but to the country, which is deeply interested in your discoveries, thus publicly to declare, that the statements you have published on the subject contain nothing more than the truth.*

"JOHN COAKLEY LETTSOM, M. D. F. R. S. &c.
WILLIAM WOODVILLE, M. D.
JAMES SIMS, M. D.
WILLIAM NORRICE, Surgeon to the Charter House.
JOSEPH HART MYERS, M. D.
ASTLEY COOPER, Surgeon of Guy's Hospital.
EDWARD COLEMAN, Professor of the Veterinary College.
H. N. WILLIS, F. R. S. &c."

* Mr. Forsyth says, that, by his mode of treatment, oak plants "grow more in one year than in six when raised in the common way." It will be necessary that his testimonialists prove the truth of this, and many other similar declarations contained in his book, before unlimited credit can be given to their evidence, in this instance, by practical readers.

"I also

"I also avail myself of this opportunity to add a discovery which I have recently made, and which, as being calculated to save time and labour, may deserve attention.

"Instead of paring away the bark, as had been heretofore the practice, and covering the stem with the composition, I now merely scrape off the loose bark, and apply a mixture of cow-dung and urine only (made to the consistence of thick paint), with a painter's brush, covering the stem carefully over. This softens the old scabrous bark, which peels off during the following winter and spring, and is succeeded by a fine smooth new bark.

"W. FORSYTH."

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As in his second edition Mr. Forsyth declares that, from that moment, he shall "cease to notice similar attacks from Mr. Knight," this postscript to his third edition appears to be all that he is able to oppose to the just statement which I have given, of the inefficacy of his composition to heal or prevent the diseases natural or incidental to trees; for, instead of actually opposing the principles which I have advanced, relative to the causes of the growth and fruitfulness of trees, he has inadvertently coincided with

with them, for he has now "candidly confessed,"* that a paint made of cow dung and urine rubbed on the bark of trees answers all the purposes of his discarded composition;—in this I perfectly agree with him: but instead of his last discovery I would recommend a substitute more cleanly and more efficacious for promoting vegetation in all its stages of growth or renovation of the wood of trees; that is, when the natural rain from the clouds comes down too scanty let the trees be well washed occasionally with clean sweet water from a river or standing pond. In regard however to his now disapproving of paring away the bark, a practice which he so strongly recommended in his former writings, I entirely disagree with him, because theory and practice have taught me that paring away certain parts of the bark, as well as cutting off parts of the living wood of trees, is of great use to them, for I have already observed that trees have no other way of evacuating their superabundant and excrementitious parts, but by oozing and evaporation, consequently in certain

* A phrase used by Mr. Forsyth, denoting, I imagine, the honesty of Mr. Stewart above all other gardeners, in having acquiesced with Mr. Forsyth's sentiments, and in permitting his name to be made use of publicly as a sort of sanction to Mr. Forsyth's pretended new invention of pruning and training the grape vine.

cases,

cases, which I will hereafter mention, judicious cutting off decayed as well as live pieces of bark and wood is one of the best and most ingenious operations and effectual remedies for preventing the canker, and other diseases natural or accidental to trees, particularly to those kinds that produce eatable fruits.

That Mr. Forsyth's pretended inventions of new methods of gardening and sagacious application of the chirurgical art to vegetation, and the healing art to diseases of vegetables, should, after having been made public twelve years, need the testimonials of surgeons and doctors of medicine to try to convince the public of the efficacy of his plaister, and that his book speaks "nothing more than truth" is a matter of unaccountable curiosity, though indeed it makes it evidently clear that doubts, respecting the utility of his recipes have deeply affected the credulous part of the public who at first believed Mr. Forsyth's report of his wonderful discoveries; and even though no evident proofs of the inefficacy of his composition had been brought to light by ocular demonstration, yet the avouchment of these medical gentlemen would certainly tend rather to increase than to remove such doubtings, for the discerning public will, I apprehend, conclude, that these avouchees must be more capable of judging of the effects of

surgery

surgery and medicine on the human body, than of the effects produced on the trees in Kensington gardens by the application of Mr. Forsyth's composition. But what will these gentlemen of the faculty now say of that which Mr. Forsyth heretofore advanced and maintained in his treatise, when they hear that he himself has renounced, and, by his own public confession, virtually overturned his former systems of paring away the bark, and of plaistering every wound and cut of trees immediately after pruning.

I have hinted that I mean not at present to enter into a philosophical disquisition on the nature and effects of urine and cow dung when applied to the bark or foliage of trees, or of herbaceous plants. Those however who know the nature of these ingredients better than I do may put Mr. Forsyth's new discovery into practice, and recommend it to others if they please; but his recipes are, in my opinion, of such a nature, and composed mostly of such filthy ingredients, which by his directions are to be used about fruits which ladies love, that I intend not to defile my hands in using them for the purpose he recommends, nor to employ my pen farther in commenting on the futility of applying medicine to the diseases or wounds of vegetables in a similar way, as it is frequently successfully applied to the wounds and diseases of

of animals. And, as I have no accusations to lay against Mr. Forsyth's private character or actions, nor bear him the least animosity, I am sorry that his public works have called aloud for the animadversions of some practical man, who in all probability has studied the nature and effects of vegetable life more minutely than some others in the practice of gardening. But as I trust I have been the means, by my writings, of stimulating Mr. Forsyth to make a new discovery, as he calls it, which will, at least, to put it into practice be attended with much less public expence, though with no better success than his former ones, I do not regret the labour I have bestowed in giving the public a right view of his treatise and pretentions to originality of invention.

Hence then to conclude this subject, it may be sufficient for me to observe, that since the publication of Mr. Forsyth's treatise, an experienced gardener and myself have been at the Duke of Dorset's seat at Knowle, and at Coomb-bank, the seat of Lord Frederick Campbell in Kent, to see at these places the state of the trees to which Mr. F. as "proper patterns refers gentlemen who wish to give his composition and methods of pruning and training a fair trial." But in the trees at these places we discerned not any thing uncommon in the methods

of

of pruning or training of them, nor were they in a state that could in the least degree substantiate the efficacy formerly attributed to the "composition;" neither was there any thing to be seen or heard at these places, as we conceived, to convince experienced intelligent persons that plaister or medicine is able to prevent or heal the diseases of plants. Indeed so far from viewing any thing superior in the fruit trees at the two places just mentioned, several of them were in an unhealthy decaying state, such however as may be seen in almost every garden in the kingdom, if in them many fruit trees of different sorts have been planted any number of years exceeding ten.

In the pleasure grounds and in the park at Knowle there are certainly beautiful majestic trees of different kinds, and some of them whose limbs had by the winds or snow been torn off, instead of applying Mr. Forsyth's plaister to their wounded parts, they are covered over with sheet lead to try to prevent their insides from rotting. But the most curious production of nature in the vegetable kingdom, that I remember to have seen, is a beech tree growing on the estate and near the mansion house of the Earl of Derby, in the county of Surrey, about twelve miles from London. Mr. Forrest, his lordship's gardener, has enabled me to give the following description

description of it:—This remarkable tree is not distinguished or admired for its great size, but for its majestic stature and venerable beauty, being apparently the production of nature without art. The circumference of its trunk is seventeen feet a short distance above the ground, where it divides itself into eight or ten stems, which a little higher are irregularly united or naturally inarched into one another. It then spreads itself forth into innumerable branches extending themselves horizontally in every direction, from the main stem thirty-five feet in length. The extremities of these branches, describing a circle, the circumference of which is two hundred and ten feet, hang nearly touching the surface of the earth. Its head forms a beautiful pyramidical superficies, in height about fifty feet; and its numerous boughs in their extension have, by means of friction caused by the wind, inarched themselves, and are united here and there in the internal shady parts of this curious pyramidal natural living vegetable structure.

Mr. Forrest says " this tree was not long ago furnished with small branches to the bottom of the trunk, but these being amputated to shew the varied forms of its stem, every limb and lateral branch so cut are now covered with as strong a bark as any other part of the tree, without

without plaister or paint, which some in the present day are such advocates for."

## On the CULTURE of the MELON.

That fruit called melon is produced by an annual creeping juicy plant, of the species of the cucumber, having male and female flowers on the same plant. There is a great variety in shape, size, and colour of this fruit, cultivated in different parts of the world, many of them of little value, though some sorts, when well ripened, are delicious in flavour and wholesome in quality.

To ripen the best kinds of melons perfectly, as great an atmospherical heat is necessary as that which is sufficient to bring the pine-apple to maturity in our country, where an artificial ground heat also is applied to its roots.

Different methods of culture, and various compositions of earths and manures have been prescribed and used for rearing the melon. Those methods, which are the most simple, least expensive, and best adapted to assist in making a suitable

a suitable climate for it to grow in, ought to be preferred. It will grow well and produce good fruit plentifully, by being planted in rich earth taken from a quarter of the kitchen garden, or from the surface of a corn field. Earth of a loamy pliable nature is the best, and such from the surface of a common, where sheep have been long pastured, being laid in a heap till it become rotten and pulverized by mixing, is well adapted for the cultivation of the melon.

For the purpose of ripening melons early in the months of May or June, I have many years used a brick bed or pit, on the same plan as that which I invented for growing cucumbers, excepting only, that through the pit of each three-light frame there are no cross flues. The pit in each frame is about three feet six inches wide, ten feet long, and three feet deep below the surface of the flues. When this bed was first set to work, the pits were filled with dung well fermented and worked, till its noxious particles were passed off by evaporation. On the surface of this well-prepared dung, was laid about one foot in depth of good rich earth; and in the centre of the surface of this bed, under each light, about the end of February or beginning of March, two or three plants were planted. The bed being thus prepared, with a lining of hot dung round about it in cold weather, no other management is re-

 quired

quired but to stop and prune the plants, thin their leaves and fruit, give and reduce air, and apply water to them in greater or less quantities, according to the heat of the air in the bed, whether caused in it by the influence of dung heat, or by the natural heat of sunshine, and temperature of the atmosphere.

If a melon bed of my inventing be prepared in the manner I have described, the dung in the pits may remain many years; nor need the earth, for the plants to grow in, be renewed every season, for it will do well by adding yearly to and mixing with the surface, about one foot deep, some rich earth of a good quality, together with a portion of perfectly rotten dung, or vegetable mould.

To ripen melons in July, August, and September, I make beds, from two to three feet high, of dung, which is first used for linings to the early cucumber and melon beds. Such dung for this purpose is very suitable, because it not only does not heat violently, but by its having undergone a proper fermentation in warming the brick beds, it is, in that use, progressively deprived of vapours of such a nature, as tends to the destruction of the melon plant.

Where leaves of trees can be obtained, they are fit to make melon beds, provided there is dung to make linings round about them; but of whatever

whatever materials beds for melons be made, the air arising in the frames from them ought to be sweet, which the good practical gardener well knows by smelling to it, though frequently he is unable to bring his beds into that state of sweetness which he knows to be requisite; for if the materials of the bed be too wet, it becomes sour by stagnation, and till that be removed, which requires time and patience, the plants will not grow kindly; and, besides, it appears from observation and experience, that though corrupted stinking air hinders the growth of certain vegetables, it greatly promotes the breeding of many sorts of insects, which feed upon, and are very injurious to fruits and vegetables of many kinds.

On the surface of beds of dung, or of leaves of trees, properly made and prepared by due fermentation, eight or ten inches deep of earth is sufficient for the roots of melon plants to run in; for if the materials which compose the bed, whether of dung or leaves, are in a good state, the roots will grow vigorously in them; and, indeed, the roots of the melon plant do not naturally run deep, but spread horizontally, not far from the surface, particularly when the great heat of the air and moisture in a forcing bed inclines them to do so.

When melon or cucumber brick beds of my inventing, are about to be built, if the frame for

the lights is not in good repair, so as to prevent the steam of the dung in the linings from getting in among the plants, or if all the articles are to be of new materials, it would be the best, and, in the end, the cheapest way, to carry up brick walls, four inches thick, a proportionate height above the flues, with a slight frame of wood on the top of them for the lights to rest on. This addition to my brick bed is already adopted in many gardens, where my methods are put in practice successfully: and, indeed, brick work, if the joints are made close, being not liable to rot or rend, as wood is, is more secure to guard against the pernicious effects of the rank steam arising from new dung.

Beds of dung, or of leaves of trees, made in winter for forcing asparagus or lettuce, or in the spring for bringing forward more early than the natural climate can do, plants from seeds of cauliflowers, lettuce, &c., will do for melons to be planted on, the latter end of May, or in June; linings of warm dung being applied to them, will, at that time of the year, give heat enough to ripen melons of the best quality.

The methods I practise, in rearing the plants from seeds, are, either to sow them in the bed of earth where they remain to fruit without transplanting, or in pots in a hot-bed. In the latter case, when the rudiment of the first rough

leaf

leaf begin to appear, they are transplanted into pots of a small size, two or three plants into each pot, and after they have made two or three rough leaves, they are planted where they produce fruit, about one foot from the glass, pressing the earth round the ball to make the surface of an equal firmness. If the bed be sweet, from the time they are planted till they have made good roots, which may be known by the shoots they make, the lights should be kept shut down nearly close, to raise as great a heat as a warm lining, and the influence of the sun can raise, covering, if necessary, the glasses during the night with mats, or other warm materials. It happens that coverings are necessary some seasons in May and June.

These methods which I have briefly described are the most simple, easiest to manage, and, I believe, least expensive, and the best I have been able to contrive.

A person looking at my bed, or to the plan of it, may perceive that there is a flue or cavity round about the pit of earth in each light. The surface of these flues is to be kept clear of earth during the winter, and part of the spring, to let the heat rise freely for the nourishment of the plants. In like manner, the flues that surround the bed of earth in each frame for melons, are to be kept clear of earth, to let the heat of the

linings arise freely from the flues to warm the air in the frames, till the days get long and the weather moderately warm; and in growing melons on dung beds, I use a similar method, by leaving unfilled up with earth a space of about six inches wide, all along against the insides of the box frames, immediately adjoining the linings; so that the heat of them is not prevented from warming the air in the bed to nourish the plants, till natural heat, assisted by coverings at night, is sufficient; then these cavities are filled up level with the furface, which is made smooth and firm by treading, to enable the earth to retain moisture enough in hot weather, without giving them water too often. But if melons are not planted earlier than about the middle of April or May, no such methods for the ascent of the heat of the linings need be practised, unless, indeed, the weather happen to be uncommonly cold and little sunshine.

In some parts of England, early sorts of melons, in fine summers, ripen in the open air by having the benefit of being planted under hand lights to forward them at first, and to screen the stems of the plants from heavy rains and damp in the night.

To prevent melons from being infested with insects, no better method can be adopted than to keep the plants constantly in a vigorous growing state.

state. For this purpose, they ought to be duly attended to, in giving them plenty of heat and water. Late in the spring, and in the summer months, they should be occasionally watered all over their leaves, till the earth in which the roots of the plants grow be perfectly soaked, and then shut down the frames with a great heat in them. This is only imitating and assisting nature. As there is nothing to interrupt in my methods the superabundant water, it oozes through the beds freely. In hot dry weather, the plants should be sprinkled frequently with clean water about four o'clock, and the lights shut down immediately for the night.

## On the CULTURE of the GRAPE VINE.

Farther to the north of the equinoctial line than 50 degrees of latitude, the fruit of the vine tree does not ripen kindly, without more heat than what is natural; and even in the most southern parts of England, when it is trained

trained to brick walls of a south aspect; where the heat in sunshine in summer is often not less than 100 degrees, some of the finest sorts of grapes do not come to perfection in the most favorable seasons. On account therefore of the inefficacy of this process, more expensive and more effectual schemes have been contrived and successfully practised.

Walls variously constructed have been formed into houses of different dimensions, by means of glazed frames, placed by way of roof to their south sides to admit light and to attract more powerfully the heat or rays of the sun. Through these houses are carried flues for fire heat to warm the air in them, in cold nights and days and gloomy weather. But after all these expensive methods, the failure of having good crops of well ripened grapes is not unfrequently experienced; and I apprehend the reason of ill success most frequently arises from their not being planted in good land, suitable to the nature of the plant. Unskilful management in pruning and training, and in keeping the air in the house about the plants not in a sweet proper degree of temperature, probably may also, in some instances, hinder success in obtaining a good crop of fine grapes: much too depends on what quantity of sunshine there is

through

through the season; the want of a sufficiency of which cannot be remedied by the greatest ingenuity of man.

It may be true that in Portugal and in other countries where grapes are produced naturally in the greatest perfection, fine fruit is obtained from plants on poor land; but it should be remembered that there is much difference between nature and art in the production of fruits of all kinds. I have seen better grapes produced on open walls of a south aspect, than could be obtained in forcing-houses in the same garden, the plants of each growing in the same kind of earth; but by making a good border of suitable earth for the vine plants in the forcing-houses, it was the means of reversing the matter; for, after this process, the best grapes were produced in the forcing-houses.

The principal thing then to obtain fine grapes is, in the first place, to take care that the plants be put into a suitable soil. The best earth for the grape vine is a strong loam of a red brown or gray colour, on a clayey but not a springy bottom, such as greatly resists the wet in winter and drought in summer. This kind of bottom, on inspection, about thirty inches below the surface, will be found nearly of an equal degree of moistness all the year. Such kind of soil is frequently to be met with all over the kingdom.

Before

Before the vines are planted, raise the border about a foot high, with loam; and trench the whole about thirty inches or three feet deep, mixing with it a good quantity of rotten dung. It should be broken small, and not turned over in lumps, according to the general method of trenching.

As the nature of the grape vine is to live long, grow fast, and produce fruit in great abundance, its roots run deep, and extend to a great length; it therefore requires much earth to run in to draw a sufficient quantity of rich nourishment to the branches and fruit, consequently when it is necessary to make a border for it, it should be made not less than five feet deep, and its width at first may be from ten to twenty feet, and increased as the roots begin to grow near the outside of it, which may be guessed at from the number of years the plants have been planted. I reckon that a grape vine, fit for a forcing-house, in full vigour of growth, will extend its roots on an average about two feet yearly. This fact ought to convince every person that intends to build a grape-house how necessary it is to chuse a spot of rich land to build it on.

To make a suitable border for the grape vine, get strong rich loamy earth, no matter where it come

come from; that from an old hedge row, or from the surface of a corn field, fallowed during the spring and fore part of the summer, will answer the purpose well, being mixed with a good quantity of rotten dung. The earth to make the border should be mixed and carried to its place when it is not wet, to prevent it from stagnation and sourness.

The best time to prune the vine plants that are to be forced early in the spring, is November or December. Among gardeners there are different methods of pruning, and if performed by a skilful person, who practically understands the nature of the plant, they all do well; for, to produce fine grapes more depends on having them planted in good land, and a proper temperature of climate kept about them to cause them to grow, than on any peculiar systems or methods of pruning or training.

When the vine tree arrives at the age of being able to produce plentiful crops of fruit, there are three methods of pruning it in general practice among gardeners.

The first is to train the shoots horizontally like a peach tree, furnishing every part of it with bearing wood at a distance, shoot from shoot, of about from eight to twelve inches, as the sorts may require, leaving to each bearing shoot of the preceding year three or four eyes.

Throughout

Throughout the summer the shoots are kept stopped a few eyes before the fruit. This is called the old method of pruning.

The second method of pruning is to train up leading branches about three, four, or five feet asunder, cutting off in the winter pruning the side or lateral shoots to one or two eyes, and laving these eyes on the leading stem about ten or twelve inches a part, and during the summer the shoots are kept constantly stopped an eye or two before the fruit, excepting the leading shoot of each main branch, which is suffered to grow to some length, and in the winter pruning it is left in length, as the plant is perceived to be able to sustain, and according to the room there is in the house for it to extend. This is called spur-pruning.

A third method of pruning the vine is to cut down near to the ground all the old branches that produced fruit the preceding year, leaving, according to the strength and age of the plant, one or two young shoots of the former year from the stem, to bear fruit. These are left at various lengths, agreeable to the ideas of different men, from eight to upwards of twelve feet long; and when the eyes break out and shew fruit, the shoots are occasionally stopped before the bunches, till the fruit be ripened, when, if the plant require extraordi-

nary

nary strengthening, the branches that bore the crop may be cut off down to the stool. Every year one or two shoots are cut down to within two or three eyes of the stool. These are to send forth the shoots for bearing fruit the succeeding year, and, of course, are to be let grow very long before they are stopped. Some gardeners lay in these long shoots straight, and others in a serpentine way; either of which methods will do equally well, provided the plants be properly managed in stopping and thinning. This is called the new method; though, in fact, I find by authors who wrote fifty years ago that it was practised in their time; and I remember to have seen it in practice in the year 1775.

Whatever method of winter pruning be practised, the vines in the course of the growing season should be attended to, so as not to suffer the tree to be crouded in any part with superflous shoots or leaves, and more bunches ought not to be suffered to swell on the plant, than it is able to bring to perfection. The berries also in each bunch should be so thinned that they may have room enough to swell.

To remedy the unfruitfulness of the grape vine that has been planted in unsuitable soil, take the earth away all round it, leaving about the stem of it a ball only to support it, and save

save as many roots long as can be preserved, then put a border of good earth to it, training out the saved roots among the earth. But take care never to earth up the vine on its stem to cover the roots deeper than the natural inclination of the plant, for if that is done to any extent it will certainly make it unfruitful.

If the border on which vines are planted be raised with earth, one or more feet, it is true fresh roots will spring out from the stems near the surface; but if by this, or a less thick covering of earth, the original roots are buried in the ground lower than nature leads them, they are thereby deprived of the natural influence of the sun and air, which in a few years will cause barrenness, at least to a certain degree.

## Of INSECTS on the GRAPE VINE.

By infection of other plants, and from certain effects in the earth, and in the climate of the house, vine plants are liable to be injured by the red spider, the mealy bug, and a kind of the brown

brown turtle insect. When the plants are infested by these they hinder the ripening and swelling of the fruit, and consequently greatly debase its flavour. To prevent accidental infection, see that no insects are brought into the house upon other plants, and to prevent natural infection, nothing is better than to keep the air in the house to a proper degree of heat and sweetness at all times, by the assistance of fire, due admission of fresh air, and gentle waterings. Every part of the house ought constantly to be kept in such a state of cleanly sweetness, as not to offend the eye or smell.

To destroy insects, peel off in the winter all the loose bark, and wash the whole plant with clean water and soap, using a spunge or such like, pressing on the wood so hard as to destroy whatever insect may happen to adhere to it. Indeed this method may be practised at any time when it can be done without injuring the fruit or young shoots. After this washing, if they are infected with the turtle insect, before they begin to shoot, rub the branches with sulphur and water.

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*The*

## *The Method by which* JOHN ROBINSON, ESQ. *had his Grape Vines managed.*

WRITTEN BY HIMSELF.

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"The manner in which Mr. R. manages his vines is as follows. He does not snag them, and so let them bear from young wood, growing up from lateral branches from an old stem, but he cuts down all the old wood to about the height of the pit, leaving only two young shoots, the strongest he can get; the strongest one to shoot from the eyes, and bear the fruit of the year; the other to be cut short and to grow, the young wood of one year to bear the fruit of the succeeding; and he goes on successively year after year in like manner, leaving the old stem of the vine to flourish and improve, as the older the plant is the better. Mr. R. treats all his vines in the same manner, both those planted in the inside of the house and those of the outside, which are brought into the house, as well as those planted in the natural ground against the common wall.

"Mr. R. prunes his vines in December; those which are trained in the house, and into the

the house, after being so pruned, are tied up with matting to iron rods fixed along the rafters of the house, as near the glass as possible, so that they may receive the severity of the winter. As soon as they begin to swell in their buds, and to shew themselves ready to break, which is sooner or later, according to the season of the spring, and the nature of the different vines, the vines so appearing to break are taken down from lying near the glass, and laid upon iron rods across the house, the length of it from beam to beam, at a distance from the glass, so that they may receive the benefit of the warm air round them, and not be liable to be affected by the frost, which they are very apt to be if they come near to the glass, being at first extremely tender, and their touching the glass, or receiving the least frost, will turn them black and destroy them. It must be observed, the longer they are kept back from breaking, the better, as the later they break in the spring the stronger they burst, and the better the fruit. If the eye burst strong, and appear thick and bushy, it is always a good sign; but if weak, and does not shew grapes on the fourth or fifth joint from the eye, it is not worth while to let it grow, but had best be rubbed off, as it only takes the nourishment away from the others.

" Mr. R. takes care that only one bunch of

grapes grows from one eye; for by this means you have the bunches good, and grapes in perfection: if more grows, the bunches are small, and the grapes do not swell so well. Gardeners are very apt to be too covetous in this respect, and let too many bunches hang on, and by this means spoil the crop; for if one bunch should come from every eye of the new-bearing wood of the vine, it would be more than the root could nourish. When the eyes of the vine swell, Mr. R. takes care to have the borders on which the vines are planted well watered with dung-hill water, which fertilizes the ground much, whcih he has saved in pits from the dung-hills; and this is continued from time to time as is necessary, pouring the water on the roots, while the grapes are forming and swelling, taking care that none of it gets on the leaves or fruit.

In order to nourish the leaves and keep them clean and growing, and to keep up a proper growth and moister, which tends much to prevent the red spiders from affecting them, Mr. R. has from time to time soft water thrown up against the top glass of the house, with a large tin squirt, as often as it appears to be necessary.

By these means Mr. R. never failed of having a good crop of fine grapes as well in the stove, where he ripens his pines, as in his succession houses."

Mr.

Mr. Robinson's garden lay about seven miles west of London, the ground in it consisted of a strong deep loamy brick earth, well manured. His grape vines grew very strong, and he had as good crops of fine peaches and nectarines in his forcing-houses, and on his open walls, as any in the country.

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## On the CULTURE of the PEACH and NECTARINE.

The peach and nectarine do not come to perfection in Britain without more warmth than that which is natural to the climate, so that to bring these fruits to maturity, brick or stone walls are built, and the trees planted and trained against the south, south-east, and south-west sides of them, by means of a trellis of laths or with nails and shreds. In fine seasons, where the land and situation are good, this method in the southern counties of England brings the fruit to excellent perfection in the months of August and September.

The kind of land which suits the peach and nectarine best, is a moderately strong, mellow, loamy soil on a dry bottom of clay or marl. If the bottom be sand, graval, or rock, the border of earth ought to be made to stand at least three feet deep, after it is perfectly settled. Before planting the trees, the border should be well trenched. If it be a rich mellow loam, no manure will be required, but if it is a strong brick earth, rather inclinable to clay, it had best be mixed with vegetable mould, or dung, so rotten that it has the appearance of vegetable mould, which is the rotten leaves of trees. The method of making vegetable mould may be seen in my treatise on the cucumber.

If the trees are to be planted in old borders, they should be trenched three feet deep, all the old roots picked out of them, and the earth mixed thoroughly with rotten dung or vegetable mould.

As these sorts of trees, after the expence of building walls and making borders for them, are in unfavourable seasons, found fruitless, to endeavour to secure a crop, and to have fruit at an early season, gentlemen of fortune have built houses, covering them on the south-side with glass frames, and warming the air in them occasionally, by the medium of brick flues conducting fire heat through them. In these houses the

the trees are generally planted and trained up upon the south-side of the back wall on a trellis. But in this situation when they are far from the glass and free circulation of the external air, the fruit, though beautiful in appearance, is sometimes not so good flavoured as could be wished. To remedy this imperfection, the houses should not be too wide, and nothing ought to be trained or stand between the trees and glass to hinder the sun from shining on them. Another good method to have fine flavoured fruit, is to train the trees up under the glass frame, about one or two feet from the glass, in the form in which grape vines are usually trained in hot-houses.

There is a pit with a glass frame for peaches and nectarines, built by my direction. It is in the clear sixty-four feet long, ten feet wide, the back wall is eight feet in height, the front five feet high, in pillars of nine inch brick work, four feet each in length, which support the sill for the glass frame of wood; consequently there are in the front eight vacuities of four feet each, between the said pillars, for the roots of every tree to extend into the main border, which is raised to within one foot of the top of the pillars, the border is therefore four feet deep, and I made it fourteen feet wide, of moderately light sandy loam of a brownish colour. After the

border

border was made it lay three months to settle, and was well trod on the surface, before the trees were finally planted, to prevent it from sinking much afterwards. As the earth appeared rich, I mixed no rotten dung with it, but when the trees were planted, I put some strong loamy earth about their roots, which had some time previous been mixed well with rotten dung. The trees being planted in the month of March, were about five feet high, well trained, and the same year they produced a moderate crop of fine flavoured fruit, which ripened in July. The trees have been planted five years, and have continued to grow remarkably vigorous, and produced fine fruit, and I have no doubt will continue to do so many years, provided they be skilfully and attentively managed.

The border extends into the pit thirty inches, and is supported by a wall in the pit nine inches thick, and three feet six inches high. The trees are planted fifteen inches to the inside of the pillars in the front, and trained up one foot from the glass on a trellis of wooden laths, fixed to the rafters by small iron supporters. The trees, which are eight in number, overspread in two years and a half after planting, a surface of upwards of six hundred superficial feet.

In one end of this pit there is a little door, and in the inside a space nearly seven feet wide, paved

paved with bricks, to walk on and to do all things necessary to the trees, such as pruning and training; and at one end there is a fire-place, the flue of which runs through the pit against the back wall, to warm the air occasionally in cloudy cold weather and damp nights.

If fruit were desired early, one fire would be too little for this pit, but in that case another might conveniently be added, the flue of which could be stretched along near the front wall in the pit, or a lining of warm well fermented dung might be made against the wall that supports the border in the pit, which would not only gently warm that part of the border near the stems of the trees, but also impregnate the air more strongly with vegetative particles; and such a combination of heat and moisture would probably cause the trees and fruit to grow freely, and become a powerful mean of preventing diseases, blights, and hurtful insects. This last however is only a theoretical suggestion for I have never put it in practice.

The best time to prune peach and nectarine trees is when the buds are so much swelled, that shoot and blossom ones can be clearly distinguished. None but skilful persons ought to be entrusted with this work. Luxuriant branches, or shoots that have no blossom buds, are not to be suffered to grow or remain on the tree, unless

to

to produce fruitful wood where there is a vacancy.

Every part of the tree ought to be left sufficiently full of blossom branches, from eight to twelve inches asunder, which must ever be left to the skill of the judicious pruner; and in training a tree, whether against a trellis or wall, it should be spread and divided equally, shoot from shoot, so that no part may be left bare from the ground, on each side of the tree, to as far as the tree extends on the trellis or wall.

## Of DISEASE and INSECTS on FRUIT TREES.

Like other fruit trees, the peach and nectarine are subject to disease, such as the canker and mildew, and to the inroads of insects, as the red spider and the green fly. Tobacco smoke used in peach-houses does good, it destroys, being copiously used, several sorts of insects on fruit trees, but it has no effect on the red spider or mildew.

The

The method I used for the destruction of insects on the pine apple plant, will destroy insects of every kind on plants of all sorts, but it is too powerful to be applied to fruit trees in blossom, or in fruit.

The mildew is a disease which often proves very detrimental to peach and nectarine trees. This disease seems to arise from a certain stagnated sour quality in the ground about the trees, entering into the sap of the tree by the roots, as well as affecting the air which surrounds the branches; and although the natural tendency of the tree, is to cast off impure sap and disease by evaporation, for want of certain qualities or particles in the circumambient air, it is not able to perform its natural office, and therefore the mildew soon begins to appear on the young leaves and most tender parts of the shoots, and if the disease is suffered to prevail, so as to stop the growth of the leading shoots, young shoots may be perceived trying to spring from the lower parts of the tree, where they would not, if the leading shoots had not been stopped in their growth by this pernicious disease. That this is the case I think is evident, because, if flour of sulphur be scattered thick on the parts of the tree infected by the mildew, it enables the tree to grow clear, without infection in its shoots or leaves, so that I apprehend the

sulphur

sulphur is the means of impregnating the evaporating air about the shoots, with certain minute particles which enables the tree to perform its natural functions.

As a farther proof of what I suggest, I say, that if the air in a peach-house be occasionally mixed with the effluvia of melted sulphur, it will not only prevent, but effectually destroy, the mildew on peach and nectarine trees. The way that I used it, was to scatter it on a part of the flue, hot enough to melt it but not to set it on fire, for were it to be kindled, it would without fail destroy the leaves and fruit, and even the effluvia of it melted, must be used very cautiously, particularly while the trees are in blossom, and till the fruit be of a good size, when, if necessary, it may be used more freely. Once, by using it copiously, when the fruit were tender, I made most of them fall off the trees next where the sulphur was melted.

This method of melting the sulphur, to cause its vapours to incorporate with the air that surrounds the trees, appears also to destroy or drive away the red spider and other insects, which are injurious to trees of different kinds, when it is confined about them for some time in a house.

To destroy and hinder insects from breeding on the trees, mix sulphur and water, and with a

brush wash well with this mixture the stems and branches early in the spring, or at any time when it can be done without hurting them; and if the walls be washed with it before the trees are nailed it will be serviceable in destroying the eggs of insects, and be a mean to prevent them from infection and blight. Observe attentively at all times, and if the mildew or red spider, begin to appear on the fruit trees, scatter flour of sulphur on the affected parts, this may be done copiously as need requires without fear of hurting them. A calm morning is the best time to do this business, before the dew be evaporated from the leaves.

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## On the CULTURE of the APRICOT.

We are told that the apricot came originally from Armenia, and that it was first cultivated in this country in the year 1562.

It is but seldom that any other artificial heat is applied to this tree, for bringing the fruit of it to maturity more early than planting and training it against a wall of a south aspect. By this process the

the masculine apricot, which is a small fruit, ripens in July, and the other sorts ripen in August and September. In sheltered situations in fine summers, those called the Breda, and Brussels apricots, ripen well on standards or dwarfs, planted in the open garden.

The apricot requires good ground to grow in, though it will prosper in earth of a less fertile, holding nature, than that which is necessary for the peach and nectarine. Rich loamy earth of not less than three feet deep is a fit soil for it to grow in. When these trees are to be planted on borders, which before have been appropriated to the growth of trees, they should be trenched three feet deep, picking out all the old roots, and mixing the earth well with rotten dung; and in trenching the borders for this purpose, it should not be done in the common manner, but it ought to be chopped over small, in the way loam from a common is done for planting melons in.

In pruning the apricot tree, it is to be done in the same manner as directed for the peach, excepting that sometimes it is necessary to let it produce fruit on short studs or spurs, which, however, ought not to be left on the tree if they are more than about three inches long, unless they can be nailed to the wall.

The apricot tree may be pruned at any time during the winter, but it is certainly best not to do it till the buds begin to swell, for by that time

it will be more clearly seen which are the most promising shoots to leave in for bearing.

## On the CULTURE of CHERRIES, PLUMS, and PEARS.

The pear tree grows best in a strong deep loamy soil, and the finer sorts of it are frequently planted and trained against brick walls of different aspects, of a great height.

Plums and cherries grow best in a brownish, mellow, moderately light loam, rather sandy than clayey, of not less than three feet deep. The finer sorts of these are often planted on walls of different aspects, so that a succession of their fruit may be had as far as it can be obtained by different situations. Indeed, many gentlemen have houses for forcing cherries by the assistance of fire or dung heat, and by these means ripe fruit is often obtained at a very early season of the year. These three kinds of fruit, unless some of the French pears, come to maturity on standards or dwarfs planted in the open ground.

When planted on a wall the morella cherry prospers

prospers best on a north aspect, and as it produces its fruit on young shoots of the preceding year's growth, it must be managed in regard to pruning and training in the same manner as a peach or nectarine tree, except that its bearing shoots must not be shortened.

All the other sorts of pear, plum, and cherry trees, with which I am acquainted, produce their fruit on studs or spurs; and when they are trained against walls, these spurs ought never to be suffered to extend far from the wall, for if they are suffered to grow far from it, the fruit in general will not derive much benefit from it, and the tree will be in a fit condition to harbour insects of different kinds.

When pear, cherry, or plum trees are planted in the open garden, as standards or dwarfs, to grow up and spread their branches nearly in a natural way, after they begin to bear fruit, they require no more pruning than yearly to cut out the dead branches, and any superfluous ones which begin to croud the bearing wood, or those which take the lead of the others, which if suffered to go on would disfigure the tree, and hinder the under branches from bearing.

When fruit trees are planted in the kitchen garden, I think espaliers are preferable to standards or spreading dwarfs, these spread and hurt the crops near them by their shadow and dripping in rainy weather; but espaliers when well managed

naged appear handsome, and they cast a shadow at certain times of the day, very useful to some kind of plants, and seedlings of various sorts.

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## On the CULTURE of the FIG.

The fig tree, though it does best in a light warm soil, will grow and produce fruit in any kind of ground which other fruit trees grow in, if it be planted against a south wall. In warm gardens in fine seasons, its fruit ripens very well on an east or west wall. The fig bears its fruit on the wood of the preceding year's growth, so that in pruning and training, every part of the tree should be left furnished with that kind of shoots, and the shoots are not to be shortened, unless it be necessary to do it to cause it to throw out a supply of bearing wood for the ensuing year. The time to prune the fig tree, is when it is ready to put forth its shoots in the spring.

The fig is a tender plant, not able to endure hard frosts, therefore in winter, litter of some sort ought to be laid on the border to keep the frost from the roots, and the branches must be covered

covered with mats, or any thing else that can be contrived.

As the fruit of the fig tree, is by some persons held in esteem, it is not unfrequently forced in houses, and in that situation, in regard to planting and warmth, it is to be treated in the same manner as the peach or nectarine. It may also be ripened early, by being planted in pots, and put into a peach or hot-house, and either plunged in the pit among tan, or leaves of trees, or set on the flues, or in any part of the house where it is not too warm. When this method is practised it may be done in the following manner:

Propagate the plants from layers, slips, or cuttings put into pots, and plunge the pots in tan or leaves, moderately warm, in a frame or hot-house. When they are two years old they will be able to bear fruit, and their pots will be filled full of roots. In the months of November, or December, turn the plants out of their pots, and with a sharp knife cut off all the outside of the ball, which will divest them of the most matted roots, then put them in larger pots in a strong loamy earth. In this manner let them be treated every year, which will be a mean to prevent the fruit from falling off, for the fig tree is very apt to cast its fruit even after they are half swelled.

The black and white figs are good for forcing, they

they may be put into the house in January or February, they require plenty of water.

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## On the CULTURE of the APPLE.

The most suitable land to plant the apple tree in, is a brownish mellow loam, not less than three feet in depth on a dry bottom. Where soil of this nature and deepness can be obtained in a sheltered situation for the apple tree, it will grow well, and produce abundant crops of fine fruit, if the seasons prove favourable. It will, however, do when planted in other kinds of earth, such as sandy, gravelly, or clayey soils, of various depths. Before the trees be planted the ground for them should, if it will admit, be trenched two feet deep, and more or less manure mixed with it, in proportion according to the richness or poverty of the state it is found in.

If the soil be of a clayey or brick-earth nature, mix it well with vegetable mould, rotten dung, or any other kind of manure of an opening quality, such as peat ashes, soot, or the

scrapings of streets. If the earth be light or of a sandy nature, besides manure, mix with it some strong soil of a marley nature.

The method of pruning the apple tree, differs nothing from that of pruning pears and cherries. After the trees come into a bearing state, the leading young shoots ought not to be shortened, and the trees should not be suffered to become crouded in their branches, nor any dead ones left on them.

## On the CULTURE of the GOOSEBERRY, and CURRANT BUSHES.

These are easily propagated by cuttings of about eight or ten inches long, or they may be raised from seed, which brings a variety of sorts. A rich sandy soil is best for growing currants and gooseberries. It should be trenched about two feet deep, and manured with rotten dung. Though they do well when planted on borders in the kitchen garden, it is best where many are required, to plant them in a quarter by themselves

selves in rows, not less than four feet, plant from plant, in the rows, and six feet between the rows.

In pruning gooseberry and currant bushes, the first two or three years after planting, head down the young shoots pretty close, leaving them longer and longer every time of pruning, as the plants gather strength, forming the branches out every way regularly to the height of three or four feet, leaving the bearers from six to ten inches apart.

These bushes require a regular annual pruning, and as they produce fruit on the preceding year's wood as well as on studs, the best and speediest way to prune them is, with the left hand, to lay hold of the branches that are appropriated for bearing the fruit, one after another, and with the knife in the right hand, begin nearest the ground, and cut off quickly all the last year's lateral shoots, leaving only an eye or two on each, taking care not to injure the spurs, and shorten the young leading shoot of each bearer, to a third of its length, or more or less, according to the strength of the bearing branches in general.

Currants shoot more luxuriantly than gooseberries, therefore their shoots require to be more shortened, and the bush let run to a greater height.

 Thus,

Thus, by suffering the bushes to extend in height only gradually, and by keeping the bearing branches sufficiently thin, they produce abundant crops of good fruit, and the bearers becoming strong are not liable to be borne to the ground by its weight. If any of the bearing branches become weak or unfruitful cut them out, and let strong young shoots come from the stem, or root, to supply their place.

This method of pruning has another good effect, it enables the bearing branches to throw out spurs on every part of them, so that fruit is produced on the bushes from the stem near the ground to the extremity of the shoots, with rarely a naked part to be found.

There are some sorts of gooseberries, which naturally bend to the ground, and trail somewhat like brambles. Such should have three or four stakes drove in round the bushes, to support hoops to which the branches may be tied regularly. To have plentiful crops of fine fruit, let them be manured at least once in two years. In winter, after they are pruned spread dung round about them, and dig it carefully in among the roots.

Currants do wellto train against walls or pailings, on which, by covering them with matts, they may be preserved from the birds, and kept to a late period of the year.

On

## On the CULTURE of RASPBERRIES.

Though the raspberry plant prospers best in a deep light loamy soil, it does well in any sort of earth, when trenched about two feet deep, and sufficiently manured. Young plants are produced plentifully every year, from round about the stools of old ones. If well managed the plants will bear plenty of fruit, being planted in any part of the garden; but in dry hot summers, they do best in a spot which is shaded from about eleven till three o'clock in the afternoon.

Raspberries may be planted in rows, leaving a space of four or five feet between the rows, and three or four feet, plant from plant. They bear their fruit on the preceding year's shoots, which are produced plentifully and grow sometimes, in moist seasons, eight or ten feet high.

The method to prune raspberries, is in the first place, to cut out clean all the shoots, which produced the fruit last year, then cut the weakest of the young shoots, leaving of the best ones, from three to six or eight, according to the age and strength of the mother plants. They may be

be pruned any time in winter in open weather; but the safest way is to do it early in the spring, when the most severe frosts are over, for in some seasons raspberry-shoots after pruning, are partly killed by hard frosts.

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## On the CULTURE of the MULBERRY.

The black mulberry tree, bears a delicious fruit, which is so delicate that it cannot be handled without causing the juice to come out, which is of a reddish staining colour. The plants of this tree are raised from layers or cuttings, put into the earth in the autumn or spring.

The mulberry is a tree rather slow in growth, but it lives to a great age, and spreads its branches widely. It prospers well in deep sandy earth. Its fruit ripens in England towards the latter end of August, or in September. After it comes into a bearing state, all the pruning that it requires is to cut out any branches that happen to die or become unproductive, and to keep its shoots from being crouded.

## On the CULTURE of the WALNUT TREE.

We are informed that this tree is a native of Persia, but the period when it was brought into this country is not certain. The sorts most commonly cultivated in this country are the thin skinned, the large and the double walnut. The young plants may be propagated by layers, but the best way to raise them is from the nuts, which may be planted or sown in drills in the autumn, or in February or March. Before they are planted where they are to produce fruit, it is best to transplant them two or three times, till they become well rooted strong plants, having a stem six or seven feet high.

Walnut trees grow best in good land, and if it were well trenched before they be planted it would help them to grow more quickly, and produce fruit of a large size. They require the same mode of pruning as the mulberry tree.

On

## On the CULTURE of the MEDLAR.

The great medlar, and the Dutch medlar, are most commonly cultivated in this country. The way to raise the plants is in the month of March, to plant them in a shady place. Take good cuttings from the tree, and plant them in rows; and when they are well rooted, transplant them till they be fit to plant where they are to remain, which is when they have a stem about five feet high.

Medlars are also raised from seed, and by grafting. When they begin to produce fruit, and afterwards, they require little or no pruning only to cut off the dead branches, and those that injure the others by rubbing in high winds.

## On the CULTURE of the QUINCE.

The quince is beautiful when it is in blossom, and in the autumn when the fruit is ripe on it. The

The sorts are the apple, the long, and the Portugal quince. The plants may be raised from cuttings, layers, or seeds. They may likewise be propagated by grafting or budding, and such will bear sooner, and probably may be more productive than those raised by the other methods.

The quince tree is to be pruned in the same manner as the apple or pear, taking care every year to cut off all dead and decaying branches, whenever they appear in that condition.

## On the CULTURE of HAZEL NUTS and FILBERTS.

These are found growing wild in woods and hedges. They may be propagated in abundance from seed; but to obtain the finest sorts of them in plenty, the best way is to raise them from layers, or by grafting. Filberts may be planted in rows in the kitchen or flower garden and shrubberies, and the common nuts on the outsides of woods or in hedge rows. They make a good hedge by themselves, if they be planted thick, and the shoots of them are useful

ful for hoops, and for many purposes in husbandry.

## On the CULTURE of the BARBERRY.

There are the white, the red, and the black barberry. They are easily raised from suckers and layers, and may be planted in the kitchen garden, or in shrubberies, as they are a beautifal flowering shrub, they look well in the spring, and in the autumn they have a beautiful appearance when their fruit is ripe. They will grow in any sort of earth, and may be pruned in the way most flowering shrubs are.

## On the CULTURE of the STRAWBERRY.

Strawberries are most generally propagated by slips, and young plants, from the runners of old ones. They are either planted in beds, or in

in rows about the borders. To obtain varieties they may be raised from seed. If the seeds of them are required, put the berries into a vessel in water, and break and rub them with the hand, so that the pulp may be dissolved and washed clean away from them; then dry them, and sow them in the spring on a border of rich light earth, and keep them watered and weeded during the summer when they require it.

The wood and alpine strawberries bear best generally when they are planted in rich light earth of a brownish colour, and these two sorts seem to bear best when they are raised from seed. Most of the other sorts, such as the scarlet, the hautboy, the calolina, and the chili, do best in a strong mellow loam.

An open situation is best for strawberries; but to have a succession, some of them should be planted in situations where they may be shaded part of the day. The alpine sort, if it be planted on a warm border, and permitted to spread, the runners will bear fruit the same year; and this prolific strawberry continues bearing fruit, some years, till the middle of October.

Strawberries are often forced, to bring them to perfection early in the spring; for this purpose, it is the best way to pot the plants a year before they are forced, in order that they may be

be strong and well rooted. A heat sufficient to force the cherry or the peach-tree, is the most natural for bringing strawberries forward early. They will do in the succession pine-apple house; but the fruiting one is too warm for them, unless to ripen them after they are half swelled.

## On FORCING ROSES.

The rose, though produced by a rough, prickly plant, that can hardly be touched by the naked hand, is so beautiful, and casts such a fragrant smell, that no little labour is bestowed, and a good deal of expence incurred, in endeavouring to bring it into bloom in the winter and spring months.

This effort sometimes proves successful eight months in the year; but it is only bestowing labour and expence with little probability of success to try to force roses into bloom against nature, in the gloomy months of winter, when during that period the natural efficacy of the light and heat of the sun is so greatly withdrawn from our climate.

Roses

Roses will sometimes blow well in houses where pines or grapes are forced, being set on the cribs or flues where there is room for them; and in the spring months they can be forced in frames or pits, with the assistance of dung heat. But to have a succession of fine roses, it is best to appropriate a small house for them only; I mean that the house in which the rose trees are forced ought to be kept to the degree of heat and moister most natural and best adapted for producing a regular succession of fine clean roses; and indeed this rule, though perhaps with many a theoretical one, had best also be followed in forcing all kinds of valuable fruits.

This principle will not oppose the generally adopted method of forcing fruits, flowers, and other kinds of vegetables together in one house; for in the spring it would be a pity to see a forcing-house not sufficiently filled with plants of some sort or another, either for beauty, smell, or usefulness; but we should study what sort of plants will best bear the heat required to bring to perfection those fruits or flowers for which the house is chiefly appropriated: for instance, the French bean, that wholesome vegetable, which in the open ground comes to maturity in summer, bears, in the winter

winter and spring, the degree of heat requisite for the pine-apple.

The general method in practice for forcing roses, where a constant succession of them is required, is to plunge the pots in the house in a bed of warm tan. This method, if the trees are good, often brings fine roses; but having considered that it is not natural for the roots of a rose tree to have greater heat than what is communicated to them by the heat of the sun and air, I practised a method many years successfully, which I reckon preferable in several respects.

Instead of using warm tan in the pit for plunging rose pots in, I covered the old rotten tan with small gravel, raising it up nearly as high as the sides of the pit, and set the rose pots in rows upon the surface of it.

This method I think is to be preferred to that of plunging the pots in warm tan; first, because the roots of the plants are never injured by heat, and therefore they will bear forcing many years successively; secondly, as it is necessary, once a week, at least, to turn out of the house the plants that have done blowing, and those unproductive of blossom, it is executed with less danger of breaking the buds; and thirdly, the expence of tan is saved.

In the Duke of Buccleugh's garden in Scotland,

land, I saw, in winter, in the year 1806, perhaps an improvement on my method. The rose pots were plunged lightly in sand in the pit; and the blow of roses were as fine as could be desired at that season of the year.

Having the pots among the sand may make it more natural for the roots, for in that position they are not so susceptible of the variations of heat and cold, as when standing on the surface of it. The fine blow of roses, however, was not altogether occasioned by plunging the pots in sand, but by the skill and attention of the gardener in the other branches of their management.

Most sorts of roses can be forced, but for that purpose the provence kinds are preferable.

There are two sorts of evergreen china roses; one of them of a pale colour, the other a deep red. The pale coloured is a beautiful rose, but it has scarcely any smell. It grows strong when planted in rich earth, and will continue blowing plentifully five months in the open air, in a sheltered situation. It should be planted in rich light mellow ground, and in winter the ground round its stem ought to be covered with short dry dung, or rotten leaves of trees, to prevent the frost from freezing the roots. In very severe frosts, in the northern counties, it should be covered with mats.

To

To keep the frost from the roots of many kinds of plants is of much use to them. If the roots or stem of a plant of any kind be frozen while they continue in that state, the branches derive no nourishment from them. The plant is then in a dormant state, consequently the frost has as much power on the branches of it, as if they were cut off; but if the roots of a plant are covered by nature, or by art, so as to hinder the frost from penetrating into the ground, the stem and branches derive a support from them, which prevents the frost from affecting the plant to that degree as it would if the roots were in a frozen state.

I believe frost does no good to any kind of plant whatever, though it benefits the ground by loosening and meliorating it, and it probably destroys many hurtful insects.

A good time to begin to force roses is about the beginning of December. Those who intend to have a regular succession should set in some plants every week. The number of pots taken in at a time, must be regulated according to the size of the house, so that by the time the house is filled with them, the first set in may be coming into bloom.

In forcing roses endeavour to imitate nature. Let the air in the house be from 55 to 65, as near as can be guessed, till about the 20th of December,

ber, when it should be increased to 70 and occasionally to 75. Smoke the plants with tobacco once a week, which, if well done, will effectually prevent them from the inroads of the green insect. Water the pots when they require it, and wash the plants, by sprinkling them occasionally with clean water; but in winter it is not advisable to do this to plants after they shew their buds for blowing, unless the sun shine often.

The house should be kept clean and sweet, and the flues and paths frequently sprinkled with clean water.

The flower buds of the rose tree are very liable to be destroyed by a little grub-worm, which rolls itself up in the leaves; therefore, as there is no other way of destroying them that I know of, but with the hand, the plants should, after they begin to shoot, be carefully examined every day, and wherever a leaf is perceived to be curled, it is likely it is the nest of one or more of these troublesome insects.

Roses forced in winter, or early in the spring, require a different mode of treatment in pruning than those planted in the open ground to blow in summer. The shoots of most kinds of the latter, that are of a strong growing nature, require shortening to keep them in a healthy, neat, blowing state; but if the former, that are to be forced in winter, or early in the spring, were

to be cut in this manner, many of them would probably produce no bloom.

Rose plants for forcing ought not to be pruned till their buds are prominent, and in that state a skilful person will be able to judge which are the most likely to produce roses. The buds that appear full on the extremities of short shoots or studs, are the most promising. But the safest way for those not well-experienced, is to leave more shoots than necessary, and when they grow so long that it can be clearly distinguished which are the blowing ones, and which are not, the plant may safely be divested of all unnecessary branches.

If rose bushes are become weak by forcing, take care either to be provided with a succession of fresh ones, or give the old ones a year's rest. If their branches are become high, they may be cut shorter. A rose bush will shoot freely from the old wood. Put some dungy earth down to the roots about the stems of them, and water them occasionally with thick water from dunghills. These means if practised will enable the rose trees to grow, and recover their former strength.

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THE

THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES.

*For January.*

The month of January being cold and often windy, the hot-houses demand great attention to keep them to a due degree of heat for the pine apple and other plants in them, at this season of the year.

If there be not for the accommodation of a married head gardener, in or near to the garden, a house. which a good garden ought never to be without, there should be at least one room decently furnished, for one or two men to sleep in, that the hot-houses and other matters may be duly attended to, night and morning.

Some of the pine plants will now probably be shewing their fruit; but whether this be the

case or not, they require a good heat in the tan bed to keep them in a growing state.

Examine the tan, and if the heat in it is not sufficient, with the hand, or a handy hoe, draw out from among the pine pots the exhausted tan, nearly as low as the bottoms of them, and fill up the empty space to the rims of the pots with well fermented sweet new tan, which had lain in a dry place in a ferment, about three weeks, and mixed once or twice during that time. See that the tan is put perfectly close to the pots, that no vacuities be left about the sides of them, which would let the heat of the tan escape. Level the pots, and make the surface of the tan bed smooth and neat among them.

In this month, the gardener knowing the state of his hot-houses, ought to make preparation of tan and other articles, which may be wanted the ensuing month.

If there are succession pines in a hot-house or pit, warmed by fire heat, it is likely they may require watering once or twice this month; but those warmed by dung heat will want none.

*Height*

*Height of the Thermometer in the Fruiting-house, for January.*

Under D is the day of the month—under M is the height at which the thermometer stood in morning—under N that at which it stood about noon—under E the height at which it stood in the evening. During the intervals it might vary, and be sometimes higher, and at other times lower.

| | D. | M. | N. | E. | | D. | M. | N. | E. |
|---|---|---|---|---|---|---|---|---|---|
| Watered | 1 | 63 | 68 | 65 | | 17 | 66 | 78 | 68 |
| | 2 | 63 | 70 | 70 | | 18 | 60 | 72 | 68 |
| | 3 | 64 | 75 | 70 | | 19 | 66 | 75 | 74 |
| | 4 | 65 | 72 | 70 | | 20 | 64 | 72 | 65 |
| | 5 | 63 | 70 | 70 | Watered | 21 | 64 | 74 | 66 |
| | 6 | 65 | 76 | 68 | | 22 | 62 | 72 | 67 |
| | 7 | 60 | 74 | 68 | | 23 | 63 | 70 | 61 |
| | 8 | 65 | 70 | 66 | | 24 | 61 | 92 | 65 |
| | 9 | 62 | 72 | 66 | | 25 | 64 | 70 | 66 |
| | 10 | 63 | 80 | 66 | | 26 | 63 | 85 | 66 |
| Watered | 11 | 65 | 75 | 70 | | 27 | 65 | 71 | 68 |
| | 12 | 62 | 68 | 63 | | 28 | 66 | 90 | 65 |
| | 13 | 63 | 68 | 65 | | 29 | 62 | 98 | 67 |
| | 14 | 64 | 74 | 70 | | 30 | 63 | 85 | 64 |
| | 15 | 68 | 85 | 68 | | 31 | 60 | 68 | 66 |
| | 16 | 65 | 93 | 68 | | | | | |

I wrote

I wrote down the days on which the pots had water poured into them; but the times the plants were watered over their leaves, are not mentioned. No certain rule can be laid down for the exact quantity of water that must be given, or how often; nor is it necessary to be particular. These and many other matters must be left to the gardener, who has the care of the plants.

To water the fruiting pine plants in winter, in gloomy weather, when it is best not to water over the leaves, a small sized watering pot, with a long tin pipe, and a flat rose on the end of it, should be in readiness. Eighty degrees is the medium heat of the water with which pines should be watered. I would advise never to water them with water under seventy-five, unless in very warm weather, when the earth about their roots will soon regain its natural warmth.

In cold gloomy weather heat will be required in the flues constantly, fires should be made regularly every evening, and morning, if there is not the appearance of sunshine, to warm the hot-houses sufficiently.

The French beans planted last month will probably now be in blossom. Let them be attended to in watering, and keep the pots clear from weeds. Sprinkle the leaves of them occasionally with water, not less than 70 degrees warm. This will promote their growth and be a mean

a mean to prevent them from being infected with insects.

If cucumbers were planted in boxes in the hot-house, in August, perhaps a few fruit may be got from them this month; therefore let them be watered when they require it.

Where there is room in a hot-house, and they be desired, a few roses in pots here and there on the cribs of the pit will blossom well, if they are in good mould and get plenty of water.

If there are any other exotics in the hot-house beside the pines, keep them clear of decayed leaves and weeds, and sprinkle them occasionally with water to cleanse them from dust. Hard wooded exotic plants require water frequently, but succulent plants, such as the cerus, melon, thistle, and aloe require very little.

Sow French beans in pots for a succession. Cress, mustard, and rape may also be sown twice a week: sow the seeds of these in pots, in rotten tan or vegetable mould, covering them well and lightly, and set them in any part of the hot-house; as they are cut young for sallading, they require no water.

If there are grape vines in the hot-house to run up the rafters, probably they will be shewing their fruit this month, therefore great care must be taken of them. If they are planted on the outside of the house, see that the stems be secured

secured from frost. In case the stems stand naked out of the ground, roll soft hay bands round them, and cover the border where the roots run, with dry litter of any kind, to keep the frost out, for if it get at the stems or roots, it will destroy or injure the crop.

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## On the GREEN-HOUSE.

*For January.*

The green-house will require attention this month. Make such fires in it as are sufficient to prevent the frost from killing or injuring the plants. Open the sashes to admit air every fine day. The plants will not require much water at this season of the year. The pots, however, should be examined every other day, as some sorts require water oftener than others.

Decayed leaves should be taken off, the pots cleared of weeds, the house kept free from dust, and clean and sweet in every part.

Smoke the plants with tobacco, once a fortnight

night or three weeks, which will destroy some sorts of insects with which they are liable to be attacked.

## On the FORCIN-GHOUSES.

*For January.*

The fruit of the grape vine, forced early, will be set this month. All due attention must be taken to make the fires at proper times, and regular, to keep up a sufficient heat. The air about the plants in the house, ought never to be under 55, and the thermometer should rise gradually every day, to between 60 and 75, and a little higher with the sun heat, if there be air at the house. Take off the tendrils from the long shoots, and tie them up when they want it. Stop the shoots, before the fruit, leaving a joint or two to break out for a leader.

Pots of cherries, strawberries, and figs may now be set into the houses, to bring them forward early.

Put

Put the glass frames on the cherry house, if it was not done last month. Make a little fire in it, but do not let it rise higher this month than about 50, and keep plenty of air at it constantly.

To have a regular succession of roses, set in some pots every three or four days. The plants of roses that have done blowing in the forcing-house, may be carried out to make room for them to come in. Search among the shoots and flower buds every day, and pick off all grubs that can be found. Tie up any tree that may want it, and cut off all dead shoots or leaves as soon as they appear.

If the thermometer is not below 55 in a morning, the house is warm enough, but let it rise in the course of the day to 70, and sometimes higher, with plenty of air at it, if the weather permit.

In evenings when the flues are hot, sprinkle them with water till the house is filled with steam. Give the plants a sufficiency of water, otherwise the roses will not be fine.

When the buds of a rose tree are ready to burst open, if it be set into the green-house it will blow fine.

Many kinds of flowers may now be taken into the forcing-houses, such as honeysuckles, persian lilacs, hyacinths, nascissus, jonquils, anemonies,

monies, carnations, pinks, stocks, sweet williams, &c. these may be put into a gentle tan heat, or set in convenient parts of the house.

Begin to force tuberoses. These bulbs must be planted in pots, and plunged in tan or dung, in which is a good growing heat.

Sow the seeds of stocks, mignonette, tomatoes, sweet marjoram, sweet and bush basil. Sow the seeds in pots in light earth, and set them into the forcing-house in an airy situation, to keep them from the damp.

The fruit of the peach and nectarine trees intended to ripen in May, will now probably be set and swelling a little. Endeavour to keep the air in the house about 60 with fire heat; when the sun shines let it rise to 65 or 70 with air at it; give the house air every day, whether the sun shine or not.

Take the opportunity of fine sunshine mornings to wash the trees with clean water, warmed to about 60 degrees, of Fahrenheits thermometor. Divest the trees of useless shoots and leaves, and keep the house clean and sweet.

Peach and nectarine trees now in flower, will demand great attention. Let the medium warmth of the air in the house be 55 degrees; and while the trees are in blossom give them no water, but fill the house full of tobacco smoke once a week, or oftener, if there be

be the least appearance of the green insect on any part of the trees.

Examine the trees frequently, and if there be any appearance of mildew, dust a little sulphur on the infected parts.

If the gum or canker be seen on the shoots or any part of the trees, open the bark and cut out the dying wood.

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## On the FORCING-FRAMES.

*For January.*

To have early melons, sow some seed about the middle of this month, and for fear of want of success, sow some more a few days afterwards. Sow the seeds in rich earth in pots, and set them in a good strong heat, which will cause them to vegetate quickly, but take care when they are c omup to keep air at the frame, to prevent them from being drawn up weak. When the seed leaf is fully expended, transplant them into small pots, two or three plants into

into each. If a brick cucumber bed is at work, set the pots in a row on the back flue, where they will have heat enough, and not be liable to be destroyed by the damp.

Those who rear melons early on a dung bed, should begin to prepare the dung for it about the beginning of this month, for dung for this purpose must probably lie four weeks in a ferment, and be shaken over two or three times, before it be fit to make into a bed; and after the bed is made, it must lie till its violent heat is over, before the plants can be safely planted in it.

Gardeners, who are allowed and approve of the brick bed, and have the idea of managing it properly, will save some labour, and perhaps a good deal of trouble to themselves.

Where there is no forcing-house, sow small sallading in a gentle hot-bed.

Force Asparagus. This is done on a hot-bed of dung, or with fire heat in a flued pit; which last is the best method where a succession is required. Fill the pit up about three feet with leaves of trees, or with dung well-prepared, to raise only a mild heat. Lay upon the surface of it all over, about five or six inches thick of vegetable mould, rotten tan, or light rich earth of any kind. The roots of full grown plants being taken up, carefully trim their roots well, and

and plant them as close as they will go together, and cover them over four or five inches thick, with the same kind of mould as that directed to be put under them.

Make hot-beds on which to sow the seeds of radish, cauliflower, lettuce, carrot, onion, and early york cabbage. Cover the surface of the beds eight or ten inches thick with rich earth; sow the seeds regularly, and cover them full half an inch thick with fine sifted mould. When the seeds begin to appear, take care to give them plenty of air, to prevent them from being drawn up too tender.

Plant in a frame on a gentle hot-bed, mint, tansy, and any other herbs of like nature, that are required before they grow in the open garden, or if you have them in pots, set them into the forcing-house.

Cauliflower and lettuce plants in frames or under hand lights, to preserve them through the winter, should have air in mild weather; and as they appear let all the decayed leaves be taken off, and when any weeds happen to grow among them, let them be picked out.

Take care of auricalas, carnations, and other such like plants that are in frames, give them air in fine days, and keep the pots free of weeds.

Pine apple plants, in frames or pits, should be attented to. Cover the glass well in cold nights,

nights, with mats and any dry litter that can be procured. The heat, unless for a short time, ought not to be lower than 55.

Mushroom beds in forcing-houses should be attended to. Let the heat of the air in them be kept up from 50 to about 60, by making gentle fires when necessary.

A mushroom house is an an inclosed thatched shed of any dimension required. The flue for the fire is carried round the inside close to the wall, and the bed is made in the middle of the house. Some carry the flue under the floor of the house a little distance from the bed. This introduces the heat gently to the bottom of the bed, as well as to the air which surrounds its surface.

Peas in frames should be attended to. They must be covered in severe weather, to keep them from being destroyed by the frost.

Plant an early sort of potatoes on a hot-bed of well-worked dung, or in a pit warmed with fire.

Potatoes may be planted in small pots, one in each pot, and set into the forcing-houses, and when their roots fill the pots, turn them out with the balls whole, into a frame to produce fruit early.

On

## On the KITCHEN-GARDEN.

### *For January.*

Sow radish and lettuce towards the latter end of this month, on a warm dry border of well-prepared earth.

Peas of different sorts may be sown this month. Sow the charlton and the early frame, in drills, four feet, row from row. Sow also the large marrowfat and patagonians, in drills, six feet, row from row.

Peas sown in the former months which are come up, may, in a dry day, have a little earth drawn lightly to their stems. This will be a mean to preserve them from the frost.

Plant broad beans to succeed those planted in December. Let them be put four feet row from row, and four or five inches distant from each other. They do best in sandy loam trenched two feet deep and well manured.

In open weather earth up late planted celery, to blanch and to help to keep it from the frost.

About the latter end of the month, spinach may be sown: sow it in drills between the rows of

of peas or beans; it will come early enough in this situation to succeed the winter spinach.

If the stems of brocoli stand high out of the ground, earth them up as high as can be done.

Towards the latter end of the month, let a succession of cabbage plants be put out. The early York and sugar-loaf are fit sorts to plant at this season of the year; they delight in ground not too heavy, and well enriched with manure.

In frosty weather, dung may be wheeled from the melon ground to such quarters of the garden as stand in need of it.

Dig the ground between the rows of gooseberry and currant bushes, and if there is any work to do that could not be done in December, let it be set about, as soon as possible, the beginning of this month.

## On the FRUIT GARDEN,

*For January.*

In open weather, prune apple and pear trees of all sorts, in the orchard; cut out any rotten or decaying branches, and reserve the best young

shoots to grow up, to fill any parts of the trees that may seem to be getting too thin.

Prune and nail plum, cherry, pear, and apple trees, on walls and espaliers. Cut them in such a manner, as that the bearing spurs do not extend too far from the leading branches. Take off all tyers or shreds that are rotten, and clear the trees of dead leaves, cobwebs, or any thing else that do not belong to them. Nail the branches fast and regularly to the walls, so that they be covered equally from bottom to top.

To forward the work in the spring, peaches, nectarines, and apricots may now be pruned and nailed; but it would be better to let this work alone till the trees are ready to push, if time can be spared from other work to do it at that season.

If not completed last month, endeavour to finish the cutting of gooseberry and currant bushes, that the ground may be dug among them before the roots begin to grow.

Plant cuttings of apple, pear, and plum trees; the plants from these will, if permitted, come into bearing soon: they do not grow so luxuriant as those from grafting.

Grape vines against walls may now be pruned; but the safest way is to let them be till next month.

Make

Make plantations of currants, raspberries, and gooseberries.

If the weather is open, all sorts of fruit trees may be planted.

Tie new planted standard trees to stakes drove fast into the ground, to prevent the wind from breaking them.

Protect the stems of apple and other fruit trees, from having their bark bit off by hares. For this purpose, stick bushes, or roll old mats round them, or any thing else that can be contrived.

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## On the PLEASURE or FLOWER GARDEN,

*For January.*

The different kinds of flowering shrubs may in this month be pruned. Cut out all luxuriant and straggling superfluous shoots; and those that are crouded should be thinned, so that the sun and air be not prevented from having their due effect on them. Some kinds, if permitted, would grow high and unseemly; therefore, when they appear to be getting into that state, cut out some of the tallest branches entirely, and let not

the branches of one shrub interfere with those of another.

After the pruning is finished, clear off the cuttings, and take up from about the shrubs all suckers which have grown from the roots, and then dig the ground among them neatly, so that the whole shrubbery may be clean, and have the appearance of uniformity.

Plant flowering shrubs and herbaceous plants of every kind.

In order to form screens, to break off cutting winds from quarters of the garden that may require it, hedges may now be planted. The kinds of plants which may be planted for this purpose, are hawthorn, beech, hornbeam, privet, elder, willow, poplar, yew, &c. Of any of the plants of the deciduous tribe, hawthorn makes the best hedge; it is durable, and when properly trained and kept clipped, it has a neat appearance.

In this month, edgings of box and thrift may be planted in dry soils. Lavender, thyme, southern-wood, daisies, and several other low growing plants, may likewise be planted for edgings. The box is most generally preferred for its neatness and durability.

Forest trees of all kinds may be planted in open weather.

The best sorts of tulips and hyacinths should be attended to. If they are in beds, in frosty weather

weather cover them with litter of any kind, or with mats upon hoops, and as soon as the frost is gone uncover them.

Bulbous roots, which have been kept out of the ground till this time, should now be planted. The sorts generally reserved for this purpose, are anemonies, ranunculus, narcissus, jonquils, iris, crocus, snowdrops, fritillarias, tulips, &c.; these may be planted here and there in the flower borders, or in beds.

## On the NURSERY GARDEN,

*For January.*

Plant cuttings of all kinds of shrubs, fruit, and forest trees, which can be raised by this method.

If the weather be open, young forest trees, and shrubs of all sorts, may be transplanted safely.

Make plantations of stocks for budding and grafting upon; plant them in rows, from two to three feet apart, and about eighteen inches, plant from plant.

Young plants and seedlings of arbutus, cypress, cedar of Lebanon, and many other ever-

green

green and deciduous plants, will require to be protected from severe weather, which frequently happen in this month. They may be protected by putting frames over them, or by arching them over with hoops and mats on them. If in pots, they may be plunged in rotten tan, leaves of trees, sawdust, or light earth.

There are various kinds of hardy trees and shrubs which require to be propagated by laying, and when the weather is open, it may be done this month. The way to do it is to chuse branches that will easily bend to the ground, fasten them down with hooked pegs, and divide the last year's shoots equally, bend them into the earth four inches deep, and make them fast in it with pegs; cut off the ends of the laid shoots, which should stand out of the ground about six inches, more or less, according to the sorts.

When the weather will allow, prepare ground by trenching or digging, for planting and sowing trees and shrubs, and seeds of different kinds.

If the weather be open, forest trees of most kinds may be with safety transplanted, and trees and shrubs of all sorts may be pruned any time when the weather will permit.

THE

THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES,

*For February.*

If the fruiting pine plants are in such a forward state as is desirable, many of them will, by the middle, or toward the end of this month, be shewing their fruit; but whether this be the case or not, every endeavour and means must be used to keep the plants on in a growing state. It is likely that the heat of the tan will be much on the decline; it must, therefore, be recruited, and it, and the plants, managed in the following manner:

Having a quantity of new tan in readiness, take the plants, one by one, out of the pit, and, with matting, tie up their leaves carefully, and set them out of the house into an airy dry shed; then

then carry out of the pit all the tan from the surface and sides which appear exhausted. Level the tan left in the pit, and fill it up with fresh bark to its proper height. When this is done, take a quantity of tan, as much as is sufficient to make a large opening, out of one end of the pit, and lay it down at the other end; proceed then to turn over the tan, taking care to mix the old and new well together in equal proportions, which will probably be about a foot deep of each sort.

When the tan is mixed and levelled, tread it down equally all over the surface, and loosen it as deep as to allow the pots to be plunged easily.

Having got the tan bed in readiness, take the pots of plants one after another, and with the fingers scrape off a little mould from the surface of each; pull off carefully a few of the undermost leaves, and then lay a covering of fresh rich earth on the top, close to the stem of every plant.

During the dressing of the plants, a man or two may be employed in plunging them in the tan bed, so that the job may be completed in one day.

If there is any likelihood of the tan becoming too warm, the pots ought not to be plunged to their rims: this must ever be left to the judgment

ment of the gardener. If the roots are now injured, the fruit will not swell well; it is best, therefore, to be on the safe side, and not to plunge the pots lower than about half way into the tan, till it come to its full heat, and then put tan among the pots, or forbear, as circumstances may dictate.

The heat of the bark bed in which the succession pine plants are, should be examined, and if it be not sufficient, it ought to be increased: it may be done in the same manner as directed for the fruiting pines.

Keep the houses sweet and clean, and the flues in good repair, that no smoke may have access in among the plants.

Water the pine-apple plants this month, if there be a good heat in the tan and houses, two or three times, or oftener, if they want it. Those in pits without fire heat may, perhaps, require a little water if the sun shine often, otherwise they are safer without it.

Admit air, in fine days, into every place where pine plants are, and take care to cover up those well at night which are in frames, or pits warmed with dung.

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*Height*

*Height of the Thermometer in the Fruiting-House, for February.*

| | D. | M. | N. | E. | | D. | M. | N. | E. |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 64 | 70 | 68 | | 15 | 66 | 82 | 65 |
| | 2 | 65 | 68 | 61 | | 16 | 65 | 75 | 65 |
| | 3 | 58 | 92 | 61 | | 17 | 64 | 85 | 64 |
| | 4 | 58 | 69 | 65 | | 18 | 65 | 70 | 68 |
| Watered | 5 | 60 | 70 | 67 | | 19 | 66 | 76 | 70 |
| | 6 | 62 | 70 | 65 | Watered | 20 | 73 | 80 | 70 |
| | 7 | 61 | 70 | 67 | | 21 | 66 | 92 | 66 |
| | 9 | 61 | 72 | 66 | | 22 | 64 | 90 | 68 |
| | | 61 | 88 | 60 | | 23 | 68 | 85 | 68 |
| | 10 | 64 | 90 | 68 | | 24 | 66 | 78 | 65 |
| | 11 | 64 | 72 | 62 | | 25 | 65 | 86 | 67 |
| Watered | 12 | 58 | 90 | 67 | Watered | 26 | 61 | 70 | 68 |
| | 13 | 63 | 71 | 66 | | 27 | 67 | 74 | 69 |
| | 14 | 65 | 92 | 66 | | 28 | 65 | 84 | 69 |

Grape vines in hot-houses, in this month, demand constant attention; stop and tie up those shoots that want it; train them up the rafters without suffering them to shade the pines but as little as can be helped.

Plant French beans for a succession: mould of a rich light nature suits the French bean best. Take some fine garden earth and vegetable mould, mix them well together, fill good-sized pots with it, and set them in rows in the hot-house on the flues, or on shelves that do not shade

shade the pines; lay four or five bean-seeds, of the speckled dwarf kind, in a row, on the mould of each pot, and with your finger push them into the mould about an inch deep, that they may have moisture enough to enable them to vegetate freely; give them no water till they appear above the earth; when they make two or three joints, stop them or not, as you think best.

French beans require no other management besides what I have mentioned, but to tie them up, and give them plenty of water, to cause them to produce fruit plentifully in a house kept to a degree of heat necessary for bringing the pine-apple to maturity.

In hot-houses, where exotic plants are plunged in tan, the bed should be examined; and if the heat in it is much declined, set out the plants and turn the tan, mixing a little new bark with it; afterwards the plants must be plunged into the bed again.

Examine frequently all plants in the hot-houses, and give them water when they want it; sprinkle them over their leaves occasionally in sun-shining days, and shut up the glasses immediately.

Sow the seeds of exotic plants of various sorts in pots, in loamy earth, and keep the earth moist, that the seeds may vegetate.

## On the GREEN-HOUSE,

*For February.*

Plants in green-houses should have the lights opened every fine day, that fresh air may circulate among them freely. Look over the plants frequently, and give those water that require it. Hardy-wooded plants, such as oranges, myrtles, &c. will require water oftener than soft-wooded ones.

Keep all the plants free of dead unsightly leaves, and the paths and every part of the house clean.

Make fires in frosty nights, and in cold damp weather, which will be of much service to the plants. If insects appear on them, which sometimes happens, smoke them well with tobacco; this will effectually destroy green soft insects.

## On the FORCING-HOUSES,

*For February.*

The grape-house will require much attention this month. Fires must be made in due time every

every evening, and in cold mornings; and if the days prove cold and cloudy, gentle fires will be wanted all day. Endeavour to have the thermometer about 55 in the morning, and let it be raised gradually to about 70, and if the sun shine, to 75 or 80, with plenty of air at the house.

The grapes that were set last month will now be swelling. If the berries on any of the bunches are too much crouded, with a small pointed scissars thin out some of them.

Tie up carefully all long shoots, and stop any of them that require it. Keep the leaves moderately thin, so that they do not lie on the fruit, nor shade them too much.

In some houses, the border, or part of the border in which the vine is planted, is in the inside of the house; where that is the case, let it be watered and sprinkled now and then, to keep it in a moist state.

Water the flues sometimes when they are hot, which will produce a fine steam, very beneficial to the plants in promoting their growth, and in preventing them from being infested by the red spider.

Pay attention to all other sorts of plants in the house in pots, such as dwarf peach and cherry trees, &c. Strawberry-pots should be kept perfectly clear of weeds; all their runners constantly

constantly cut as soon as they begin to appear, and their leaves well thinned.

Keep all sorts of plants in pots sufficiently watered, and fill the house about once a week full of tobacco smoke, which will prevent the plants from being infested by some sorts of insects.

Plum, cherry, peach, nectarine, apricot, fig, gooseberry, currant, and raspberry plants in pots, may now be taken into houses or frames, to try to ripen their fruit early in the season.

Cherries are much esteemed for their beauty and delicious taste: on these accounts, houses for forcing them are by some appropriated entirely for that purpose.

In the former part of this work, I have given a description of a house which will do to force cherries, or any other sort of fruit trees. The flue, which is directed to be run along in the front of the house when it is intended for pine-apple plants, may be carried on an arched wall, or on the surface of the border, any distance from the front that is thought necessary, for the cherry or grape vine, which will let the border in the house communicate with that on the outside.

To plant a cherry-house, take light, sandy, rich mellow earth, of a darkish colour, and make a border of it the whole width of the house, and four

four feet deep; then get fine young mayduke cherry-trees, in a bearing state, of different heights, and plant them in rows, beginning with the tallest in the backside, reserving the shortest for the front, letting them slope to the south gradually, somewhat in the form in which plants are set in a green-house.

Cherries set, or in blossom, will, in this month, require great attention. Like rose buds, they are liable to be destroyed by a small grub worm, which rolls the leaves round itself, occasionally, for a covering: it preys on the leaves as well as the fruit. The trees should be searched once or twice a-day, to destroy them with the hand as soon as they can be observed.

No tree forced for obtaining fruit early, is more liable to fail of a good crop than the cherry; the blossom is apt to fall off before the fruit is set, and the fruit will keep falling off before and after they are as large as peas. This is occasioned by a kind of stagnation of air about them, which affects the tender blossoms and young fruit.

The sloping and upright lights of a cherry-house ought to be so constructed, that the air may be allowed to have a free ingress and egress whenever it is necessary.

While the trees are in blossom, do not water them over their branches or blossom. Let air be

be at the house day and night, and have gentle fires night and morning, and in damp gloomy days; such methods as these will suit the nature of the cherry-tree, and be the means of securing a crop of fruit.

If the thermometer in a morning is as low as 40, there is no danger; but it should rise during the day, to imitate nature as much as possible.

Fig-trees may be planted and forced in the same way as directed for cherries, except that they require a greater degree of heat to bring them to maturity, or they may be trained on a trellis like a peach-tree.

Pay due attention to the rose-house, fires must be made in it evening and morning, and in cold gloomy days they must be continued all day. Let the thermometer be about 60 in the morning, and rise gradually to 70 and 75, with air at the house. Water the plants frequently, but see that it has a free passage through the pots, otherwise it will stagnate and hurt the roots. Examine the leaves and flower buds daily for insects. Smoke the house about once a week with tobacco, to prevent the green fly from attacking the roses. Look over the plants carefully every day to pick off the grubs; where you see a curled leaf, on it, or near it, you will probably find one or more of them.

Set in rose pots once or twice a week, and some

some of all other kinds of flowers you mean to force, such as narcissus, hyacinth, jonquils, pinks, carnations, honeysuckles, Persian lilacs, scarlet lychnis, sweet williams, &c.

You may also sow the seeds of various sorts of sweet flowers, such as stocks, mignonette, &c. Sow them in fine mould in pots, and when they come up well, transplant them into pots, three or four plants into each: they will do to blow in the pots, or to be turned out into the borders in April.

The forward peaches and nectarines must have constant attendance in making the fires regularly evening and morning, and in giving air every fine day. Let the heat be about 50 in the morning, and rise gradually as the sun does. Sprinkle the flues now and then with water to raise steam, and wash the trees about once a week, with clean water not too cold.

If the border in which the peaches and nectarines are planted be in the house, water it as often as it requires to keep it in a moist state.

Smoke the trees occasionally with tobacco to prevent insects from breeding on them.

Trees in forcing-houses had best not be washed all over, till the fruit are set, and as large as peas.

As soon as the least mildew appears on a tree, scatter flour of sulphur on the affected part.

Trees that are inclinable to be affected with the mildew, should be narrowly inspected, particularly when the fruit is in its infant state.

The royal george, red magdalene, and some other sorts of peaches and nectarines, are very liable to be affected with the mildew. It comes sometimes not only on the young shoots, but on the fruit, when in their infant state, and often causes them to drop off before they cast off the blossom; and, in this case, the mildew is so minute that it requires a person of good skill and practice to discover it.

The branches of trees which are known to be liable to be affected with the mildew early in the season, should be dusted with sulphur, before they come into blossom; and when they are in blossom, a little should be scattered gently all over them. If this method be practised, and the house kept in a good state, in regard to heat, air, and cleanliness, I doubt not but it will have the desired effect.

To have a constant supply of small sallad, sow the seeds of mustard, cress, and rape, twice a week, in pots, in the manner directed last month, under the management of the hot-house. Set the pots in any of the forcing-houses, in a dry place.

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On

## On the FORCING-FRAMES.

*For February.*

The melons sown last month should be duly attended. Stop the plants after they have made a rough leaf or two. Those not transplanted from the seed-pot, should some time this month be potted out, in small pots, two or three in each. Set them in a warm place in the hot-bed, where they can be shaded from the sun, till they have struck root, and give them a little water, with the chill off, to settle the mould about their roots.

Sow a few melon seeds at two different times in this month, to raise a succession of plants.

Cucumber seeds may be now sown, and let the plants which are beginning to produce fruit be well managed.

Take care of potatoes in frames: give them plenty of air every fine day, keep them free of weeds, and water them occasionally.

Make a hot-bed of dung or leaves, and plant

potatoes on it, to succeed those planted last month.

You may plant potatoes in small pots, and set them in the forcing-houses till they are so rooted that they will turn out with the balls whole; then, having a bed ready, turn them out into the earth, about eight inches apart, covering the balls of them about two inches with the earth: give them water immediately, and a sufficiency of air every fine day.

Plant asparagus in a pit, with fire heat, or on a well prepared dung bed.—For the method, turn to November and January.

Cauliflower, radish, carrot, onion, and lettuce seed, should be sown early in the month, on beds of warm dung or of tree leaves.

Sow celery on a hot-bed, or in pots, to set in frames.

Plant, in a frame on a hot-bed, herbs of different kinds, such as mint, balm, tansy, &c. These may likewise be planted in pots, and set in frames, or in the forcing-house.

In hard weather the lights must be still kept on tender cauliflower and lettuce plants, in frosty nights and snowy weather; but they should be taken off in fine open days.

Cauliflower and lettuce may be applied on gentle hot-beds of dung or leaves, to bring them in before those in the open ground.

Mushroom

Mushroom beds in the shed, warmed by fire, will require attention. Make a fire occasionally, and examine the beds often. When they begin to get dry, give a gentle watering, and keep them covered with a light covering of hay. Let the heat of the thermometer be from 50 to 60.

Early peas in frames, if they be getting high, should be supported by stakes, and packthread run between them.

Carnation, auriculas, and other plants in pots, in frames, should have air every fine day, and water when they begin to get dry.

## On the KITCHEN-GARDEN.

*For February.*

Sow the different kinds of peas. The low growing sorts require about four feet between the rows, and the tall growing six feet row from row.

Radish and lettuce seeds should be sown at two or three different times this month.

Plant broad beans in rows, four feet apart. Before this crop is planted, those sown in January

ary should be beginning to appear through the ground.

If the spinach, which was sown last month, appear coming up, sow some more to succeed it.

Towards the end of the month, sow a few of the different sorts of cabbage, and savoy seeds.

Plant out-cabbages of all sorts in the beginning, middle, and about the end of the month.

Sow some seeds of the early horne carrot on a warm border.

If the weather be open, parsnips and carrots may be sown about the end of the month. These roots prosper best on a sandy, light, deep soil, and if it be well trenched in the course of the winter or autumn, before sowing, it will be a mean to make them run long rooted.

If the weather prove open, the month of February is a good time to sow a full crop of onions. The ground for this purpose should have been manured in autumn, and laid up in ridges during the winter to soften. It should now be levelled, and dug small, mixing the dung and it well together; then sow the seeds regularly, and if the land is not of a strong loamy nature, tread it all over with your feet, and afterwards rake it smooth.

Sow common and curled parsley in drills, on the edges of borders or on quarters of the garden, about thirty inches or three feet row from row.

In

In the latter end of the month, you may sow Hamburgh parsley, salsafy, and scorzonera; but the month of March will be early enough for them.

Horse-radish may be planted any time this month. Dig trenches, as if for blanching celery, a foot or eighteen inches deep, and after having dug the trench, take slips or buds of the roots, and plant them in a row, three or four inches apart. As they advance in growth in summer, earth them up in the same way as celery is earthed, taking care to break the earth, and lay it to the plants light, that they may easily grow up through it. This method produces fine sticks of horse-radish.

Another method to grow good horse radish is to make holes with a stick, eighteen inches or two feet deep, and drop pieces of the roots of the plant into them.

Shallots and garlick should now be planted. Dig a piece of good ground for them, make it out into beds, and put them a foot row from row, four inches plant from plant, and three or four inches deep in the ground.

Towards the latter end of the month, plant potatoes for an early crop. Dig a piece of rich ground. If it was not well manured last year, let it be well dunged now. Take an early sort of potatoes, and cut them into two or three parts, and

and plant them twenty inches row from row, and ten inches plant from plant. They should be six inches deep in the ground.

About the end of the month, the seeds of marigolds, angelica, barnet, loveage, borage, cardus, chervil, and coriander may be sown.

Mushroom beds, in the open air, should be uncovered about once a week. Gather off all the mushrooms that are fit, put some soft dry hay next to the bed, and take care to give it a thick covering of straw and mats above the hay, to keep it warm, and prevent the rains from getting in to make it too wet.

Early Dutch turnip seed should be sown about the end of the month.

Jerusalem artichokes may be planted any time this month. Cut the roots in two or three parts if they be large, and plant them in rows three feet asunder, a foot plant from plant, and five inches deep.

Small sallad may be sown in a shallow drill between the rows of peas or beans.

Sow hyssop, summer and winter savory, thyme, marjoram, sweet and bush basil, fennel, sorrel, &c. At this season the basil and marjoram should be sown in pots, and set into a hot-bed or forcing-house.

Towards the end of the month some of the strongest cauliflower plants may be taken out of the

the frames, and planted in rich deep ground, in a warm sheltered situation. Plant them in rows nearly three feet a part, and about twenty inches plant from plant.

Now is a good time in open weather to earth up sea-kail, to blanch. The plants having been planted in light, deep, dry soil, six feet row from row, stretch a line down between the rows, and with the spade make a space about two feet wide, exactly in the middle between the rows, chop it small with the spade, and lay it lightly on the plants, covering them about six inches thick.

If you have any vacant ground in the garden, you may trench it, to be in readiness for putting any kind of crops into it next month.

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## On the FRUIT-GARDEN.

*For February.*

The peach, nectarine, and apricot trees, which are not intended to be finally pruned and nailed till some time in the month of March, should be examined, and all shoots or branches, which are luxuriant,

luxuriant, dead, or evidently of no use to let remain on the trees, should be cut off.

Inspect the stem and every part of each tree, and if there appear to be canker in any part of the bark, or if the gum be oozing out, cut off those parts of the bark which are dead or infected; and if the wood, or a part of the wood, under such dead or affected bark be rotten or beginning to decay, cut it out also. This will assist the natural efforts of the trees, in casting off the crude undigested juices, which, if confined in them, would, in a short time, destroy them, or some part of their branches.

Cherry, plum, pear, and apple trees, that were not finished last month, should be pruned, and nailed some time in this month.

Grape vines on open walls ought to be, in the course of this month or beginning of next, pruned and nailed. If it is your method to train the tree on the wall, in the form of a peach tree, cut out any old feeble naked branches, and cut in the young wood of last year to four or five eyes, as the strength or weakness of the shoot may make it expedient. If what is called the new method be followed, cut out all the old wood which bore fruit the former year, and train up, crooked or upright, as many of the strongest young shoots as you think the roots are well able to sustain, and bring the fruit which it

it is supposed will be on them to maturity. Remember, some of the last year's shoots should be cut near to the ground, to throw forth bearing wood for the ensuing season.

Raspberries may now be pruned in the manner already directed. When they are finished, clear away all the cuttings and other litter, and then wheel in dung among them, to be dug in, the first opportunity. If the weather be cold, these plants had best not be pruned till next month.

Any time this month fruit trees of all sorts may be planted safely. Those transplanted from one part of the garden to another, if carefully dug about, may probably be removed with balls of earth at them, and in that case the removing of them will not retard their growth so much as if no earth hung to them. However, if trees are taken out of ground not so good as that into which they are about to be put, they had best lose all the earth which may incline to adhere to their roots.

In this month raspberry, gooseberry, and currant bushes may be planted, and cuttings of them put into the ground to raise a supply of young plants.

If it is necessary, new plantations of the different sorts of strawberries may yet be made. The old beds should be cleared of the runners, and

and of every sort of useless stuff, and if it be wanted lay some fresh earth among them; then loosen the ground between the plants, mixing the fresh earth in among the rows.

Manure and dig the ground about every kind of fruit-tree that require it.

Standard fruit-trees which have been lately planted should be securely supported with stakes, that when their heads get heavy they may not be blown down by the wind.

If gooseberry and currant trees were not finished pruning the former months, it should be done about the beginning of this month, and the ground manured and dug about them as soon as possible.

Plantations of standard fruit-trees, as cherry, pear, plum, and apple, should be particularly attended to, the first three or four years after planting, so that their heads may be formed in a regular manner, which is to be effected by cutting off any luxuriant irregular shoots, which may arise in summer; for if shoots of this sort are suffered to remain they will draw much of the nourishment from the other shoots, therefore it will be proper to take such out or shorten them, in order to assist the others, that they may branch out regularly in every direction, according to their natural growth. In trees also of a more advanced age irregularities will arise, which,

which, by judicious pruning, should be regulated every year.

## On the PLEASURE or FLOWER GARDEN.

*For February.*

Any time in this month when the weather is open, plant edgings of thrift, box, hyssop, winter savory, lavender, suthernwood, pinks, daisies, &c.

Roll and mow grass walks and lawns, and cut the edges of grass neatly with an edging iron.

This is a good time to lay turf wherever it is wanted, either to mend old work or make new walks or lawns, for, with very little trouble, it will grow freely at this season of the year.

About the middle or latter end of this month, cedars, lauristinus, firs, cypress, junipers, hollies, yews, evergreen oaks, arbutus, pyracanthus, phillyreas, with almost all other sorts of evergreen trees and shrubs may be planted.

The pruning of all kinds of flowering shrubs should be finished this month. As soon as the shrubs are pruned, tie up those that require it, and clear the borders of cuttings, and every

every thing that would hinder their being dug neatly.

Shrubberies and flower borders would be better to be manured once in two or three years; and this is a good month to do it in. Vegetable mould, or very rotten dung, is the best manure for flowers and shrubs. Wheel it to the side of the border in barrows, and with a shovel or spade cast it on about the plants, and dig it in among their roots, leaving the borders neat and uniform.

Beds of fine ranunculuses, hyacinths, tulips, and anemonies, should be defended from excessive rains and frost. They should be arched over with hoops, and in frosty or rainy weather mats or canvas laid over them.

Plant hypaticas, polyanthus, rose campion, columbines, daisies, gentianella, saxifrage, scarlet-lychnis, sweet-williams, rockets, canterbury bells; and many others of a similar nature, may now be planted.

Seeds of auriculas and polyanthus may now be sown: they should be sown in pots, or on a warm border in the common ground.

About the latter end of the month many kinds of hardy anuual flower seeds may be sown, such as sweet peas, lupins, convolvulus, sunflower, lavetera, candy tuft, hawk-weed, &c. They should be sown in patches, in the borders

ders here and there, where they are to remain to produce flowers.

Towards the end of the month it is time to sow the seeds of stocks on a warm border. Some of the ten-week may be sown in pots and set in a forcing-house or hot-bed, which will bring it forwarder than the open ground into which it can afterwards be transplanted. It blows pretty, and makes a fine appearance in beds or in clumps in the borders.

Tender annuals should be sown in pots and set in the forcing-houses or in a hot-bed, for the purpose of bringing them forward early. The best kinds are the globe amaranthus, double balsams, tricolors, coxcombs, iceplant, eggplant, and china asters, with a variety of other sorts.

In this month all sorts of bulbous roots, kept out of the ground for a late bloom should be planted to succeed those put into the ground the former months. Plant them in a light dry soil formed into beds about three feet wide. Bulbous roots of the common sorts may be planted in the flower borders among other plants in patches, four or five together; small sticks should be set beside these patches, that it may be known where the roots are planted.

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On

## On the NURSERY-GARDEN.

*For February.*

At any time in the month make plantations of stocks to bud and graft different sorts of fruit-trees on. Plant them in good well trenched ground, thirty inches or three feet row from row, and about eighteen inches plant from plant. This distance is to be understood of large plants that are to stand to be grafted on. The small plants should first be planted out in beds, about three feet wide, and four or five rows in each bed, with the plants six inches apart in the rows.

Fruit and forest trees of all kinds may be transplanted any time this month, when the weather is open.

Sow in the latter end of the month the seeds of apples and pears, and the stones of plums and cherries, to raise stocks for budding and grafting on. Sow them in beds three feet and a half wide, leaving a foot or eighteen inches for alleys between them. Cover the seed of the pear and apple

apple an inch deep, and the stones of the plum and cherry two inches deep. If the ground is of a light nature, tread the surface, which will enable the beds to retain the moisture longer than if it were left light.

In this month all kinds of nuts, seeds, or berries of various hardy forest trees and shrubs may be sown; lay bushes or something else over the beds, to hinder the birds from eating the seeds, till the plants begin to appear.

Trees and shrubs of all kinds may now be propagated by layers and cuttings,

Flowering shrubs of all sorts may be in this month transplanted with safety.

Dig the ground between all sorts of young trees and shrubs that are not intended to be removed this season.

Prune fruit and forest trees, and flowering shrubs of all kinds.

Towards the latter end of the month fruit trees may be grafted, if the weather be open, but the month of March is a better season.

Last year's layers and cuttings, which are sufficiently rooted, should be planted in nursery beds.

Seedlings of the arbutus, cypress, cedar of Lebanon, firs, and pines of the tender kinds, with other young evergreens and deciduous plants

from warmer countries than this climate, require in their infancy protection from severe frosts and snow, by coverings of mats or glass frames. The pots should be plunged in old tan, rotten leaves of trees, or light earth. When the weather is open the coverings should be removed.

Tender seedling plants in beds should be sheltered in bad weather, by being arched over with hoops, and mats thrown over them.

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THE

THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES.

*For March.*

In this month, if the fruiting pines have been kept on in a vigorous growing state, and the plants large enough, several of them will be shewing fruit strongly; and those that may have come up in December and January, will be swelling as fast as can be expected at this season of the year.

In case the plants were not dressed, and the heat of the tan-bed increased last month, it ought to be done about the beginning of this month.—For the manner of performing the work, look at the directions given for that purpose in February.

If the bark-bed was augmented last month with

new bark, let it be now examined, and keep the tan close to the sides of the pots that the roots may have the advantage of the moist heat of the tan; and if the pots stand above the surface of the bed, examine well the heat in it, and if you are sure the plants will bear more bottom heat, lay in a layer of tan among the pots. Set the pots level that they may hold water, and make the surface of the bed level among them.

In this month the plants will require to be watered, if the weather be tolerably mild and much sunshine, two or three times all over their leaves. Do this in a fine morning, with water about eighty-five degrees warm. Wash them well, till every part of them be perfectly clean, and keep up a strong heat in the house all day.

If any fungous stuff grow up in the tan about the pots, clear it away, and keep the surface of the bed and pots free of weeds.

If you have any succession pines a year old or more, they should be shifted in this month.

Having a bed prepared for them, strong enough to raise a good heat, take the plants and tie their leaves together carefully, than turn them out one after another, and cut all their roots off close to the stem, and if the stems of them be bare of roots, or appear rotting or black, cut a part of them off up to the quick. Rub the mould clean from the stems, divest them of

a few

a few of the lower leaves, and pot them in good rich mould, in small pots suitable to the size of the plants, and plunge them in the tan up to their rims.

Let all this work be done in one day, if it be convenient. Keep a strong heat about them, and give them no air nor water till they have struck root and begin to grow. Plant now any crowns or suckers which were taken off late in the autumn.

To make some of your fruit swell very large, prevent all suckers from growing on the plants. You may destroy them by twisting out their hearts with a sharp pointed stick, or a piece of iron about eighteen inches long.

Take care of the succession pines. Keep a good heat in the tan-bed, and water them when they want it. In this month, if the weather prove fine, sprinkle water, warmed to eighty degrees, all over them, till their leaves be thoroughly cleared from dust.

The succession plants in pits, without fire, should be attended to daily. Cover them up in the afternoon about five o'clock, and uncover them about seven or eight in the morning. See that there is always a kind growing heat in the tan, for they should be kept growing constantly.

Examine the linings, and if the heat be much declined,

declined, lay off any fresh dung on the top, and wheel away the rotten; then bring hot new dung, and mix up with that which came from the top.

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*Height of the Thermometer in the Fruiting-House, for March.*

| | D. | M. | N. | E. | | D. | M. | N. | E. |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 68 | 90 | 69 | | 17 | 67 | 72 | 66 |
| | 2 | 65 | 94 | 68 | | 18 | 64 | 90 | 66 |
| | 3 | 65 | 90 | 65 | | 19 | 63 | 90 | 65 |
| | 4 | 63 | 90 | 65 | | 20 | 68 | 75 | 67 |
| | 5 | 65 | 95 | 64 | | 21 | 65 | 80 | 66 |
| | 6 | 61 | 65 | 62 | | 22 | 71 | 74 | 70 |
| | 7 | 60 | 66 | 62 | Watered | 23 | 71 | 90 | 68 |
| Watered | 8 | 62 | 87 | 62 | | 24 | 70 | 90 | 70 |
| | 9 | 62 | 68 | 65 | | 25 | 66 | 90 | 70 |
| | 10 | 65 | 90 | 65 | | 26 | 70 | 74 | 65 |
| | 11 | 65 | 78 | 70 | | 27 | 65 | 74 | 68 |
| Watered | 12 | 66 | 88 | 68 | | 28 | 65 | 74 | 67 |
| | 13 | 65 | 84 | 68 | | 29 | 60 | 90 | 65 |
| | 14 | 60 | 74 | 68 | | 30 | 65 | 73 | 62 |
| | 15 | 68 | 70 | 67 | | 31 | 78 | 65 | 62 |
| | 16 | 69 | 87 | 72 | | | | | |

The grape vines will now and then require examination. Take off any useless shoots or leaves, and tie up those shoots and bunches that want it. If the berries set too thick thin out some of the smallest of them with a pair of scissars.

Plant

Plant French beans in pots, to succeed those planted last month.

French beans that are in full bearing will need plenty of water. Sprinkle them over the leaves frequently with clean water about seventy degrees warm.

If the French beans in bearing get crouded with leaves, thin out the oldest ones regularly.

Do not neglect to examine the exotic plants daily. Those on warm flues will need water frequently.

Take dead leaves off all kinds of plants, and keep the houses constantly in a clean sweet condition.

Open the glasses every fine day to let fresh air in among the plants.

In the hot-house may be sown the seeds of annual exotics, such as balsam, tricolor, sensitive plant, egg plant, globe amaranthus, &c.

If there are any fig trees in pots in the hot-house forcing, give them plenty of water, and keep the earth in the pots free of weeds.

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On

## On the GREEN-HOUSE.

### *For March.*

About the middle of this month a hot-bed may be made for seeds of green-house plants. Sow them in pots in light earth, and plunge them in the bed in old tan, and put the glasses on them.

Sprinkle the pots frequently with water, and when the plants begin to appear, give them fresh air daily, to bring them up as hardy as they can bear.

Green-house plants may now be raised. Plant four or five cuttings in each pot, and plunge them in a frame. Till they begin to grow, let them have as great a heat as the sun can raise without any air.

If it can be done conveniently, it would do the green-house plants good to put some fresh earth on the tops of the pots. Loosen a little earth on the surface of them, and take it off; then fill the pots nearly full of fresh earth, leaving only about half an inch deep empty all over, to hold water.

Lemon and orange stocks, which were budded last summer, may, if the buds appear to have united

united well, be headed down in this month. The buds of these would be forwarded greatly, if the pots were plunged in a tan or dung pit, in a gentle heat.

Myrtles, orange, lemon, and other kinds of trees and plants in the green-house, whose heads have become irregular, may be cut down, and pruned in such a way as to endeavour to cause them, in the course of the summer, to form a regular shape.

The plants will require to be often watered in this month. Examine them every day; for there are some sorts which require water more frequently than others.

If the nights are frosty, make a gentle fire in the evening, and give plenty of air in fine days.

In rainy days, wash, with a spunge, the leaves and stems of orange, lemon, and other hardy leaved plants. The leaves of green-house plants in gloomy houses are liable to contract filth during their confinement, particularly if insects are suffered to harbour on them. In fine weather it would do the plants good to wash them occasionally, in a morning, all over their leaves with clean water, with a squirt or engine.

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On

## On the FORCING-HOUSES.

*For March.*

As the days get long the grape vines will grow quickly; they will therefore be wanting something done to them frequently. Train up the long shoots neatly, stop all those that require it, and thin the leaves regularly, so that the fruit may not be hindered from growing by a superabundance of leaves or shoots. Let the thermometer be about 60 in the morning, and rise up in the course of the day to 75 and 80, with sun and air at it.

Water the borders in the house, and sprinkle them and the flues now and then with sweet clean water. If this be attended to, and air given in fine days, the house will be kept in a sweet state.

The vines may sometimes be watered all over; but if this kind of watering is practised it should be done carefully; for I have seen grapes much hurt with the decaying paint having been driven from the rafters and other parts of the house on them, by the force of the water.

If the paths, flues, and borders in the house be sprinkled

sprinkled and watered as I have directed, grape vines will do without giving them water over their leaves and fruit: though I by no means disapprove of washing them well, now and then, all over, leaves and fruit, provided it be done with clean water, and no filth driven on them from any part of the house.

Pots of peaches, nectarines, cherries, &c. in the grape house, should be attended to. See that they be duly watered, kept clean of weeds, and that insects do not devour them.

The leaves of strawberry pots should be thinned, and their runners cut off, as soon as they appear, and give them water when they begin to get dry. Smoke the house with tobacco once in eight or ten days, or before the insects begin to breed on them.

Plants in pots of the cherry, peach, nectarine, fig, currant, &c. may still be taken into the forcing-houses when there is room: if they do well they will ripen before those in the open ground.

The cherry-house will now require much attention. Still continue to look over the trees carefully, and destroy all sorts of insects that can be catched with the hand. Nip off all curled and decaying leaves, and keep the house clean of dust, and all kind of filth.

Give the house plenty of air; and if the stones in

in the fruit are become hard, the trees may be washed all over occasionally with clean water. Let this be done in a fine sunny morning, and take care not to spatter the fruit with any kind of dirt.

Make a fire in the evenings and in cold days, and give the house plenty of air.

The trees will bear a little more fire heat now than in the former months.

The forward peaches and nectarines will now be swelling fast, and their shoots for the ensuing year making a rapid progress.

The heat of the house should be about 55 in the morning, and rise up progressively to about 75 in the course of the day, if the sun shine, and plenty of air can be given.

Wash the trees now and then all over with clean sweet water, and raise the heat of the air in the house, for a short time after watering, a little higher than it usually is at other times.

Water the border in the house when it is in want of it, and the flues and paths with water occasionally to help to keep the air sweet.

Make fires whenever the house requires artificial heat, and fill it full of tobacco smoke once a week or ten days to destroy any tender kinds of insects that may have come into it.

Inspect the trees every time in the day that you

you go into the house, and if any mildew begin to appear, dust a little flour of sulphur on the affected parts.

If the fruit are fairly stoned and hang too thick on the branches, thin them regularly.

Tie up the young shoots straight, cutting out all luxuriant and superfluous ones; and if the trees get too crouded with leaves, nip them off that they may not lie upon one another, nor hinder the sun from shining on the fruit in some parts of the day.

During this month, let the fig-house be kept nearly in the same state with regard to heat and air, as the cherry-house. The fig-tree is not liable to be hurt with insects as the cherry is, though in dry seasons it may be attacked by the red spider. To prevent this, sprinkle the borders and flues of the house frequently with water, to keep the air in it wholesome and sweet; and give air every favourable opportunity, so as not to lower the heat too much.

Cherry, plum, and other fruit trees in pots in the fig-house, as also strawberries, and pots of flowers, or herbs of any kind, should be attended to in giving them water, and in keeping them clean and free of weeds.

Take care of the rose trees in the forcing-house,

house, give them plenty of water, heat, and air, and they will blow fine. Smoke the house with tobacco occasionally to keep the green fly from them. As the days get long, those not in bloom should be washed two or three times a week all over their leaves, with clean water, from a fine rosed pot. Fires must be made every evening, and in cold gloomy days. Examine the shoots and flower buds every day, to see that insects do not hurt them. Set in fresh trees once or twice a week, and flowers of all kinds you wish to force to have a constant supply.

Grape vines in the rose-house will require constant attendance to keep them in order: they should be kept under the rafters that they do not shade the roses and other flowers; keep them moderately thin of leaves, stop the shoots before the fruit, and let the long shoots for next year be tied up straight.

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On

## On the FORCING-FRAMES.

About the beginning or middle of this month, the melon plants raised in the former months, will be ready to plant in the frames, where they are to produce their fruit. Turn them out of their pots with the balls entire, and plunge them in the earth as deep as to let the ball be covered about an inch, and give them a little water to settle the earth about the roots. Keep the lights, if the air in the frames be sweet, close shut up till the plants appear to grow, and then begin to admit air, more or less, as the weather will allow. Cover up the beds well every evening, and uncover them about seven or eight o'clock in the morning.

Cucumber plants, will now be producing fruit, let them be attended to, and managed as I have directed in my treatise.

Sow melon and cucumber seeds, to succeed those sown in the preceding months. They should be sown at different times in this month, to produce a regular succession.

Take care of the asparagus in frames, and to have a regular supply, a bed should be made about the beginning of the month, and planted in the manner directed in November.

Lettuce

Lettuce and cauliflower plants, forcing in frames should be attended to. The lights may be taken off in fine days, and put on in the evening, about five or six o'clock.

The frames may be entirely removed from lettuce and cauliflower plants, preserved in them during the winter. Of the lettuce plants, as many may remain to come to perfection as there is room for.

The mushrooms produced by the assistance of fire heat, will probably this month come in in abundance. The fire had best be continued in cold nights, and the bed will require some water to keep it from being too dry.

Peas in frames will require a great deal of air in fine days, and water occasionally. When a gentle shower of rain comes, open the glasses to let it fall on them.

Plant tuberose roots in pots in rich earth; they require a bottom heat to strick them, therefore let them be put in a tan or dung bed. If the mould is moist they must get no water till they have good roots and begin to grow.

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On

## On the KITCHEN GARDEN,

*For March.*

Peas and beans of all kinds, must be sown in this month. Sow them at different times, to make a regular succession. When the last sowing appear coming through the ground, sow again. If this method is adopted a constant supply may be expected.

If the spinach sown last month begin to appear, make another sowing. Draw drills between the rows of peas, drop the seed in the drills and cover it about an inch deep.

Twice in this month sow the different sorts of cabbage seed. Sow them in beds, each sort by itself. Rake the beds, and if the ground be light beat them down with the back of the spade, or roll them with a light roller.

Now is the best time to sow a full crop of carrots. They like a deep sandy rich earth best. You may sow them in beds or otherwise, just as you think best. When they are sown if the ground is not of a heavy stiff nature, tread it with the feet all over, and afterwards smooth it with the rake, and gather the large stones off.

Sow a full crop of parsnips. These, though

they grow best in good land, will do in any sort of ground, if there be depth for the long roots to go down. If the land be not of a binding quality, tread the seeds in before the ground is raked, or roll it after it is raked with a light roller.

This is a good time to sow onions and leeks. Sow their seeds on rich well manured ground in beds, or broadcast. Rake in the seed and roll the ground, if it is not too wet. If you have not got a roller tread the earth with your feet which will do as well, only it takes more time.

Horse radish may be planted any time this month. For the metod turn back to February.

Sow curled parsley. It may be sown in drills on the sides of borders, or in rows in any part of the garden. Make the rows about thirty inches asunder, cover the seeds about an inch thick, and tread or beat them down with the rake or a spade, to keep the ground from drying too quickly, which might hinder the seeds from vegetating.

Plant garlick, and old onions, which are beginning to grow for scallions.

Shallots may be planted the beginning of the month, but they generally do best when planted at an earlier period.

Potatoes of different sorts, should now be planted. Being a large rooted plant, it is an impoverisher

poverisher of the ground, which should therefore be in good heart, or well manured. Cut the roots in pieces, and plant the small sorts about twenty inches or two feet, row from row, and about ten or twelve inches, plant from plant. Let the large sorts be thirty inches or three feet, row from row, and sixteen or eighteen inches, plant from plant.

Sow the seeds of chervil, coriander, cardus, borage, lovage, burnet, angelica, marigolds, &c.

Plant Jerusalem artichokes. Their roots may be cut, and planted about the same distance as large sorts of potatoes.

Sow cress, mustard, and rape, for sallading. Sow them in drills on a border, or between the rows of peas or beans. When the last sown begin to appear sow again, which will insure a constant supply.

To have a regular supply of turnip, sow the seeds of the early Dutch two or three times in the course of this month.

The mushroom beds in the open air, may be uncovered every eight or ten days, pick off any weeds or litter that may be found on them. Gather the fruit if there be any, and cover up the beds well to keep out the cold winds.

If they are required, fresh mushroom beds may now be made. The spent dung from the melon or cucumber linings, will do well for this pur-

pose. Shake it well and make the bed about six feet wide at the bottom, tapering it up gradually to the top, that earth for the mushrooms to grow in may lie on the sides of it.

Sow the different sorts of radish once a week, to keep up a constant supply. The turnip sorts should be now sown.

At two or three different times this month, sow the different kinds of lettuce seed. Sow them on little beds of rich earth for transplanting.

Plant cauliflower in ground well dunged, set them in rows three feet apart, and nearly two feet distance in the rows. Rows of spinach, radish, lettuce, or any other sort of low growing plants, may be sown between the rows of them, they will be off before the cauliflower grow large.

Brocoli seed, may be sown in this month for an early crop, a small bed of it will be sufficient.

Sow green and yellow savoy seed, for an early crop.

Transplant lettuce of different sorts. Plant them in beds well enriched with dung one foot, row from row, and about six or eight inches, plant from plant.

Now is the time to sow the seeds of sea kail. Sow them in light sandy deep land, in drills about

about five or six feet apart, and cover them about two inches thick. In this situation they are to remain to grow to produce blanched suckers for use; when the plants come up, thin them.

About the middle of the month, sow the seeds of Brussels sprouts, green and red borecole. Sow cardoons; these may be sown in trenches, or on a bed, and transplanted into trenches in the manner that celery is done. If the seed is to be sown in the trenches, let them be about six feet, row from row; make the trenches twenty inches wide, and the same depth, lay the mould up equally on each side, dig some dung into the bottom, and sow the seeds in a row, covering them about an inch deep.

Some time after the plants are come up, thin them, and keep them clear of weeds. Before they are begun to be earthed up, which is to be done in the same way as celery, let them stand about eight inches plant from plant.

When cardoons are sown in trenches, April is early enough to sow the seed; but I think it is best to sow them on a border, and transplant them into the trenches some time in summer.

In this month, sow salsafy, scorzonera, and skirrets; sow them in beds in an open situation, and if the ground be light, tread it, and rake them in, as directed for carrots.

Sow

Sow large-rooted or Hamburgh parsley. It may be sown in drills eight or nine inches apart; and when it gets strong, leave the plants three or four inches asunder.

Early in the month sow the seeds of tomatoe or love-apple. They had best be sown in pots, and set into a hot-bed to bring them quickly forward, for they will not ripen well without some kind of artificial heat; they require to be planted and trained against a wall or paling, otherwise it will be late in the season before they are ripe, in the warmest situations.

Sow capsicums for pickling: these are so hot that they can scarcely be tasted. Bring them forward like the love-apple, and plant them out in beds in the open ground, where they will ripen in the autumn.

Plant chives; this is to be done by taking off slips from the old plants; make beds for them nearly four feet wide, and plant them about seven or eight inches distant from each other.

Make new plantations of mint. This plant is propagated by slips; take them up when they are about three inches above the ground, make beds for them, about three feet wide, and plant them five or six inches apart.

This month is the time to sow nasturtiums or Indian cress. The seeds may be sown in clumps, or in drills three feet asunder; put them in three

or

or four inches, seed from seed. It is a climbing plant; therefore, when the plants begin to run, they should have sticks set in the ground near them, to let them climb on, or they will creep on the ground like cucumbers.

In this month plant cuttings or slips of wormwood, lavender, southernwood, rosemary, &c.; a shady border is the best place for them. Plant them six or seven inches apart, and by watering them in dry weather, they will strike root, and begin to grow in the course of the summer.

Any time this month, plant slips of camomile, feverfew, pennyroyal, tansey, burnet, balm, &c.

Sow the seeds of buglos, orach, smallage, clary, fennel, marigolds, borage, &c.

Green and golden purslane should now be sown. Dig a bed three feet wide, and sow the seeds broadcast, and rake them in to cover them sufficiently; the seed may be sown in drill, if you chuse it, they will be easier kept free of weeds.

About the beginning of the month, sow celery in a bed, on a rich warm border. The seed of this plant is very small; cover it lightly, just to let the seed vegetate, beat it gently down with the flat side of the spade, and sprinkle it frequently in dry weather with clean water. When the plants are able to bear it, transplant them into

into beds three or four inches apart; keep them watered in dry weather, and when they grow stout plants, set them in the trenches where they are to be blanched. I think solid celery is the best sort.

Towards the latter end of the month, or sooner, the artichoke plants will require dressing. Level down the ridges of earth which were made to preserve them from frost, then proceed to take off all the superfluous suckers, leaving from four to eight of the strongest to produce fruit. When this is done, lay, if they want it, some manure among them, and dig it in cleverly about their roots.

The best of the artichoke slips that were taken off, will do to make a new plantation, if it be required.

Artichokes require a rich deep soil. Before they are planted, trench the ground well about two feet deep, and put plenty of dung on it if it be poor; they love as rich a soil as any herbaceous plant I know. When the ground is dug and levelled, mark out the rows five feet apart, and set the plants in clumps, three or four in each, two feet asunder; give them water, and keep them watered in dry weather, during the summer.

This month is a good time of the year to make plantations of asparagus. Young plants may be

set

set in the beds, or the seeds sown in drills; but before this is done, the ground must be well prepared, for if asparagus is not planted in good land well prepared, it will not produce plentiful crops, and the grass will be small.

The kind of ground which suits asparagus best, is a mellow deep loam of a brownish colour, rather of a sandy nature, not binding.

In the course of the autumn or winter before planting, let plenty of manure be laid on the ground, seven or eight inches thick is not too much; it may be rotten dung alone, or a mixture of dung and vegetable mould. Take an opening out at one end of the ground three feet six inches deep, and three feet in width, and lay it down at the opposite end; then begin and trench the ground, which should not be trenched in the common way, but it ought to be turned over, and mixed in the manner that a dunghill is mixed, or as new and old tan are mixed in a pit for the pine-apple; the labourers will, therefore, have to stand and work in the bottom of the trench, and they should chop down the dung and earth together, mixing them well as they proceed; and if there is time in frosty weather in winter, it would do it good to give it a second turning.

When the asparagus is about to be planted, level the ground; and if, from the nature of the soil,

soil, it appear not to be rich enough, put another layer of dung upon it, and dig it in as deep as the spades will turn it.

The ground being in readiness, divide it into beds four feet wide, with alleys three feet wide between the beds. Plant four rows of roots in each bed, eight inches row from row, and about the same distance plant from plant; let the plants be fine young ones of the former year from seed.

Stretch your line lengthways, beginning at the middle of the bed, and with a spade cut out a trench close to the line, about six or eight inches deep; and when one trench is opened, plant it before you open another, proceeding in this way till the whole is finished.

Keep the plants well watered in dry weather, and the beds perfectly free of weeds at all times.

If instead of planting the roots, the seeds of asparagus are to be sown in the beds, which perhaps is the best method, draw drills, the same distance as is above directed for the plants, four inches deep, sow the seeds in them, and when they are up out of danger, thin them, leaving them about five or six inches plant from plant. Keep the beds clear of weeds, and water the plants when they require it.

Any time this month, sow asparagus seed to raise a supply of young plants; sow them in drills

drills two inches deep, and five or six inches apart; or the seeds may be sown broadcast, treading them in with the feet, and smoothing the beds afterwards with a rake.

In this month fork asparagus beds. Take a dung fork not sharp pointed, and with it dig the beds as deep as you do not injure the plants; let the earth lie fine and light, and some of it should tumble into the trenches between the beds; then rake the beds, leaving the plants covered with mould, about four or five inches thick.

Plant Indian corn; for this purpose, dig a bed of rich earth, stretch a line lengthways in the middle of it, and, at two feet distance, dig holes a foot wide, and nearly the same depth; fill them up with rotten dung to within four inches of the surface, and cover the dung four or five inches thick with mould; then, in each part above the dung, plant four or five seeds, give them a little water in dry weather, and keep them clear of weeds.

Plant slips of taragan, about six inches apart, in beds three feet wide.

In the latter end of this month, in little beds, sow the seeds of sweet marjoram, basil, and summer savory; rake the seeds in fine.

This is the time to plant liquorice: deep light ground is best for it. Trench it two feet deep, and take some cuttings of the side roots, growing near

near the surface of the ground; divide them into lengths about six inches long, and plant them with a dibber, about twenty inches asunder, in lines, and about ten inches plant from plant in the lines, placing them straight down, a little below the surface, and rake the ground smooth, to fill the hollows that the dibber may have left.

## On the FRUIT-GARDEN,

*For March.*

Apricot, peach, and nectarine trees, ought, in this month, to be pruned and nailed; care should be taken in pruning and nailing these trees, that as few blossom buds be broken off as possible. Cut out carefully all cankered useless wood, and endeavour to leave a regular supply of good bearing shoots in every part of the tree. Nail the branches at regular distances, and shorten the bearing shoots, or lay them in at full length, as may appear expedient, on considering the nature and vigour of the different kinds. In whatever parts of the trees the gum, or canker, begin

begin to appear, open the bark, and cut out the affected parts.

If the grape vines were not pruned and nailed last month, let them be finished early in this month. This plant may now be propagated either by cuttings or layers. Let the cuttings be shoots of the last year's growth, well ripened, and having their joints not far apart, and if it can be done, leave a knob of old wood at the lower end of each cutting, which should be about ten inches long; they may be planted against walls, or in a warm part of the kitchen garden. Put them full half way into the ground, and make it firm about them, to prevent the air from drying them; water them in dry weather.

The vine may also be propagated by bending down a young shoot, and pegging a part of it a few inches into the earth, turning the point of it up five or six inches above the ground.

When cuttings of vines are designed for forcing-houses, they should be planted where they are to remain, or put singly into pots and set into a frame or forcing-house. They may be propagated by single buds, or raised from seed, which brings varieties.

If there are any gooseberry, currant, or raspberry bushes unpruned, it had best be done about the beginning of this month.

The suckers of fig-trees may be planted, to have

have young plants in readiness to plant when they may be wanted.

If pear, apple, plum, or cherry trees were not pruned and nailed the preceding months, they should be done now as soon as possible.

Any time in this month, fruit trees of all sorts may be planted; the fore part of the month, however, should be preferred.

If you have any kinds of fruit trees which are propagated by grafting, and that do not produce fruit of those kinds you like, you may now put many grafts on them, of such sorts as you approve; and when they unite and grow, you may cut away the shoots of the original tree. By this method, you will soon have the sorts of fruit you desire.

When the buds are beginning to push, young planted trees, against walls, or in any other situation, should be headed down, and left shorter or longer, according as the strength of each may dictate.

Strawberry plants may be planted. It is a very good time to plant the Alpine: if good plants of this sort are now planted in good ground, they will take root freely, and keep bearing all summer, if they be watered in dry weather, and are of the right kind.

Plantations of raspberries may be made any time this month, if they are required. If the weather

weather happen to be dry, water them as soon as they are planted.

Dig the borders about all sorts of fruit trees that require it.

Early flowering trees against walls will be coming into bloom the latter end of this month, if not before; therefore endeavour to protect them from cold wet weather as well as you can. Various kinds of coverings for them have been recommended, such as nets, mats, canvas, &c.; branches of yew, fir, laurel, hurdles, &c.

There are different opinions respecting the utility of these coverings; some preferring the one before the other, and some maintaining that, on the whole, coverings of any kind, unless they keep the blossom dry, do more hurt than good.

Those coverings that keep the trees dry, while in bloom, I think ought to be preferred; for it may be observed, that trees always set their fruit best in dry seasons.

If the blossom be fully expanded, and the fruit, which, at first, is no larger than the head of a small pin, be fairly impregnated, there is, I apprehend, less danger of its being destroyed by frost than by rain; for the minute fruit, in its most infant state, is wonderfully protected by its natural coverings, and as these are of a soft spungy nature, they seem to resist the frost better than rain.

When

When wet gets at the rudiment of the fruit in its most tender state, after the opening of the flower, it is not easily dried, on account of its thick coats of covering; therefore, if there happen not to be a sufficiency of sun, heat, and air, to push the tree strongly forward in its growth, and to dry the blossom in the course of a day, it is probable that the minute fruit, even if it has received the impregnation, will be destroyed, and drop off some days after it has been wetted.

In this month, sow the seeds of gooseberry, currant, and raspberry plants. Dig little beds of rich earth, and sow the different kinds of seeds separately, cover them with mould nearly an inch thick, rake them smooth, and beat them down with the spade flatwise; keep them watered in dry weather; transplant them the following autumn, and let them be about a foot or eighteen inches asunder; head them down early in the spring, and let them remain there till they have fruit on them.

If you follow this method every year, you will probably obtain some valuable sorts, worthy of propagating for a general crop. This is the only way to obtain fine new varieties.

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On

## On the PLEASURE or FLOWER GARDEN,

*For March.*

The carnation layers which were taken off last autumn, and kept in the frames all winter in pots, may, about the end of this month, be planted in large pots to produce their flowers.

Carnations will grow in any rich loamy soil; but the compost recommended by florists is to be made with the following ingredients: one half rotten horse dung one year old, or that has been used as a hot-bed for melons; one third fresh, sound, loamy earth; one sixth coarse sea or river sand; these are to be mixed together in autumn, laid in a heap, about two feet thick, in an open exposure, and turned three or four times during winter.

When the plants are about to be potted, run the mould through a coarse sieve, then put some of it into the pots, and turn the plants out of the small pots in which they stood all the winter, taking care that the earth adhere to them in a

ball about their roots; and after rubbing off about half an inch of the surface of the old mould round about the plants, cleaning them, and cutting off the decayed leaves, the ball is to be placed in the centre of the pot, and the space filled up between it and the sides of the pot, with the prepared mould.

After the plants are all potted, set them in a warm airy part of the garden, and put an arch of hoops over them, that in case of frosty nights, drying cold winds, or heavy rains, mats may be thrown over them.

It will be necessary when the carnation flower stems are eight or nine inches high, to support them with sticks thrust into the centre of the pot.

Auricula plants in pots should be protected in sharp frosts and rainy weather, or else their tender flower buds will be injured. Let them be protected either in a frame under glasses, or with hoops and mats cast over them; earth up, after cleaning, the surface of the pots with fresh mould, and in dry weather give them gentle waterings. Sow auricula seeds in fine mould, in pots.

The latter end of this month is a fit time to transplant most sorts of evergreens. Endeavour to take up the tenderest kinds with a ball of earth sticking to their roots.

About

About the beginning or middle of the month, all kinds of flowering shrubs and forest trees may be planted with safety, for ornament, either in whole plantations or scattered about in the pleasure ground.

Anemonies and ranunculuses may be planted to succeed those planted last month. As these will blow in warm weather, plant them, if you can, in a part of the garden where some part of the day they may be shaded from the sun.

Sow now all sorts of biennial and perennial flower seeds. These may be sown in little beds separately, and raked in cleverly so as to cover the seeds sufficiently. Fresh earth should be given to the pots of scarlet lychnis, double sweet williams, campanulas, rose campions, stocks, double wall-flowers, which were potted last autumn.

In clumps on the flower borders sow all sorts of hardy annual flower seeds, such as sunflower, lavatera, flos adonis, sweet sultan, hawk-weed, lupins, sweet peas, lark-spur, candy-tuft, dwarf lychnis, convolvulus, snails, catterpillars, &c.

Less hardy annuals may, in the beginning of this month, be sown in pots, and set in a frame or on a gentle hot-bed. India pink, china-aster, marvel of peru, french and african marigolds, palma christi, chrysanthemum, amaranthus, persicaria, convolvulus major, and stramoniums, re-

quire some artificial heat in the early part of the season to enable them to blow well in summer.

Transplant annuals that were sown in February; prick them into pots and set them in frames till they are well rooted, and then plant them in places where they are to flower; if they be hardy kinds, give them plenty of air and water when they want it.

Sow the seeds of foxglove, shrubby mallow, broad leaved campanula, tree primrose, french honeysuckles, honesty, hellebore, hollyocks, &c.

In the borders of the flower garden or in beds, plant pinks, sweet williams, golden rod, batchelor's button, double feverfew, french honeysuckles, canterbury bells, foxgloves, monk's hood, tree primrose, london pride, violets, hypeticas, thrift, gentianella, double camomile, polyanthus, and others of the like kind.

If not done in the former months, dig the ground in borders or clumps between evergreen and flowering shrubs.

In this month may be planted roses, honeysuckles, dwarf almond, double flowering cherry, virginia dogwood, candleberry myrtle, sumac, bladder nut, persian lilac, syringo, &c.

When the weeds begin to come up, hoe and rake the borders in the shrubberies.

Edgings, when wanted, of box, thrift, thyme, daisies,

daisies, pinks, lavender, suthernwood, or such like, should now be planted.

Roll gravel walks once or twice a week, and keep them free of weeds and all sorts of litter.

To make grass walks or lawns, which may be now done, having levelled the ground sow it with rib grass, white clover, and nonsuch, rake the ground fine, and roll it well in a dry day.

New lawns and grass walks may be turfed, which gives an immediate sward; but turf cannot in many places be procured.

Grass walks and lawns should now be kept clear of worm-cast; to do this the grass must be often swept, or scatter the worm-cast about, with a pliable ash or hazel pole, and roll it frequently.

The grass on lawns will now begin to grow; it had best, therefore, be moved before it get too long, otherwise it will be bad to cut, and will not look well till it get two or three mowings.

The seeds of tender annuals, such as balsams, cockscombs, globe amaranthus, double stramoniums, &c. should be sown in pots, and set into a frame for forcing-house.

Mignonette is an annual sweet plant; it should be sown in pots in the green-house, or set in frames to bring it forward early. When it is sown in the autumn, it can be preserved all winter

winter in the green-house or in frames. All the warmth it requires is to keep the frost from it. If it be planted in the autumn and preserved through the winter, it will blossom early in the spring. It should be sown in rich, light, sandy earth. When the plants come up leave only three or four in a pot, and lay a little fine mould about them, close to their stems. They do well to transplant into pots, being set in a shady place till they have struck root.

Sow mignonette in patches on the flower borders. The beds of ranunculas, tulips, hyacinths, and anemonies, should be protected from frost, high winds, and heavy rains. Put hoops over them, and lay upon them, when required, mats, canvas, or any thing else that can be contrived. Also get some sticks prepared to support the stems of the finest of them. In putting the sticks into the ground, take care not to hurt the bulbs.

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On

## On the NURSERY GARDEN.

*For March.*

Now is a good time to sow the seeds of firs, pines, cypress, evergreen oaks, cedar of lebanon, juniper, and other kinds.

In the latter end of this month, or sooner if it be a forward spring, the trees which were grafted the preceding year, should now have their shoots, which were produced last summer, shortened, that they may, the ensuing summer, make branches, to form a regular head.

Propagate all kinds of shrubs and trees, by layers and cuttings.

Trees and shrubs of all sorts may, in the course of this month be transplanted.

In this month, the seed of deciduous trees and shrubs may be sown. Those that bear seeds for sowing are ash, laburnum, birch, elder, larch, scotch fir, sycamore, and many other sorts; sow them in beds separately, and cover them in depth according as their sorts require, from

an

an inch to two or three deep: the large sorts may be sown in small drills. If the ground be light and dry, tread it after the seeds are sown, and smooth it with a rake.

Propagate vines by cuttings: plant them in beds six or seven inches apart, and water them in dry weather.

Dig the ground between the rows of trees and shrubs, and if there is any vacant ground, dig or trench it, that it may be in readiness to plant or sow.

If the spring is forward, and the weather mild, towards the end of the month, the heads of the young stocks which were budded with fruit the preceding summer, may be cut off: observe to cut the stock about four inches above the bud.

Trees of all sorts that require it, should be grafted this month.

For grafting fruit-trees, stocks raised from seed are generally preferred, although those raised from cuttings, layers, and suckers, may be used. It is generally allowed that the stock and graft should be of the same species.

The method of grafting is to cut off the head of the stock, in a sloping manner; then prepare one of the grafts with about four or five eyes, proceed to cut a slit in the stock downwards, and another in the graft upwards, thrust the graft

graft into the stock, taking care to join the bark of each close together at one side, tie them firmly together with bass matting, and immediately cover the grafted part with well prepared clay, in an oval form, and close it securely to prevent the sun and air from drying the parts put together, before they are united.

To prepare clay for grafting, take a quantity of good clay, and mix it with some new horse and cow dung, and a little straw cut small, and beat it well to make it tough.

There are several methods of grafting, besides the one I have described, which is called whip grafting, cleft grafting, crown grafting, root grafting, and grafting by approach. These are not so often practised as the whip method.

Cleft grafting is performed on stocks, from one to three inches or more in diameter. Cut off the head of the stock with a strong knife or small saw; then make a cleft in the stock, long enough to admit the graft, and keep it open with a wedge. Prepare the graft by making the lower end of it in the form of a wedge, and place it in the cleft, taking care that the rind of the graft and that of the stock meet exactly; the wedge may then be removed, binding up the part with strong bass, and putting a good covering of clay round, to keep out the wet and

air till the stock unite with the graft, when it may be removed. More than one graft may be put into one stock.

In this month the seeds of sweet brier may be sown, and you may also, if you choose it, sow the seeds of many kinds of roses; by so doing, you will have a chance to obtain some new varieties, perhaps of beautiful colours.

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THE

THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES.

*For April.*

If the pine apple plants intended for fruiting are in such a state as could be wished, the greater part of them will be shewing their fruit. The state of the bark bed should be examined, the pots kept level, and the tan close to the sides of them, that the heat of the bed may not escape unnecessarily.

If the tan among the pots be sunk below the rims of them, it may be made up, if it would not make the heat at the bottoms of the pots too warm for the roots. This ought to be particularly attended to, for if the plants receive a check at this time, by destroying the roots, the swelling

swelling of the fruit will be prevented. However, let it be observed, that if the plants have had time, and really have made strong roots, from the stems near the surface of the mould, since the tan-bed was renewed and the plants had their dressing, unless the heat be violent, there will be little danger of burning their roots; for after pine plants have been potted upwards of eighteen months, the roots that were first made begin to decay, and if the plants are kept in a vigorous, growing state, fresh roots are constantly, during the spring and summer months, sprouting from the stems immediately at or near the bottom of the under leaves; and indeed if the mould be up to the leaves, the roots will push from under them into it.

A method to make some of the pine apple fruit grow very large, is not to suffer any sucker to grow on the plants. They may be destroyed by thrusting a sharp pointed stick or iron into the centres of them, and twisting it round will destroy their hearts.

Give the plants water when they want it, and air every fine day. Make fires in the evening, and in cold, gloomy days, keep fire heat all day.

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*Height*

*Height of the Thermometer in the Fruiting-House, for April.*

| | D. | M. | N. | E. | | D. | M. | N. | E. |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 60 | 90 | 65 | | 16 | 68 | 76 | 66 |
| | 2 | 61 | 80 | 68 | | 17 | 60 | 84 | 65 |
| | 3 | 62 | 90 | 64 | | 18 | 65 | 86 | 65 |
| Watered | 4 | 64 | 92 | 68 | Watered | 19 | 67 | 80 | 64 |
| | 5 | 66 | 94 | 73 | | 20 | 62 | 86 | 64 |
| | 6 | 67 | 75 | 66 | | 21 | 62 | 72 | 66 |
| | 7 | 68 | 66 | 66 | | 22 | 63 | 72 | 66 |
| | 8 | 67 | 82 | 66 | | 23 | 75 | 80 | 65 |
| | 9 | 70 | 92 | 68 | | 24 | 65 | 72 | 67 |
| Watered | 10 | 60 | 78 | 72 | Watered | 25 | 66 | 84 | 66 |
| | 11 | 67 | 94 | 68 | | 26 | 72 | 78 | 68 |
| | 12 | 78 | 88 | 68 | | 27 | 68 | 80 | 70 |
| | 13 | 70 | 78 | 68 | | 28 | 68 | 85 | 70 |
| | 14 | 60 | 88 | 60 | | 29 | 64 | 75 | 65 |
| | 15 | 61 | 96 | 73 | | 30 | 70 | 74 | 68 |

If the large succession pine plants, which have been planted a year or more, were not shifted and disrooted last month, let it be done now. Tie up their leaves, and set them out of the house. Take the rotten tan out, and carry in some new bark, to mix with the old, left in the house. Mix the old and new well together, to the depth of two feet or more, if it be necessary to do so, to raise a sufficient heat.

As soon as the bed is thus prepared, proceed to shift the plants. Turn them one after another

ther out of their pots, shake the mould from them, and cut all their roots off close, and a bit off the bottom of the stems, if they are found bare of roots, or beginning to decay. Pot the plants in rich earth, and plunge them immediately in the tan-bed, up to their rims. Keep an extraordinary heat in the house, till the plants make roots and begin to grow.

Large suckers planted last year, in August or September, may perhaps by this time have filled their pots with roots: if that be found to be the case, they had best be put into larger pots, to prevent them from receiving a check, which probably would throw them into fruit in the summer.

Get a sufficient number of pots in readiness; let them be as large as will permit mould enough to fall easily between their sides and the ball of earth about the roots of the plants; then set the plants out of the house, tying their leaves up first, to prevent them from being broken. When this is done, proceed to take the exhausted tan from the surface of the bed, and take it out, down as low as the tan which appears fresh and a good heat in it, carry in new tan to fill the pit up to its proper height, then take out an opening of the new and old tan mixed, and lay it down at the opposite end of the pit.

The

The opening should be at least as deep as to let an equal quantity of new and old tan be mixed together. When the tan is turned and made level in the pit, tread it equally all over, and dig it deep enough to let the pots be plunged easily.

Having rich fine mould, and every thing else in readiness, proceed to shift the plants. Take off carefully a few of the bottom leaves, and turn the plants out of their pots, with the ball of mould about their roots perfectly whole, and set them in the larger pots, filling the vacancy up with the fine mould over the surface of the ball above the roots, about an inch thick, to the bottom leaves. Plunge the pots up to their rims in the tan, and when the heat in the bed rises to its full strength, give the plants a little water, to settle the mould about their roots; after this, they will need but little water till the roots are extended through the fresh mould to the side of the pots.

The crowns and suckers of last year, which have not been shifted at this time, ought not to be forgotten; give them water occasionally as they appear to require it. If they are in brick pits, without fire heat, let a sufficient heat be kept up in the dung linings. Cover the glasses up in the evening about five o'clock, and uncover them in the morning about seven.

If

If there are grape vines in the hot-houses trained up the rafters, let them be kept in good order, keep them trained under or near the rafters, that they do not overshadow the pines. Thin the berries in the bunches, if it is required, and stop the shoots before the fruit, training up straight, from whence they proceed, the young shoots, to produce fruit the ensuing year.

Carry out of the hot-houses the french beans that have done bearing, and plant more to keep on a succession, till they come in, in the natural ground.

Water the french beans well that are bearing, sprinkle their leaves frequently with clean water, if they are in a part of the house where it can be done. This will be a great mean to prevent them from the inroads of insects.

French beans in a hot-house, if they be well managed, grow very strong, and keep bearing long; therefore if the leaves are not kept regularly thinned, the blossom and fruit is injured, take care then to cut off some of the old leaves now and then as they appear to want it.

Examine exotic plants, if there are any in the houses, put a little mould on the surface, to refresh the roots; keep them free of dead leaves, and give them moderate waterings, when they require it.

If there are peach, fig, or any other kind of fruit

fruit trees in the houses in pots, in keeping them clean and giving them water, they must be attended to daily.

The seeds of exotic plants, both annual and more durable, may be sown in this month.

Take the opportunity of every fine day to give the hot-houses air. If the weather be gloomy, that it cannot be given without making the air in them too cold, keep fires occasionally in the day time, you may then admit air freely without running the risk of lowering the heat too much.

The fruiting plants, and successions that have not been disrooted, if the weather prove fine, should be sprinkled about once a week or ten days, with clean water, from 75 to 80 degrees warm.

If you have any crowns or suckers, which were taken off the plants, late in autumn or in winter, let them be planted.

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## On the GREEN-HOUSE.

*For April.*

The green-house plants may now be shifted if you choose it. Having light loamy earth, not

of a stiff binding nature in readiness, in a fine day begin at one side of the house, and set out into some convenient place, in the open air, as many rows of plants as you can finish in one day. Then begin and trim the plants, cut off straggling naked shoots, and head down any of them that require it. Turn the plants out of their pots, and reduce the balls of earth about their roots, more or less as may be found expedient. The outside all round the balls of those that are much matted may be shaved off with a long bladed knife. Put them in pots just large enough to let mould go between the pot and the roots. Tie up the branches neatly of those plants that require it, and place them in the house again in a regular manner.

Proceed day after day till they are all shifted, give them a gentle watering to settle all the mould about them, and keep them for a few days a little warmer than usual. On examinaation, if it be found that some of the plants do not require shifting, take a little mould off the top, and replace it with fresh earth.

After the plants begin to grow, give the house plenty of air in the day time, and when the weather is warm, leave air all night at it.

Let all kinds of plants in the green-house, such as stocks and mignionette be taken care of, keep the mould about them free of moss and other

other weeds, and water them moderately occasionally, as they appear to want it.

About once a week in fine mornings sprinkle the plants all over, till their leaves are wetted with clean water: this will clear them of dust, and accelerate their growth.

If there is the appearance of the green insect on any of them, fill the house full of tobacco-smoke.

Grape vines in the green-house will now be shooting: see that they do not break by running against the glass.

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## On the FORCING-HOUSES.

*For April.*

If you have the grapes in a forcing-house in such a state of forwardness as to ripen them in the month of May, they will now be swelled to a size that you can hardly perceive them to grow larger, till the black sorts begin to change colour, and the white ones to appear of a more bright colour than at an earlier period of their swelling.

From the time that the grapes are in the state above described, till they are ripe, they will swell considerably; therefore the bunches should be examined, and if the berries on any of the bunches be so thick that they will not have room to swell, thin them carefully by twisting some off with your finger and thumb, or with a pair of pointed scissars.

Make fires every evening and morning, and in gloomy cold days, keep them up all day.

Sprinkle the flues now and then with clean water, and let the borders in the house be sufficiently watered.

Give air at all times when you can without lowering the heat of the house too much, a strong heat must be kept in it. It should not be lower than about 60 in the mornings, and it ought to rise to 75 and 85 with sun heat and plenty of air.

See that the vines be kept in a regular state of training, and that their leaves do not become too crouded, so as to hinder the grapes from the influence of the sun beams.

Stop the shoots agreeably to the mode of management you have adopted in pruning them. If the wood that bore the crop the preceding year was all cut out, take care that long shoots be trained up from the bottom for bearing

bearing wood the ensuing year. Stop the shoots, if they require it, before the bunches.

Take care of all kinds of plants in pots. Peaches, figs, and cherries, require examining every day, to see if they want water, or if any of the shoots need tying up.

Strawberries in pots require water often. Their leaves should be well thinned, and the runners taken off.

Take good care of the cherry-house; give it plenty of air. The cherries will now be grown large; give the border a good watering now and then, which will enable the trees to swell the fruit to a good size: by keeping them in a healthy growing state, the fruit will be fine flavoured, and the trees will make strong flower buds for the ensuing season.

If the fruit are not ripening, wash the trees occasionally in a fine sunshine morning, with sweet clean water. Inspect the leaves and shoots constantly when you walk in the house, for fear that any kind of insects breed upon them.

Smoke the house once a week or ten days, which will prevent the trees from being infested with a blackish kind of insect, frequently very hurtful to cherry trees of all sorts.

Make fires in the house every evening, and in cold mornings.

Peaches and nectarines, designed to ripen in

May,

May, will now be forward; the stones in them will have got hard, and the fruit will appear to have swelled but little for a considerable time. A good heat must be kept in the house; from 55 to 70, with fire heat is not too much, with air at the house; and in sunshine days, it should be higher.

Keep the young shoots tied up regularly, and see that the trees do not get too full of leaves to hinder the fruit from the rays of the sun occasionally.

With an engine wash the trees well in a sunshine morning, with sweet clean water, about 65 degrees warm. Examine the shoots frequently, and, if there be the least appearance of mildew, dust the parts well with sulphur.

Make fires in time every evening, and in cold days. Do not forget to fill the house full of tobacco smoke at least once a fortnight, or oftener if you see need for it.

If the fruit are too thick on the trees, it is not too late to thin them till they begin to swell for ripening; and if the border, or any part of it, be in the inside of the house, where the rains cannot get at it, let it be kept in a moist state, by being well watered about once a week or fortnight.

The fig trees in the forcing-house will now, if the weather be fine, be bringing their fruit forward

forward apace. The fire heat may be increased a little, and they will bear a good strong sun heat, if care be taken to keep a free circulation of air moving out and in to the house.

If the border in which the fig trees grow be in the house, keep it sufficiently watered, and keep the house in a sweet wholesome state; and if this be done, I do not think the trees need to be watered over their leaves till the following warm months.

Train the shoots to the trellis regularly, and do not suffer the trees to become over-crouded with leaves.

In case there are in the fig-house pots of peach, cherry, plum, or other kind of dwarf fruit trees, water them before they get too dry, and endeavour to keep them clean in their leaves, and free of weeds in their pots.

Pay attention to the rose-house. The roses will blow plentifully now when the days have got long, if they are well supplied with water and other necessaries. As fast as the trees begin to blow, set them out into a cooler place. Many ladies set rose trees in their rooms and windows, when they are in blossom; and if they were taken care of when in these situations, it would not hurt the plants: but it frequently happens that in such places they are starved for want of water, or overwatered by setting them in

in pans constantly full of water. In such cases all that can be done, is to pot plenty of rose trees every season.

About this time of the year, some sorts of insects begin to be hatched, by some means, and creep out of their winter habitations. When rose trees begin to shoot in the natural ground, if they are narrowly inspected, insects may often be seen in great numbers on them; it is therefore the safest way to smoke the house every time fresh roses are put into it: and when the rose buds begin to push, it is a good method to examine them bud after bud, for fear a little grub had made its nest in the end of any of them.

Make fires in the flues of the rose-house every evening, and in cold days, and give the house as much air as can be done, so as to keep it to a proper degree of heat, to cause the roses to blow vigorously. Keep the pots sufficiently watered, but always take care that it have a free passage through the bottoms of them.

In the rose-house, if there is room, many other kinds of flower-pots may be set to make them blossom, before they come in the open ground. Carnations, pinks, and a variety of herbaceous plants, and low growing shrubs of different sorts, may be forced in it; but rose trees require the air in the house to be kept sometimes

in

in a state to make them blow very fine, which is not suitable for many of these. However, no unnecessary space in the house ought to be left unoccupied. Several sorts of flowers will blow in the rose-house, though some may not do well, and these things will, in forcing all kinds of flowers as well as fruits, frequently happen.

Whatever sort of plants are in the rose-house, they demand daily attention to keep them in a growing state. If you have grape vines in it, manage them the same way as those in the hot-houses.

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## On the FORCING-FRAMES.

*For April.*

If the melon plants, which were planted out early in March, have met with no interruption, but have continued in a vigorous growing state, it is likely the fruit will be set and swelling. To forward the fruit as it ought to be, to have it fine flavoured and well swelled, a strong heat must still be kept up in the linings. Examine them,

them, and if the heat is not sufficient when they are kept to their full height by fresh dung, get a quantity of new dung in readiness, and having pitched on the coldest side lining, begin to carry away all the exhausted dung, laying aside those parts of it unexhausted to mix among fresh dung. When the rotten dung is cleared away, apply the dung to the bed, by shaking it and mixing the old and new dung well together, make the lining of a width capable to raise a strong heat. When the heat rises in it, it will sink quickly, so that care must be taken to keep it to a proper height, by additional quantities of dung.

The linings of a melon bed should never be raised above the level of the surface of the earth in which the plants grow, unless the heat of the linings is no warmer than what the air in the bed about the plants ought to be, on a medium.

Keep the melon plants moderately thin of leaves; stop the shoots a joint or two before the fruit, and cut off all superfluous shoots; give them water when you perceive the mould beginning to get dry, and let them have as much air as you can without keeping the air in the frame too cold. Sprinkle them all over with clean water now and then, and shut them up with a strong heat: this will help to keep them on in a growing state, and prevent the red spider from hurting

hurting them. Insects are generally found thickest on plants in a weak sickly state.

Plant out more melons for a succession, and sow melon seeds to raise plants to plant out next month.

The mushroom bed in the forcing-house will be better to have a fire made two or three times a week, if the nights are cold.

Seedlings of any kind, in melon or cucumber frames, should be attended to in giving them water, and keeping them clear of weeds.

Sow cucumber seeds to plant under hand-glasses, and take care of the plants that are now producing fruit.

Take care and look forward to have a supply of warm dung in readiness for linings, or to make new beds for any kind of plants that require it.

This is a good time to plant tuberose roots in pots, to set in the frames to strick them, or to plant them on a gentle hot-bed, having about eight inches deep of rich earth on the surface of it. Before these plants are planted, break off the side suckers, and all the last year's roots. If you choose you may plant the suckers to raise bulbs; but they are mostly brought from Holland every year.

If melons do not set kindly, impregnate the blossoms

blossoms in the same way as I have directed for the impregnation of cucumbers, in my treatise on the cucumber.

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## On the KITCHEN-GARDEN.

*For April.*

In this month peas in the open ground will require to have earth drawn to each side of them, to make them stand upright, and when they begin to run, stake them, which will enable them to bear a larger crop than if they were suffered to trail on the ground. Observe to put the shortest stakes to the early short growing peas.

Remember to continue to sow a crop of peas whenever the last sown are appearing through the ground. By observing this rule you will have a constant supply of green peas, if the mildew or some other disease do not prevent.

Likewise observe the same rule in sowing beans of different sorts. The ground between the rows of

of forward sown beans will require to be hoed, and earth drawn to the stems of them.

Sow twice in this month the different kinds of cabbage seed, for a succession, and plant out young cabbage plants once a fortnight.

This month is still a good time to sow carrots and parsnips. Sow them on good ground, tread in the seeds, and smooth the ground afterwards with a rake.

Sow now the different kinds of brocoli: the seeds should be sown in beds, on a border of rich earth. If the ground is not of a stiff clayey nature, tread them in, and rake the beds.

Sow the seeds of savory, brussels sprouts, jerusalem kail, and red and green borecole.

Sow radishes of different sorts. Some are fond of the black rooted turnip radish; it is a good time to sow the seed of it any time this month.

To have a succession of spinach, observe to sow the seeds for a crop as soon as you see those come up, which were last sown. It may be sown in drills between the rows of peas or beans.

Continue to sow, in shallow drills, turnip, radish, rape, and white mustard for sallading.

Onion and leek seeds may be sown about the beginning of this month. Tread the seeds in well, and rake the ground afterwards.

To

To have a constant supply of young carrots and onions, a few of their seeds should be sown two or three times a month during summer and autumn.

Cardoons may be sown about the beginning of the month on beds to transplant, or in trenches, where they are intended to be blanched.

Artichokes not yet dressed, should be done early in this month. Slip off all superfluous suckers, leaving the strongest on the stools to produce fruit, and dig in about the stools some good manure. Make a plantation, if it be wanted. Plant them in rows five feet apart, and set three or four plants in patches about two feet distant. Keep them well watered, and perhaps they may blow in the autumn.

If asparagus beds were not forked last month, they ought to be done in the beginning of this month. Asparagus seeds may still be sown.

Celery, sown early on a hot-bed, or in pots, may now be pricked out on beds of rich ground, three or four inches plant from plant, and take care to keep them well watered.

French or kidney beans may be sown in this month. Draw shallow drills for them, three or four feet asunder, and put the seeds in the rows three or four inches apart. Cover them lightly, about

about two inches deep, and smooth the ground; but do not tread on the seeds at this period of the season.

Transplant cauliflower. Plant them in well enriched ground, trenched or dug deep: put them in rows three feet apart, and about eighteen inches plant from plant. You may sow between the drills any sort of low growing seeds, such as radish or lettuce.

A little cauliflower seed should be sown at two different times, to make a constant succession of plants. Sow it on a rich bed of earth, and rake it carefully in.

Sow curled parsley. The best way is to sow it in a shallow drill, where it can easily be kept free of weeds, and covered in winter in hard dry frosts, when there is no snow on the ground.

Sow summer savory, borage, chervil, burnet, and any other weeds of herbs that may be wanted.

Raise gourds, pumpkins, and patagonian cucumbers. This last grows long and very large. To propagate these, a trench may be made in the garden, about twenty inches deep, three feet wide, and as long or short as you please. Make a bed of warm dung in the trench, about thirty inches high. When the heat comes up well, tread

tread it, and make it level, then cover it about seven or eight inches thick with rich earth, and plant the seeds four feet apart in patches, and set hand-lights on them. When they come up, thin the plants, leaving two or three in a patch. Give them water when they want it, and when the weather gets warm enough, set the glasses off.

Sow turnip twice this month, that you may have a constant supply. Tread or roll the ground well after sowing the seed, and when it is coming up, if the fly begin to eat the tender plants, strew a little fine soot over them.

Thin, by hoeing, the early sown crops of turnips.

Transplant lettuce every eight or ten days, and that you may have plants for this purpose, sow a few seeds every week.

If not done last month, sow as much salsafy and scorzonera as you want.

Sow purslain and nasturtiums, they are used in sallads by some people.

Now is a good time to plant slips or cuttings of sage, thyme, hyssop, lavender, suthernwood, &c.

Some of these are more easily propagated by seeds. Plant also slips of tarragon.

You should observe if any of the seeds sown last

last month have failed in coming up, to replace them by sowing again the beginning of this month, or as soon as you perceive it is wanted.

When it is wanted, thin the early crops of onions, carrots, &c. This may be done by hand-hoeing or weeding as you think best.

The seeds of sea-kail may still be sown: for the method turn back to March.

This is a good time to plant a full crop of potatoes. Chuse a piece of good ground for this purpose, and in planting them, pick those for seed that are sound and free of disease.

Potatoes in general do not prosper in a binding soil, unless plenty of opening manure be put into it. Where the land is of a binding nature, make trenches, about thirty inches or three feet apart, and put a layer of long dry dung in each, and set the potatoe cuttings on the dung, in a row about twelve to eighteen inches distant, according to the sorts, cover them about four or five inches deep. The best way to do this work is to stretch the line along one side of the ground, after it has been trenched or well dug, then make the trench and finish it before you begin another; by this means you will not harden the ground by treading on it after it is planted.

There have been complaints made of, and re-

wards offered to cure, a disease in potatoes, called the curl. There are some sorts of potatoes more liable to be affected with this disease than others: the best way is not to plant many of such sorts, and, when any of them are planted, keep them by themselves.

I have not found out, nor have I heard of a better method to prevent disease in potatoes than to plant well ripened uninfected ones, in rich or sufficiently manured ground, as suitable to their nature as can be found; if it be winter and spring fallowed, it will meliorate it, and destroy some sorts of insects in the ground, which frequently hurt potatoes. If this method is followed, unless in unfavourable seasons, there is little danger to be apprehended from disease of any kind.

To be a help to prevent infection too, I would advise that the seed be changed from one climate to another once in two or three years. In most parishes throughout the kingdom different climates are to be found, occasioned by the nature and situation of the soil.

This practice of changing the seed, which I strongly recommend as a mean to prevent disease, is opposed by Walter Nicol, a late writer on gardening. He says "May not the seed be as effectually changed on the same farm or garden, if of any considerable extent, as by being carried

carried from one parish or country to another? Are potatoes improvable like wine, by being sea-borne or land-borne, without being afterwards planted in soil different from that in which they last grew? Certainly, no. And shall he, who has his seed brought from land non-descript, and which he never saw, be certain of planting again in that which is essentially different in quality? May it not as probably happen that perchance he shall plant in land exactly similar to that in which his seed was produced?"

This is the opinion and reasoning of one who calls himself a practical gardener. How long he was in the practice, he does not say; but he condemns methods in general practice in England, among those gardeners who rank among the first in successful practice, without giving reasons for doing so.

If it were right to follow Mr. Nicol's opinion in not carrying a change of potatoe-seed from one district to plant in another, it would apply to seeds of every description.

Experienced farmers are careful to procure a change of seed from other districts now and then, and gardeners have a change of seeds of most sorts every year.

Potatoes are not improvable like wine, but they may be improved in a similar way, as the plant is which produces wine. The seed pro-

duced on the stem of the potatoe may be sown, and if attention, be paid in selection some superior sorts, and kinds, not very susceptible of infection or disease, may be obtained from it. That commonly called potatoe seed is the root, and not really the seed of the plant.

It is generally allowed that a change of sound potatoes for seed, from one parish or district to another, is a mean to prevent them from degeneracy, consequently they vegetate stronger, and are more able to resist disease. The reason of this, I apprehend, is the change of situation, either from a warmer to a colder climate, or the reverse. The climate, or external air near the ground, is often affected by the nature of the soil. This is evident, for it is known that some parts of the country produce crops earlier than some other parts, which are two or three degrees of latitude nearer the south.

Mr. Nicol, as a farther reason for not changing potatoe seed, says, " The curl has frequently been brought to places where it was never known before, by this mistaken notion." This may have happened, but that is not a sufficient reason for discontinuing the practice of changing the seed. The curl in potatoes appears in the stems, and it may arise from the effect of the air, as well as from the seed or nature of the soil; and

as

as the appearance of the potatoe is affected by the disease in the stem, no person should plant potatoes unless they appear sound.

Mr. Nicol, who has resided most of his days in Scotland, may find in that country, a considerable change of climate within the compass of a few miles. In the valleys, peaches and nectarines may be seen ripe on the open walls, and wheat and other grain in perfection in the fields, while at the same time, not many miles thence, snow lies in abundance. Between two such extremes, variation of climates, in which potatoes grow, must subsist; these, doubtless, will have some effect on their growth when changed from the one to the other, and that effect may be the prevention of disease.

## On the FRUIT GARDEN,

*For April.*

All kinds of fruit-trees may be pruned and nailed in this month; the only objections I know against the practice are a very forward spring, and that the blosoms are liable to be rubbed off; the

the first is a sufficient objection, but if they are in blossom before they be nailed, it must be done by a careful person, and trees in a good bearing condition, can well spare a few blossoms. There is also another objection ; when trees are intended to be covered, it cannot be done with some kind of coverings that are used, till they are nailed. The coverings should certainly be begun to be applied just before the blossoms open.

Fruit-trees of all kinds may now be planted. It should be endeavoured not to keep them long out of the ground, and they ought to be watered as soon as planted.

Head down all sorts of young trees lately planted, and to keep the earth moist about the roots of new planted trees, lay a little dung, not over rotten, round their stems.

About the end of the month, it will probably be time to begin to thin the fruit on the apricot trees if they be too thick; leave more on, however, than you wish to remain, as some may drop off, and you can thin them next month, when they will be fit to make tarts before the kernels are hard.

If the spring be forward, toward the end of the month, the vines against warm walls will have made some shoots, look over them, and break off any useless ones.

Cuttings

Cuttings of vines may be planted the beginning of this month, before they begin to grow.

Trees may yet be grafted if the season be backward. Late kinds of apples, plums, and pears, are the sorts that will be most likely to unite freely at this season. The wall trees should be looked over carefully, and if any mildew begin to appear, strew a little sulphur on the affected part; and if the green insect begin to make its appearance on the shoots, you may strew them over with a little fine snuff. After the fruit is set and the blossom decayed, wash the trees now and then, if the weather be dry, with clean water in fine days; this will help toinv igorate them, and be a mean to prevent infection.

Keep fruit-tree borders perfectly free of weeds, and do not plant or sow any sort of vegetables near the stems of peach and nectarine trees, if you do it will impoverish them.

Let the beds of strawberry plants be kept clean, and if the weather prove dry in this month, water them well occasionally.

If you have abundance of strawberry beds, you may mow down some of them when they are in blossom, and clear away the mowings; water the beds in dry weather and they will put forth fresh leaves and blossoms, and you will have a chance

chance of fruit from them after your strawberries of the same sorts are over.

If you did not sow last month the seeds of raspberry, gooseberry, and currant bushes, you may do it this month.

When coverings for fruit-trees are used to take off and put on daily, they should be put on in the afternoon, between five and six o'clock, and taken off in the morning .about seven, or as early as the sun shines on them. In very cold or wet days, it would be best to let them remain on all day.

This is the best time to prune fig trees, cut out all old useless branches, and train in regularly the most promising young shoots, about eight or ten inches apart, without shortening them.

In warm situations the early sort of figs will ripen on standards. Plant them in a row, and do not suffer them to run higher than about four feet. Secure the roots in winter from frost by long litter, and cover their branches with mats. You may drive in stakes to support the coverings.

Pear, cherry, plum, and apple trees, that are much cankered, and do not produce well, may now be headed down, if you intend not to destroy them.

On

## On the PLEASURE or FLOWER GARDEN,

*For April.*

In dry days, take the opportunity of hoeing and raking the flower borders, and pick out the weeds with the hand, where the hoe and rake cannot be conveniently used.

Edgings of box, thrift, and daisies, may still be planted, and this is the best season to clip edgings of most sorts of plants, as they are not liable to be hurt by the frost. If lavender and some other plants used for edgings are cut in the winter, if hard frost succeeded, probably it would kill them.

In dry weather, gravel walks should be turned. If their edges are bounded with grass, it should be cut even with an edging iron, and the walks swept clean, then turn the gravel so deep as to bury the surface of it, and let all that is turned be trodden and well rolled the same day.

Grass walks and lawns should be frequently rolled, and mown as often as they want it. This will produce a fine sward, and prevent worm cast from making much appearance.

New

New walks and lawns sown with grass seeds in the former months, should be rolled occasionally in weather when the ground will bear the roller well.

Many flower plants of the herbaceous kind, and others, will now require to be tied up, to keep them from being broken by the wind.

If carnation layers of last year, were not pot ted out last month, let it be done about the beginning of this month. For the method, &c. see March.

The seeds of carnations and pinks should now be sown. Sow them in little beds of rich earth, cover the seeds about half an inch thick, and if the ground be light, beat the surface of the beds with the spade turned flatwise, give them water in dry weather, and keep them free of weeds.

Mignonette and stock, sown early in the spring in pots, after being previously set in the open air a few days to harden, may be planted out in beds each sort by itself, or on borders in patches among other flowers and low growing shrubs.

Auriculas coming into bloom ought to be protected from high winds, rain, and too much sunshine. If they were left unprotected from these, the mealy dust which covers the surface of the blossoms, and is no small beauty to the flower, would be washed or blown off.

That

That these pretty flowers may be viewed to advantage when in bloom, a stand should be erected facing the east, the back part of the stage should be some wall or paling, it must also be covered in at the top, but the front and ends should be left open and covered only occasionally with mats. There ought also to be five or six ranges of shelves about six inches wide on which the pots are to be placed; each shelf should rise a sufficient distance above the other, so that when the pots of plants are set upon them they may appear uniform.

Tender annual flowers sown the former months in pots, in frames, or in the forcing-houses, should now be pricked out one by one in small single pots, or five or six in each pot to be separated afterwards.

Tuberoses which are begun to run should be supported, they require long sticks as the stem grows sometimes four feet high. To have a succession, more roots should be planted this month.

On the borders or vacancies in the front of shrubberies, sow the seeds of hardy annuals to succeed those sown in the former months. Sow them in patches, and put a stick or some mark to each patch to shew where the seeds are sown, to prevent their being cut up when the borders are mowed.

Beds of tulips, ranunculus, hyacinths, and anemonies which are in blossom or coming into blossom, ought to be well protected from rains and hot sunshine. Tie up with short sticks the stalks of tulips and hyacinths if they are likely to fall. Keep the beds clean of weeds or of any thing else that may have an unsightly appearance.

If there are any plants of the herbaceous or perennial kinds which have been in pots through the winter, let the earth on their tops be loosened and taken off, and some fresh rich earth put on in its place, give them gentle waterings two or three times a week, as they may require.

All kinds of shrubs in pots, should now have fresh mould on the surface of them, be pruned and cleared of dead unsightly branches, and supplied with water in dry weather.

Let all the rose trees in pots be pruned about the beginning of the month. After pruning, loosen their earth down to the roots, and take it all off and replace it with some fresh rich earth, and keep them well watered in dry weather.

The seeds of biennial and perennial flowers may still be sown; sow them in little beds, each sort by itself, and water them occasionally in dry weather.

Plant the different kinds of evergreen trees and shrubs. If it be practicable, let them be taken up

up with some earth at their roots, place them upright in holes previously dug, break the mould fine, and lay it in among the roots; when the hole is filled up, tread the earth over the roots and give them a good watering. Tall trees and shrubs should be tied to strong stakes to prevent them from being blown down by the wind.

In the beginning of the month various kinds of deciduous trees and shrubs may be planted. They must be watered constantly in dry weather during the summer, to keep them alive.

If it was not done in the latter part of last month, sow the seeds of double stramonium, egg-plant, globe amaranthus, double balsam, sensitive plant, ice-plant, tricolors, cockscombs, &c. In the early stage of their growth, most of these require forcing. When they are brought forward to begin to blow in warm weather in summer, they will do in a sheltered place in the open air or in the green-house.

Balm of gilead is a plant of the perennial kind, it may be propagated by slips or cuttings, but the general way is to sow the seeds in pots, and set them into a forcing-house or frame. When the plants are two or three inches high transplant them into single pots, and when they grow strong they will stand in the open air all the summer, and in the green-house in winter.

You

You may now sow in the beginning of the month, if it was not done in the former one, the seeds of the tobacco plant, it grows tall and broad leaved. You may sow it in patches here and there in the shrubbery, or in a bed in the kitchen-garden. I have had the seeds of this plant shake out of the pods in autumn, lay in the ground all winter, and come up in the spring.

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## On the NURSERY-GARDEN,

*For April.*

Fruit-trees may be grafted about the beginning of the month, if they have not begun to shoot.

Hollies may be grafted with cuttings of the variegated kind, it is best to graft these on the plain holly four or five years old from seed.

The stems of trees that are required to be trained straight, ought to be done while they are pliable; tie them with bass to straight stakes in such a way that when shaken by the wind it do not gall them.

The weeds should be hoed up every where, and picked out of the beds of young seedlings with the hand.

Plant

Plant stocks for budding and grafting upon.

In dry weather trees and shrubs of every sort planted this spring, would be better to be watered once or twice a week.

Now is a good time to transplant phillyreas, alaternus, laurels, lauristinus, portugal laurels, magnolias, rhododendrons, cedars, spruce firs, weymouth pines, &c. if the weather be dry, give them water as soon as they are planted.

There is a kind of grafting, called inarching, which is by some practised on trees which do not unite readily, this is a good time of the year to do it in.

The method is to have the stock planted near the tree from which the graft is to be taken, or bring it near in a pot; then take one of the branches intended to be inarched and bring it close to the stock, then in the parts of the branch and stock where they will most readily join, pare away the bark and part of the wood about three inches in length, so that the two cuts may join exactly, cut a slit upwards in the branch about an inch long, and another downwards in the stock to receive the wedge or tongue of the branch, join them so that the bark of the cut parts of them may unite; tie them together closely with strong bass, clay the part over, and when this is done, fasten the branch to a stake until

until they are united, when the graft may be cut from the parent plant.

The seeds of tender trees and shrubs may be sown; the beginning of this month is, by some, reckoned the best time; the seeds of the arbutus, cedar of lebanon, cypress, &c. are generally sown in large pans or boxes, for the conveniency of moving them to such situations, at different seasons, as is thought best adapted for their growth.

The seeds of sweetbrier and roses of different kinds, may now be sown. Sow them in beds and cover them about an inch deep, and keep them watered in dry weather.

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THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES,

*For May.*

THE fruiting pines will now demand particular attendance, fires must be made in the house every evening, unless the nights are so warm that the thermometer be above 60 in the morning; and if mornings are gloomy, and no appearance of sunshine, fires should be made. The fruit will not swell well, unless a good strong heat be kept up in the tan bed also. It is better to have the pots stand out of the tan a little than to be the least deficient of heat, for besides causing the roots to grow, a strong sweet heat in the tan bed raises a constant effluvia among the

 plants,

plants, very nourishing to them; and less fire will be wanted if a strong heat is kept up in the tan than otherwise.

Examine the tan-bed, and if you find the heat much on the decline, you had best give it an augmentation of fresh tan. Tie the leaves of the plants up carefully, and set them out in the open air or in a sweet dry shed. Carry out any much exhausted tan, and fill the pit up with new bark. Mix the new and old as deep in the pit as you are sure will raise and continue a good heat till the month of September, when the fruit will be ripened; for if it can be avoided, the plants should not be moved again till the fruit is over. Do not plunge the pots to the rims, nor above three parts of their depth if the roots are at the bottoms. In short, you ought to put them in the tan such a depth only as you are sure the roots cannot be over-heated. The weather, some years, gets very hot in May, which causes the tan to heat greatly, if there be a heating substance in it. Before the pots are set in the tan bed, if it be required, pull off a few of the under leaves of the plants, and put some fresh earth on the surface close round the stem of each plant.

You need not give the house much air till the heat in the bed come up, when you may water the plants; and in this month they should be watered all over the leaves and fruit with clean

clean water, not less than 75 degrees warm. Take care to give plenty of air and heat.

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*Height of the Thermometer in the Fruiting-house, for May.*

| | D. | M. | N. | E. | | D. | M. | N. | E. |
|---|---|---|---|---|---|---|---|---|---|
| Watered | 1 | 65 | 90 | 66 | | 17 | 70 | 90 | 70 |
| | 2 | 68 | 92 | 67 | | 18 | 67 | 90 | 71 |
| | 3 | 70 | 88 | 70 | | 19 | 71 | 90 | 72 |
| | 4 | 67 | 90 | 66 | | 20 | 70 | 90 | 71 |
| | 5 | 68 | 92 | 68 | | 21 | 66 | 80 | 70 |
| | 6 | 68 | 96 | 74 | | 22 | 73 | 92 | 72 |
| | 7 | 70 | 94 | 70 | Watered | 23 | 71 | 90 | 72 |
| | 8 | 70 | 92 | 70 | | 24 | 66 | 94 | 70 |
| Watered | 9 | 68 | 75 | 70 | | 25 | 66 | 94 | 72 |
| | 10 | 68 | 88 | 70 | | 26 | 66 | 87 | 70 |
| | 11 | 68 | 90 | 70 | | 27 | 68 | 90 | 73 |
| | 12 | 68 | 92 | 70 | | 28 | 62 | 88 | 70 |
| | 13 | 67 | 86 | 70 | Watered | 29 | 72 | 98 | 75 |
| | 14 | 68 | 75 | 64 | | 30 | 71 | 75 | 70 |
| | 15 | 67 | 77 | 75 | | 31 | 68 | 92 | 74 |
| Watered | 16 | 66 | 92 | 70 | | | | | |

The succession plants should be attended to. If those that were disrooted in any of the former months have begun to grow, give them gentle waterings as you find they require it. If there are any plants sickly, which will not be the case

if they are in good mould, and get enough of heat and water, it is not too late to cut the roots from them as was directed in the preceding month.

Any suckers or crowns potted in the autumn, and which remain yet in the same pots, will now, if they have grown as they ought, require shifting into larger pots. Having some good mould and pots in readiness, and all other materials you want, sufficient to complete the job, begin in the morning of the first fine day you have to spare, and carry out the plants, and take all the exhausted tan out of the bed, putting in as much new as may raise the bed to its proper height. Then mix the old and new well together, tread it on the surface, and level and dig it up again a spit deep. Take the plants one after another, scrape the loose mould off the surface of the pots, divest the plants of as many of their bottom leaves as you see necessary; turn them out of the pots with the ball whole, put them into such sized pots as may allow of mould to fall down easy round the balls, and then plunge them regularly in the tan bed up to the rims. Keep a little stronger heat than usual in the house till the heat come up in the tan, then give plenty of air, heat, and moderate waterings when they require it; only observe that plants after fresh potting, do not want so much

water as they did before, till the roots begin to be matted in the new mould.

A heat should still be kept in the linings of those pits of pines worked with dung heat. Cover them every night with mats, to keep the cold damps from them. Plant any crowns or suckers taken off in the autumn or winter.

Set out french bean pots that have done bearing, and make a fresh plantation of french beans, to keep a constant supply of that vegetable.

Take care of all kinds of exotic plants in the hot-houses; this is a good time to shift any of them that want it, and to propagate them by cuttings.

If you have grape-vines in hot-houses, in a good state of bearing, the fruit will now be far advanced toward perfection; perhaps some of them may be ripe about the end of the month. All that can be done to these now, is to stop any shoots that require it, and not to suffer the bunches to become overcrouded with leaves. The berries of younger grapes will require thinning.

Keep all the hot-houses clean and sweet, and sprinkle the paths and flues occasionally with water.

If you have pots of figs, peaches, or nectarines, in either of the hot-houses, endeavour to keep

keep them clear of insects and mildew, and give them gentle waterings as often as they want it.

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## On the GREEN-HOUSE,

*For May.*

If the green-house plants were not shifted last month, you may do it the beginning of this, or let them remain till you set them out for the summer.

Pick all the dead and decaying leaves off the plants, and keep the pots free of weeds. The plants will want water frequently, if they are in good health; and the house in the day-time will require all the air you can give it; leave some at it all night, more or less, as the warmth of the nights are.

In some situations, green-house plants may be set out about the middle of this month; but I have known them set out about that time, near London, and got greatly hurt by the frost afterwards. To be safe, it is best to let them be in till after the twentieth of the month, and in cold situations till the beginning of June.

This

This is a good time to raise green-house plants from cuttings. Many sorts will do well by planting them in pots, and setting them under hand-glasses; put six or seven in each pot, of about six inches in diameter; plunge four or more pots close together, in old tan or leaves of trees, put a hand-light over them, let the mould be watered now and then, and keep the glasses close shut till the cuttings begin to grow, then begin to give air to harden them. If they are kept moist, they ought not to be shaded in the hottest sunshine, it will not burn them. Cover them in the evening, to keep them warm during the night. Those who have frames to spare, may put cuttings in them, where, as they can have a greater heat, they take root sooner.

If orange seeds, sown early in the season in pots in a hot-bed, to raise stocks to bud on, be come up four or five inches high, they may be transplanted into single pots; put them in rich loamy earth, not of a strong binding nature, keep them in a gentle hot-bed, and water them now and then.

Orange and lemon trees may be inarched, by bringing the stocks in pots near enough to the branches of the tree.

If you have any seeds of green-house plants to sow, it should now be done. Sow them in pots in

in light earth, and keep them in the green-house, or in a frame.

Smoke the green-house with tobacco occasionally, to keep the plants free of some sorts of insects.

Grape vines, in the green-house, will now be showing fruit; break off all useless shoots, and stop any shoots, before the bunches, that may require it.

## On the FORCING-HOUSES,

*For May.*

Grapes that have been forced, so as to get the fruit ripe the latter end of this month, will require constant attention. That air enough may be admitted, fires must be continued to be made, evening and morning, and kept gently up throughout cold gloomy days. Stop the shoots and tie them up, and keep the leaves moderately thin.

If you have vines in another house, begun to be forced in February or March, they will require constant

constant attendance also; the bunches will probably require to be thinned of some of the smallest berries. Keep the house in a sweet growing temperature; and if the border, which sustains the plants, be in the house, take care that it be well supplied with water; or if it be in the outside, it may, probably, in dry warm weather, require a good watering now and then.

Peaches, nectarines, figs, and all other sorts of plants in pots, in the forcing-houses, should, by keeping them clear of weeds and insects, if possible, and by frequent gentle waterings, be carried on in a growing state, to enable them to bring their fruit to tolerable perfection.

Smoke the houses with tobacco, about once in ten days or a fortnight, to destroy any insects that may be beginning to breed on the trees.

If you have had good success with your cherries, they will be swelling off for ripening. Give up watering them over the fruit, and give the house as much air as you can, every fine day. The grubs will be gone; but it is likely the birds will fly in and eat them, if you do not contrive nets, or some other method to keep them out.

Peaches and nectarines begun to be forced in December, will, sometime in this month, begin to ripen; if that is the case, watering should be given over, and plenty of air given, and fires continued to be made in the evening, and in damp

damp days, just to keep them in a dry moderately warm state.

Nectarines and peaches, begun to be forced in February or March, should be thinned of all superfluous shoots, and the shoots left for the following season, trained out regularly, and tied up so as not to interfere with the fruit; and the trees should be so thinned of leaves, that air may have a free circulation to every part of the tree. Water the trees well in fine mornings; let the water be clean, that it do not stain the leaves or fruit.

If you have had good success, the figs in the forcing-house will be making progress; leave no unnecessary wood on them; if any of the leading shoots be getting on before the others, or faster than you wish, nip off the tender end with your finger and thumb. If the weather happen to be hot and dry, water the trees all over with clean water; it will be the means of keeping the spider from the leaves. Keep the border, if it be in the inside, well watered, and in long continuance of dry weather, you may water it, even if it be in the outside.

Take care of pots of plants of any sort you may have in the fig-house; they should be kept free of weeds, and watered frequently in warm weather.

As the roses have done blowing in the forcing-house,

house, they should be turned out, and more set in, if you think you want them to keep on a supply, till they begin to blossom in the open air. Keep the plants clear of insects, by smoking with tobacco, and by watering them all over now and then, when they are not in blossom. If there are vines in the house, keep them to the rafters, and stop them as they require.

If you find it necessary, make a fire in the evenings and in cold gloomy days. Keep the rose-plants, and all other sorts in the house, sufficiently watered, and free of dead leaves and weeds.

Transplant any young seedlings you may have raised in the rose-house, and you may sow in it the seeds of tender exotics, in pots.

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## On the FORCING-FRAMES,

*For May.*

Melons will now demand constant attention; they still require a good strong heat kept in the linings, to make the fruit swell kindly. Stop the

the shoots of them, and cut out all superfluous and weak ones. Let the leaves be kept moderately thin, observing to take off the decaying and oldest first, and suffer no weeds to grow among them.

Cover up the glasses at night with mats, and uncover them in the morning, about seven or eight o'clock, or as soon as the sun shines on them.

Water the melon plants when you perceive they want it; they will not do well, unless you give them enough of water, heat, and air. If the weather happen to be warm and dry, sprinkle them occasionally all over the leaves and fruit with clean water, about four o'clock in the afternoon, and shut the lights close down. This method will be a mean to prevent the plants from being infected by the red spider; this destructive insect will not hurt the plants, if they are kept in a vigorous growing state.

Remember when the melons set and begin to swell, to put a piece of tile or slate under each, to preserve them from the damp of the earth in the bed.

Plant out more melons to keep a succession; though bottom heat would do them good, you had better have none than too much; the plants will not grow kindly, if there is burnt earth under their stems. When the earth is what is termed

termed burnt, it appears of a greyish colour, and does not smell sweet. The best way, at this time of the year, is to plant out on a cool, sweet bed, and make linings when it wants them; keep, if you can, a strong sun heat in the beds, for a few days after the plants are put out, and give them water as you find they want it. If you keep them moist, the greatest sun heat you can give will not injure, but make them grow quickly.

Give all the melon plants that require it, air every day, and in warm nights you may give them a little all night; but take care that the rank steam in the linings do not penetrate into the frames in any part where you give air, or at the bottoms of the frames.

If the fruit do not set kindly, impregnate the blossoms in the way I have directed for cucumbers.

In some warm parts of the country, early sorts of melons will ripen under hand-glasses. The method is to make a bed in a trench in the ground; dig the trench out about twenty inches deep, three feet wide, and as long as you have glasses to cover it; make a bed of good dung, about thirty inches high; when the heat comes up well in it, tread and level it, and lay about eight or ten inches thick of good earth all over it, smooth it with a rake, and stretch a line along

along the middle of it; then set the plants four feet apart, put the lights on them, give them water and a little air when they want it. When the weather comes warm, train the shoots from under the glass on fern, or tiles, &c.

Gourds, pumpkins, and patagonian cucumbers, may now be planted out, or the seed sown under hand lights, the beginning of this month.

Cucumbers may also be put out for pickling, when they are young.

Sow melon seed to have plants to plant out next month, that you may not want a succession of them.

Remember to look forward to have always a preparation of dung in readiness for linings, or other purposes for which it may be wanted. The linings of the melon and cucumber beds will require to be raised at least once a week, to keep a sufficient heat in the frames for the growth of the plants.

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On

## On the KITCHEN-GARDEN,

*For May.*

If it was not done in the latter end of last month, sow french beans, of different kinds, the beginning of this. Sow the dwarf small kinds, three feet row from row, and set them in the rows about three or four inches, seed from seed. The speckled dwarf, as it grows strong and bushy in good ground, should be planted three and a half, or four feet, row from row.

Plant the scarlet and the white running french beans; they ought to be planted five feet apart in the rows, and they may be staked with long stakes, to let them run up upon: the scarlet is the best bearer. Either of the sorts will do very well without staking, if the runners are kept constantly cut off; they will bear plentifully by using this method, and the scarlet looks very pretty, as it keeps putting forth its blossom all the summer, on conical spurs, from three to five inches long.

To have a constant supply of green peas, sow a crop as soon as you observe the last sown come fairly up above the ground. The tall growing sorts

sorts are the best for sowing, at this time of the year.

Hoe the ground between the rows of peas, and if the weeds have got long, rake them off. Stake all the peas that require it; pick out the tallest stakes for the highest growing sorts, and put the stakes in firm, that the wind do not blow them down. If the ground be light in which peas are sown, tread with the feet the rows.

Set broad beans when you see the last planted come up, and hoe and draw up earth to the stems of those advancing in height. If the forward-sown beans are in blossom, cut the top of them off, which will be the means of making the beans fill quicker than if they were left unstopped. When beans are planted in light ground, tread them in well with the feet.

Plant out cabbage two or three different times in this month, to have a constant supply of fine young cabbage. If red cabbage were not planted out before, remember to plant some out, about the beginning of this month.

Sow cabbage seed twice in the course of this month; all kinds of it may now be sown.

If red and white beet-root were not sown the latter end of last month, sow some the beginning of this. It may be sown in drills, about eight or ten inches apart, and covered about two inches deep; if the weather prove dry, water it

it now and then. If you wish it to stand thicker, sow it broadcast.

To have a constant supply of young carrots and onions, sow a few of the seeds of each about once a fortnight.

To have a succession of brocoli as regular as can be, sow the seeds at two or three different times in this month. Sow them in beds, each sort by itself; and if the land is not of a binding nature, tread in the seeds, and rake the beds afterwards.

Savoy, red and green borecole, Jerusalem kail, and Brussels sprouts, may now be sown.

Keep sowing the round-seeded spinach, to have a constant supply of it, whenever you see the last sown come through the ground. Sow it in shallow drills, between the rows of peas and beans.

Radish seed should be sown every eight or ten days; a bed of ground shaded some part of the day, will suit it well at this time of the year, if the weather prove warm, and much sunshine.

As often as you appear to want it, to keep a constant supply, sow the seeds of white mustard, rape, cress, and turnip, for sallad. It will do best now on an east or west border, where it will be shaded a part of the day.

Prick out celery plants in beds, and water them well in dry weather. If you think you

 will

will be too scanty, sow a few celery seeds the beginning of this month, they will do to plant out in the autumn.

Sow a small bed of cauliflower, every fortnight, in rich earth, and water it well in dry weather.

Plant out cauliflower once a fortnight, or every ten days, if you wish to have a constant supply of that delicate vegetable; plant them in deep rich ground, and keep them well watered.

Sow the seeds of curled parsley, draw a shallow drill for it, cover the seeds about two inches deep, and give them water in dry weather.

Transplant summer savory, borage, burnet, basil, marjoram, &c.; prick them in beds, or in pots, and set them in frames, if you wish to make them grow quickly.

Sow turnips every ten or twelve days, that you may have a constant supply of that vegetable, and thin with the hoe your former sown turnip crops. If the insects begin to eat the tops, I know nothing better than to strew a little soot or lime over them, and water them in dry weather; the ground should be well rolled any time before they begin to make bulbs.

Some time in this month, probably, your crops of carrots and parsnips will want hoeing; cut the weeds up clean, and where the plants are too thick, cut up some of them, leaving the strongest healthy plants a regular distance from one another.

other. The parsnips should be left seven or eight inches apart. If the carrots are to be used while young, leave them only three or four inches asunder; but if they are to remain to grow to their full size, they should be thinned to stand about six inches asunder.

Sow the seeds of lettuce as often as may supply you with lettuce plants to plant out every week. Plant them in beds, a foot, row from row, and eight or nine inches, plant from plant; give them plenty of water in dry weather, and you will have fine tender lettuce, if they are planted in rich ground.

If scorzonera, salsafy, skirrits, &c. were neglected to be sown last month, they may be sown in the beginning of this. It will be best to sow them in drills, as you can then easily cover them well, so that they may vegetate freely, without being scorched by the hot sunshine; water them if the weather prove very dry.

If required, you may, about the beginning of the month, propagate by slips the following herbs—camomile, pennyroyal, balm, mint, hyssop, savory, sage, thyme, sorrel, &c.; and you may propagate by cuttings, lavender, rosemary, rue, southernwood, &c.; plant them under a shady wall, and give them water.

If your capsicums, sown in the preceding months, are grown strong hardy plants, you may

plant them out in a bed of good earth, about the middle, or toward the end of the month; if the weather prove dry, give them water.

In some families, tomatoes, or love-apples, are used for pickling when young, and for soups when ripe; they will not ripen well, unless you train them up against a warm wall, or paling. Plant them in good ground, and nail them up as they grow, and they will produce fruit plentifully: they are a great impoverisher of the ground; I would, therefore, advise not to plant them near peach or nectarine trees.

If you have saved any plants, to produce seeds of superior sorts, of brocoli, cauliflower, lettuce, radish, early cabbage, &c., tie the plants to stakes, to keep them from being blown down by the winds, and when they come into seed, endeavour to keep the birds from them.

In dry days, take the opportunity to hoe up weeds every where in the garden, and rake them off the borders. Weeds, if possible, ought never to be suffered to produce seeds; there are some sorts, as chickweed, groundsel, &c., which seed very early in the spring, and if they get leave to stand till they drop their seeds, the ground is not soon cleared of them.

Beds of mint may be planted the beginning of this month; draw the plants, for this purpose, out of the old beds, taking such as are about five

or

or six inches long; take them up with roots, and plant them in good ground in rows, six or seven inches asunder, and give them water to settle the earth about their roots.

Uncover mushroom beds once a week; gather any fruit that may happen to be on them, clear them of weeds and any wet litter, put a little clean hay next the bed, and a sufficient covering on them, to keep the cold out in nights, and heavy rains from wetting the bed too much.

Plant out slips of tarragon; let a bed of good mould be dug, mark out the bed, three feet wide, and draw shallow drills in it, about a foot asunder, and plant the slips of tarragon in the drills, about seven or eight inches apart.

This is still a good time to plant potatoes, if you have not already planted enough.

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## On the FRUIT-GARDEN,

### *For May.*

Let any trees which were budded last summer, be frequently looked over; take off all shoots that

that arise from the stocks as soon as they make their appearance; if any of these were suffered to grow, it would hinder the shoots from growing vigorously. However, if any of the buds have failed, or been broken off by accident, let a strong shoot be left to come from the stock, which may be budded in August. Tie up the shoots of new budded trees, with a bit of bass, to the part of the stock left above the bud, this will prevent their being broken by the winds till they have become strongly united to the stock.

New-grafted trees should be examined; there is no more occasion for the clay, when the graft and stock are well united, this will probably be effected by the latter end of this month, when the clay may be taken off after a shower of rain, and the bandages untied, if there is no danger of graft and stock being disunited by high winds.

Keep strawberry beds clear of weeds, and in dry weather give them plenty of water.

Grape vines, against warm south walls, will now be growing fast; they should be divested of all useless shoots. Grapes do not ripen well every year, on the best walls in the most sheltered situations; but they should be assisted as much as possible, by stopping the shoots at proper distances before the fruit, and nailing the shoots to the walls as soon as it can be done, and by

by not suffering the trees to become crouded with superfluity of leaves.

If your vines are managed in the manner practised by some, of cutting out all the old wood every year, you must take care to train up, from the bottom, a sufficient number of young shoots, to be bearing wood for the ensuing year; and do not neglect to keep the shoots, on which your bunches are showing, constantly stopped two or three eyes before the bunches. If they are managed in the other way, you will observe to leave enough of good shoots for bearing next season.

About this time of the year, fruit trees are often hurt by snails; they come creeping from their holes in evenings and mornings, and feed upon the fruit and leaves of the trees. The trees should be looked over at those times, and these, and other insects, carefully picked off.

Where apricots have set too thick, they may now be thinned; if the fruit be taken off before it be stoned, it makes good tarts. All useless shoots ought to be taken from apricot-trees, leaving a sufficient supply of young wood for next season. When the shoots will bear nailing, let them be trained regularly, and suffer not the trees to be overcrouded with leaves.

Apricot-trees are liable to be hurt by a grub, which rolls itself up in the leaves; they should be

be often looked over, and the grubs picked off, or the curled-up leaves taken away. In dry weather, wash the trees occasionally with clean water; and if the mildew begin to appear, strew a little flour of sulphur on the affected shoots.

Peach and nectarine trees ought to be carefully attended to; they should be looked over frequently, and all the foreright and backright shoots taken clean off, and the side shoots thinned regularly, leaving only, in every part of the trees, a sufficient number of young ones to lay in for next year's bearing wood; nip off curled leaves, for in them are probably the nests of insects. Wash the trees with clean water out of an engine, in dry weather, in fine mornings. These methods will help to keep the trees from disease and insects, by invigorating them in their growth.

If you observe the least appearance of mildew, strew some sulphur on the infected parts. If this is carefully attended to, it will stop the mildew in its progress.

Peaches, nectarines, apricots, cherries, and plums, should be carefully looked over frequently, and all cankered parts cut to the quick. On whatever parts you see the gum making its appearance, open the bark with your knife, to let it have a free passage.

Keep the fruit borders perfectly clear of weeds by frequent hoeings and rakings; and neither plant

plant nor sow any sort of vegetable nearer the stems of peach and nectarine trees than eight or ten feet, if you wish your trees to be in good health, and live many years.

Cherry, apple, pear, and plum trees, against espaliers or walls, should be looked over towards the end of this month, and be divested of all useless and unhealthy shoots. All shoots that are produced backright or foreright, should be cut off, leaving some of the best side shoots where you have room to train them in, in case you want some of them at next winter's pruning. You must also observe to leave all short shoots, which appear to be forming themselves into bearing buds.

If your fig-trees were not pruned last month, it may be done the beginning of this. Cut out all the weak and superfluous wood, leaving the moist fruitful young shoots for bearing; lay them in about eight or ten inches apart, and put the nails and shreds on them no thicker than to keep from breaking from the wall.

If this month prove dry, all kinds of new planted fruit trees should be watered as often as they require it, to keep the earth about their roots in a moist state.

The alpine and wood strawberry may still be planted; they will probably bear in the latter end of summer, if they are kept well watered.

Those

Those strawberry plants that were forced early, may be turned out of their pots into a bed in the open ground, and watered in dry weather, they will, perhaps, give you a crop when others have done bearing.

If you have a superabundance of strawberry beds, it will be worth while to mow down a few of them when they are in blossom; rake all the leaves away clean, keep them clear of weeds, and watered in dry weather, and they will put out leaves and blossoms again. By this method, perhaps, you will obtain a crop of strawberries, after the sorts of the same kind you cut down are over.

The beginning of this month, if it was not done last month, is a good time to head down any old plum, pear, cherry, or apple trees, that do not produce good crops of fruit. If, the autumn before, fresh mould had been put about their roots, the old exhausted having been removed first, it would contribute to their productiveness, for it is the want of good earth and unkind seasons, which are the chief causes of barrenness in trees.

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On

## On the PLEASURE or FLOWER GARDEN,

*For May.*

If auricula plants have done blowing, this is a good time of the year to fresh pot them, which should be done annually.

The best mould for auricula plants is that of a light sandy nature, of a blackish colour, mixed with perfectly rotten dung, and a little vegetable mould, if you have got any.

A noted florist recommends a compost for auricula plants, to be made of the following ingredients: one half rotten cow dung, two years old; one sixth fresh sound earth, of an open texture; one eighth of rotten leaves; one twelfth of coarse sea or river sand; one twenty-fourth decayed willow-wood; one twenty-fourth peaty or moory earth: one twenty-fourth ashes of burnt vegetables. It should be turned over once or twice, and as often pass through a coarse screen or sieve, that it may be well mixed; let it lie a year, to have the air, frost, and sun, during which time, turn it two or three times.

Having

Having clean pots, about six inches diameter in the clear at the top, in readiness, begin to shift the plants; turn the plant carefully out of its pot, take off any unnecessary suckers, and shake the earth clean from its fibres, which should be shortened, if very long; and if the main root be long, or any way decayed, cut off a part of it. Examine each plant carefully, and if any unsound part appear, cut it out with a sharp knife; if the lower leaves are yellow, pull them off; fill the pots about three parts full of the prepared mould, and place the roots thereon, spreading them regularly, so as nearly to reach the sides of the pot, which is to be filled up with the compost mould, striking the bottom of the pot gently, two or three times, on the board on which you are shifting the plants, to make the soil firm about the roots of them; fill the pot up with earth, to within half an inch of the top. Thus proceed till they are all finished, and place the pots in an airy shady situation, free from the drip of trees or houses, till they have struck root. Plant any offsets that have been taken off the old plants; give them all a gentle watering, to settle the mould about their roots. If you are afraid that worms get into the pots, which are hurtful to the plants, make a bed of coal ashes, half a foot thick, set rows of bricks on it, and set your pots of auriculas on the bricks, in rows.

If

If they are fit, you may now plant out seedling auriculas and polyanthuses; they may be pricked out in a box, or in large pots, about two or three inches apart; water them with a fine rosed pot. The seeds of polyanthus and auricula, may still be sown.

For a succession of annual and biennial flowers, you may sow now heart's-ease, candytuft, the white and purple, sweet allyson, hawkweed, sweet peas, convolvulus, nolana, &c.; sow them in patches in the flower borders.

Those of a less hardy kind may now be sown in the borders, such as indian pink, french, and african marigolds, marvel of peru, chrysanthemums, persicaria, &c.

Toward the end of this month, many kinds of annuals may be planted, that were raised in the forcing-frames or houses in the former months.

Plant out in small beds, or in patches about the flower borders, stocks, mignonette, india pinks, wall flowers, &c.

If not sown last month, sow now sweet williams, wall flowers, pinks, carnations, campenalas, foxgloves, hollyhocks, scabious, &c.; water them, if the weather prove dry.

Beds of curious ranunculuses, anemonies, hyacinths, and tulips, should be defended from the scorching sun, as well as from high winds and heavy rains; when the sun shines, cast the mats over

over them, about ten o'clock in the morning, and take them off again in the afternoon, about four or five. If there is the appearance of rain or high wind, put them on in the evening. When this shading and sheltering is practised, it will preserve them in beauty a fortnight longer than if they were neglected, and the flowers will be finer.

To make a covering for hyacinths, &c. at little expence, get stakes four feet long, stick a row of them into the ground in each side of the bed, eighteen inches apart; drive them a foot into the ground, and tie rods between them to each across the bed, which will support the coverings.

Much covering, however, is not good for the bulbs of these plants; and, therefore, there should be a medium observed, not to overdo them with covering.

I am informed that it is the practice in Holland, to take up the hyacinth bulbs about a month after the bloom is over; they take up the roots, and cut off the stem, but leave the fibres to it; then they place the bulbs on the bed sidewise, with their points towards the north, and cover them about an inch deep with dry earth or sand, in form of a ridge, over each row; in this state, they remain three weeks, to dry or ripen gradually, during which time, the bed is preserved from heavy rains and very hot sunshine; the bulbs

bulbs are then taken up, and their fibres, which are become nearly dry, rubbed off; they are then placed in a dry room for a few days, and afterwards cleaned from any soil that sticks to them, their loose skins taken off, and the offsets that can easily be separated. This dressing being finished, the bulbs are wrapped up in pieces of paper, or buried in dry sand, where they remain till the season of planting.

Clear carnation pots of all weeds, and pick off any dead leaves from the plants; the stalks of them will now be running up to flower, they should be supported with straight stakes, thrust them into the most convenient part of the pot of mould, and tie the carnations up to them with little bits of bass, in such a way as they may run up without being bent. Examine them frequently, and if you perceive the bandages too tight, ease them a little.

Carnations are liable to be hurt by the green insect; when you find it beginning to breed, you must take care to destroy it with your finger and thumb.

Double scarlet lychnis, double rockets, double sweet williams, and several other kinds of perennial flowers, may be propagated by cuttings. When the stalks are advanced in growth, before they begin to flower, cut some of the most promising, whose joints are pretty near each other, close

close down to the ground; divide them into lengths of three or four joints to each, cut them over straight, just below a joint at the bottom, plant them halfway in, in good earth, put hand-lights over them, give them water, and shade them a few hours in the middle of every hot sunshine day.

If you can get slips from these kinds of plants, they will come on faster than cuttings.

Double stocks and wall-flowers may likewise be propagated by cuttings, when they cannot be readily obtained double from seeds; if cuttings of them, four or five inches long, be pricked into little pots, in rich earth, six or seven in each, and set into frames, or under hand-lights, they will take root in a short time, if they are kept moist, and shaded a little in the middle of hot days. The seeds of wall-flowers and stocks should be sown in this month.

Tuberoses should now be taken care of; the stalks of those first sown will be advancing in height, they should have long straight sticks to support them, tie them to the sticks slackly, that they may easily run through the tyers. If you wish a succession of tuberoses, you must plant more roots, this month, in pots, and set them into a hot-bed to strike root. Those that are forward will do among the roses in the rose-house, or in the green-house, when the plants are

are set out. These plants are very subject to the red spider; draw their leaves now and then through your hand, which will destroy the spiders and their eggs; you may also with your hand gently rub the stalk where it is hardened.

If not done before, stake all kinds of trees and shrubs that were planted last winter or spring, and keep them watered well in dry weather, otherwise you will have a chance to lose many of them.

When it is necessary to make a blind, or fill up a gap, you may yet venture to transplant some sorts of well-rooted trees and shrubs; but you must resolve to keep them well watered, and do it too, or else you need not trouble yourself to move them.

Every kind of seed lately sown, if the ground be not sufficiently moist to cause it to vegetate, will not come up in dry weather, unless you water them: but they will lie in the ground several weeks, and come up after rain.

Water, in dry weather, all sorts of flower plants lately put out, and not struck root.

If gravel walks were not turned last month, this is a good time to do it. If the edges of the walks are grass, cut them neatly, sweep all rubbish clean off the gravel, take out an opening at one end, and carry to the other; if the walk be hard that you cannot dig it easily, loosen it with

a pickaxe, and set on as many men as have room to dig; turn it over just only as deep as to turn in the surface; have a man or two to tread, level, and roll it, as fast as it is turned. This work must be done in a dry day, when the gravel is not too wet. Remember to roll it well, as soon as you can stand upon it, after the first shower of rain.

Keep all your flower-beds free of weeds, by frequent weeding; and if you can, let no weeds make much progress among your shrubs, or on your flower borders; hoe them clean, and rake them neatly, whenever they require it.

Let the grass lawns and walks be mown when they require it. To keep them in good order, they will want mowing once a week in dry weather, and twice a week in wet weather.

Hedges of hawthorn, privet, lilac, syringo, laurels, laurustinus, elderberry, and of all other kinds of shrubs or trees, may now be clipped, to keep them in good order.

About the end of the month, you may take up any bulbous roots whose leaves are decayed, such as crocus, anemonies, snowdrops, &c.

Pots of seedlings, of any kind, should be moved into a shady situation, during the middle of hot sunshine days.

When the leaves of guernsey lilies decay, their roots may be transplanted.

On

## On the NURSERY-GARDEN,

*For May.*

The trees which were grafted in the spring should be examined, and if the grafts shoot freely, the clay may be taken off after a shower of rain; and if the bandages pinch the stocks, they should be untied, and tied again, if the graft is not firmly united to the stock. In windy situations, when the grafts shoot vigorously, it may be necessary to tie them to stakes. As soon as they appear, cut off all shoots that arise from the stocks below the graft; this should be duly attended to, that the grafts be not deprived of due nourishment. If any of the grafts have not united, or any accident happened, leave a shoot to come from the stock near the ground, which you may bud, or graft upon next season.

Let the trees be looked over which were budded last summer; tie the shoots that spring from the buds, with a bit of bass, to the part of the stocks left above the buds, this will keep

them from being broken off by the winds. Cut off all shoots that arise from the stocks as soon they appear, for if they were suffered to grow, it would deprive the bud of its nourishment, and make it grow weak. If any of the buds have failed, leave a shoot from the stock to be budded next season.

There are some kinds of shrubs which strike most freely from layers of young shoots, laid down the beginning of summer; the shoots of some sorts will probably be long enough for that purpose by the latter end of the month. Bend down some of the pliable branches that have made the strongest young shoots, fasten them down with strong pegs, and lay the young shoots into the earth, covering them two or three inches deep, and leave three or four inches of the top of each shoot above the ground; when they are laid, give them water, and continue to water them in dry weather. If you find the shoots are too tender, defer this business till some time next month.

Plantations of trees and shrubs of all sorts, made in the course of the spring, ought to be watered in dry weather. Cover the ground with moss round the stems of very tender shrubs; this will prevent the sun from drying the earth too fast about them.

In the middle of hot sunshine days, the seedlings

lings of arbutus, pines, cedars, cypress, &c., would be better to be shaded.

Beds of young American plants lately transplanted, would also be better of shading in hot days; and they should be often moistened with water.

Several kinds of American tree seeds may still be sown; sow them in blackish ground not of a binding nature, cover them about an inch thick, and water them in dry weather.

Some kinds of evergreens may yet be transplanted, such as the rhododendron, arbutus, magnolia, cypress, evergreen oak, cedars, &c.; let them be well attended to in watering.

Inarching may, in this month, be practised on exotic trees, such as orange, lemon, and others, which do not readily unite by grafting.

If the weather be kind, great plenty of weeds will now be rising every where; take every opportunity, in fine days, to destroy them; a man in a day will hoe up a great many weeds in their infant state, but if the weeds are suffered to grow strong, they are not so easily destroyed; so that by cutting up the weeds when they are young, labour is saved, and the ground is not exhausted by the production of weeds.

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THE

THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES,

*For June.*

In this month the fruiting pines will make great progress, if the tan-bed be in a good state, and the plants well managed in every particular.

Examine the pots, and see that they stand level in the tan; if it be sunk much from the pots, raise it a little with fresh prepared bark: but inspect the heat of your bed well, that you do not have your pots plunged so deep as to injure the roots of them. The fruit will not swell off well unless they have a lively bottom heat, and a sufficiency of water, together with a strong top heat, and plenty of air.

If the thermometer stand not below 60 in the morning and sunshine days, you will have no occasion

casion for fires; but if the nights are cold and the days cloudy, you must have fires, otherwise you will not be able to give air enough and keep the air in the house up to a sufficient degree of heat.

Besides watering the mould in the pots in which the roots grow, water the plants and fruit all over now and then, with water about eighty degrees warm: you may do it about eight o'clock in the morning, or in the afternoon about four or five. If you water in the afternoon, take care that there be a good heat in the house during the night.

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*Height of the Thermometer in the Fruiting-House, For June.*

| | D. | M. | N. | E. | | D. | M. | N. | E. |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 66 | 83 | 71 | | 16 | 66 | 85 | 70 |
| | 2 | 72 | 94 | 72 | | 17 | 72 | 98 | 75 |
| Watered | 3 | 72 | 90 | 71 | | 18 | 72 | 100 | 80 |
| | 4 | 69 | 90 | 68 | | 19 | 74 | 102 | 82 |
| | 5 | 66 | 94 | 72 | Watered | 20 | 75 | 98 | 77 |
| | 6 | 70 | 95 | 74 | | 21 | 75 | 97 | 76 |
| Watered | 7 | 75 | 97 | 76 | | 22 | 71 | 98 | 76 |
| | 8 | 75 | 98 | 76 | Watered | 23 | 71 | 90 | 73 |
| | 9 | 71 | 100 | 77 | | 24 | 65 | 95 | 75 |
| | 10 | 73 | 98 | 75 | | 25 | 73 | 98 | 77 |
| Watered | 11 | 70 | 97 | 74 | Watered | 26 | 70 | 90 | 74 |
| | 12 | 75 | 98 | 76 | | 27 | 75 | 94 | 76 |
| | 13 | 72 | 96 | 72 | | 28 | 71 | 92 | 76 |
| | 14 | 73 | 93 | 73 | Watered | 29 | 70 | 91 | 73 |
| Watered | 15 | 67 | 90 | 70 | | 30 | 68 | 100 | 77 |

The

The fruit when it gets large should be supported with sticks to prevent it from falling, and to make the crowns grow upright on the fruit. Were the fruit permitted to lean to one side, the crown in growing would force itself upright, and when the fruit was ripe, the crown would stand crooked on it.

If any of the fruit that showed early are ripe, set them out of the fruiting-house, and replace them by any that may have shown fruit among the successions.

Attention must now be paid to the succession plants. If those whose roots were cut off have begun to grow, give them gentle waterings. Keep a good strong heat in the tan bed, and admit plenty of air to them in fine days. Sprinkle their leaves occasionally with clean water, not less than 70 degrees warm, and shut them down in the afternoon with a strong heat in the house.

When large succession plants have been divested of their roots, and potted in the month of March, they will probably by this time have filled the pots with roots, if so they ought to be shifted into pots a size larger, just large enough to admit of mould falling easily round their ball. If they were not shifted, when the roots begin to get matted, it would check them and

probably

probably make them fruit in August or September.

When you water your pines recollect that some sorts require less water than others; the queen's and sugar loaves require more than some of the black sorts, such as the antigua, &c.

If all the succession plants potted out in the autumn have not yet been shifted, let it be done about the beginning of this month. Shift them into pots just large enough to let mould go between their roots and the fresh pot. Plunge them in a bark bed, in which there is plenty of heat; give them, when they begin to grow, gentle waterings, and plenty of air and heat, and they will make good progress in growth.

If you have pines in pits, warmed with dung heat, you had best let the linings remain at them, they will keep out the cold at nights; and if there is some heat continued in them, it will do the plants good. Continue during this month to cover them up with mats at night.

Keep your pine-houses all perfectly clean and sweet. Sprinkle the flues and paths now and then with clean water in the afternoon.

Examine all your tan-beds, and consider what time you will be in want of tan, that you may make preparation accordingly.

Whatever exotic plants are in the houses, let them

them be taken care of. The french beans in pots will be bearing plentifully; they will require plenty of water, probably once every day. Look over the plants daily, and gather those beans that are fit, before they become stringy or tough.

If you have any grape vines in hot-houses, they will be forward; take care of them. Stop the shoots before the fruit, and tie up those shoots that are appropriated for bearing next year. The vines should be kept under the rafters, and not suffered to shadow the pine plants.

To make some of your fruit grow uncommonly large, you may destroy the suckers on them; but take care in doing it, not to hurt the plants.

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## On the GREEN-HOUSE,

### *For June.*

All the green-house plants may now be set out, except very tender ones.

If the green-house be a good one, orange and lemon trees would do best to remain in it all the

the summer; they might have plenty of air, and there would be an opportunity of screening them from cold nights, heavy rains, and windy weather. After being set out of the green-house, orange and lemon trees frequently lose the green colour of their leaves, which they do not regain again till the following spring, and their young fruit are apt to turn yellow and drop off. When these trees are set out of the green-house, let them stand in a sheltered situation if you have got one, and where they may have a shade in the heat of the day. If the trees do not require shifting, scrape the surface of the mould off the roots, and cover them about an inch thick with rich loamy earth.

If orange and lemon trees require shifting, probably new and larger tubs may be wanted for them, and if the trees are large they will demand strength to shift them; perhaps a pulley may be required. The earth should be, with a pointed stick, picked from the sides of the tub, to ease the ball, that it may come out of the tub nearly whole. But a better method is to knock the hoops off the tubs, and take them to pieces: a cooper can do it, and put them together again, if the staves be sound.

Having got the tubs from the balls, shave off, with a large sharp knife, all the matted roots round the sides and bottom of the ball, and having a tub

a tub large enough ready, put some mould in the bottom of it, set the plant upon it, and fill up the vacancy between the side of the tub and ball, covering the surface about an inch and a half deep round the stem of the plant. Let the mould be a rich loam, mixed with a little perfectly rotten sheep's dung, which has lain not less than twelve months, or if that cannot be obtained, any other perfectly rotten dung or vegetable mould will do.

Set all the green-house plants, if you can, in a sheltered situation, where they may have a shade in the warmest time of the day. If they were not shifted before, proceed to shift them the first fine day. Having pots, and good mould, not of a binding nature, ready, trim and cut down any of the plants that require it; then turn them out of their pots, one after another, shave the matted roots off all round the balls, and some of them may require farther reducing; put them in pots which will admit mould round the balls, cover them about an inch deep, tie the plants up neatly, and give them water to settle the mould about them.

If the fruit on orange and lemon trees be set too thick, thin them off regularly, so as not to leave the trees over-burdened with fruit, which would weaken them in their growth.

In dry weather continue to water the green-

house plants moderately; see that it has a free passage through the pots, particularly the orange and lemon trees: there should be holes in the bottoms of the tubs to let the water out.

Most kinds of green-house plants may now be raised by cuttings. Get some pots and mould in readiness, then take shoots of plants from three to five inches long; let the wood of the lower end be pretty hard, and cut off at a joint: cut the leaves from that part of them which is to be put in the ground. Prick them into the pots, about two or three inches deep, according to the size of the cutting, water them, put them into a frame or under a hand glass, and there they will take root, if they are attended to.

Several sorts of green-house plants will strike root, if they are planted in a shady border, and watered in dry weather.

When you intend to propagate succulent plants, such as cerusses, sedums, euphorbiums, indian figs, ficoidesses, &c. take the cuttings off, and lay them in a dry airy place for a fortnight or three weeks, before you plant them. In that time the cut parts will be healed, and the plants will not be so liable to rot as if they were planted immediately after cutting from the mother plant.

Transplant any seedling green-house plants which have been raised from seeds. If they are stout

stout plants, set one into each small pot, but if any of them are small, prick three or four into a pot: give them water, and set them in a shady place in the green-house, or in a frame, till they have taken root.

After the plants are set out, let the green-house be well cleaned, and if you have got grape vines in it, give them a dressing, and you may now, as the green-house plants are out, keep it to a heat suitable for the vines.

If you have any green-house plants for which you have not room, turn them out of the pots into the borders; they will, if they are watered, live till the frost kill them, and, in the course of the summer, probably they may blossom.

Succulent plants, such as aloes, torch thistles, cotyledons, sedums, &c. do not want much water.

Orange and lemon plants raised in the spring from seed, and those intended for budding, ought to be inured by degrees to stand in the open air in summer. If they are in hot-beds, they should have plenty of air, and be set into the green-house for some time before they are totally exposed to the open air.

Make cuttings of all sorts of sweet scented green-house plants, such as the heliotropium, verbena, diosma, &c. and geraniums of different kinds, with a variety of heaths. Some of these last

last are not very easy struck, and therefore must be pricked into pots in sand, and bell glasses put over them. A great number of heaths are raised from seed, by the nursery men, every year, about London.

## On the FORCING-HOUSES,

*For June.*

The grapes of the vines that were begun to be forced very early, will now be ripe, all then that is wanted to be done is to keep the shoots tied up close to the trellis, or rafters, and give the house plenty of air: keep the air in the house dry, and endeavour to prevent the birds from getting in to eat the grapes.

Vines in a later forced house must be taken care of. Their berries will be swelling fast; if they are too thick on the bunches, thin them out carefully. Keep the shoots stopped a sufficient distance before the bunches, and let the long shoots, training up for next year, be constantly tied up. Thin the leaves so that they do not shade nor croud the grapes too much. Keep the house

house clean and sweet. Give the plants plenty of air and heat. If the evenings are cold make a fire in the house, and also in cold gloomy days.

Take care of all other plants in pots, let them be kept free of weeds, and watered when they want it.

Most of the early forced peaches will be ripe, and many of them gathered: take care of those that remain. Give the house plenty of air, and keep it dry. Tie up any of the shoots that may happen to need it: they should be tied so fast that when the trees are exposed to the open air entirely, the winds may not break them from the trellis.

The later forced peaches will demand constant attention. Let the shoots be thinned, and tied up regularly; and do not suffer the leaves to become crouded; let none of them lie on the fruit, nor on one another. The air should have a free circulation through every part of the tree.

Wash the trees, by means of an engine, now and then, with clean water. Give the house plenty of air; and if the nights are cold and days gloomy, you had best make fires occasionally, as you find need for it. Water the border now and then, that the roots may grow freely.

Examine the trees often carefully, and if you observe

observe any mildew, strew a little sulphur on the affected parts. Smoke the trees well with tobacco once in ten days or a fortnight, or oftener if you see need for it.

The cherries will now be ripe in the cherry-house. Let those that remain of them be taken care of. Cherries will keep on the trees for some time after they are ripe, if you can keep the birds and insects from them. You may contrive to cover the parts of the house where you admit air with nets. If the meshes are narrow, the wasps and flies, as well as the birds will be prevented from getting in. The wasps and flies mostly fly in, they therefore require room for their wings extended, otherwise they are repulsed in their attempt.

Give the house plenty of air, only do not let the rain fall on the cherries.

Keep the fig trees in your house in good order: let the shoots, if the trees are trained, be tied up neatly, and keep them moderately thin of leaves. Let the border be sufficiently watered, and the trees may, in warm weather, be watered all over their leaves: give plenty of air, and in cold nights you had best make a gentle fire in the house, taking care that the damp vapours arising from the flues may have liberty to pass freely out of the house.

About the end of the month perhaps some of

the earliest sorts of figs may begin to ripen; when that is the case, you had best refrain from watering the trees over their leaves and fruit.

As the roses will, in this month, begin to blow in the open natural ground, there will be no occasion to take more pots of them into the forcing-house. Those that are in it, may be set out into the green-house, or put into any sheltered place in the open air.

If you choose to prune any of your early forced roses, they will blossom in the autumn, when most other sorts of roses have done blowing. This method will weaken them.

You will now have the rose-house at liberty for all kinds of exotic tender annuals, many of which will require to be transplanted into larger pots.

It will also be a good place to set your forward tuberoses: keep all kinds of pots of plants free of weeds, and give them gentle waterings, when they require it.

If there are vines in your rose-house, they should also be taken care of: keep them to the rafters, stop the shoots that require it, and those reserved for bearing next season, tie up and train to a sufficient length before you stop them.

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On

## On the FORCING-FRAMES,

*For June.*

If your early melons have come on well, you will have had ripe fruit last or early in this month. A good heat must still be kept up in the linings to make the plants continue to grow freely. If the first ridged out plants have been kept in a healthy growing state, young fruit will be beginning to set on them, when the first crop are ripening. Give them plenty of air, and after the fruit is full swelled, you had best not let water fall on them: let them lie on dry tiles or stones, and let no leaves hang over nor lie against them; the air should have a free circulation round about them.

Melons not in so forward a state should be well managed: keep a good strong heat in the linings of the beds, and now and then give them water all over their leaves; it should be poured on them out of rosed pots, till the earth or bed is wet, remembering that it ought to have a free passage through the beds, or else it will stagnate

and send up unhealthy vapours among the plants, which will probably cause the mildew or canker to make their appearance on the shoots or leaves.

In dry weather sprinkle the plants sometimes, in the afternoon about four o'clock, and shut the lights close down: continue to cover them with mats every evening, and take them off about seven in the morning. If the nights are warm, give them a little air all night; but take care that the mats do not hang down on the linings to draw the steam into the frames among the plants.

You should always take care to have dung in readiness to raise or renew your linings. If you have not heat enough, by keeping them up to their due height, which should be a little below the level of your earth in the frames, lay aside the unexhausted dung that you may find in the linings, and when you carry away the rotten dung, mix it and fresh dung well together, making a new lining of it. This should be done only to one side of the bed, and when the heat in it begins to decline, you can renew the opposite lining in the same manner.

Impregnate the fruit in blossom if you think it necessary. Cut out all superfluous shoots; stop the shoots before the fruit, and when any shoots run to the side of the frames, either turn them

them back or cut them off as you see most fit. Do not let the frames be over-crouded with shoots or leaves.

You may plant out more melons for a late crop; they will now require no bottom heat. You may take a bed on which was forced, early in the spring, radish, &c. Take the mould off, level it, and lay about eight or nine inches thick of good earth upon it, tread the earth gently down, set the frames on, and plant two or three plants in each light, give them a little water, put the lights on, and keep the air very warm till the plants make roots and begin to grow, then give them air, when you find it necessary to make them grow strong.

If need be, you may make a lining to the bed, but if the weather prove very warm, it is not likely that it will be wanted before August or the beginning of September.

In very hot days all the melons would be better to be shaded with mats, about two or three hours in the heat of the day: the mats may be put on about eleven o'clock, and taken off about two in the afternoon.

If you have melons under hand-lights, give them a little water when they want, and air may be left at them day and night, which will inure them that they may be trained out, about the latter end of this, or the beginning of next month

On

## On the KITCHEN-GARDEN,

*For June.*

Continue to sow peas. The large patagonian and marrowfat sorts should now be sown. Sow them as before directed, when you see the last sowing through the ground. Put them in drills five or six feet asunder, cover them well in moist land that they may vegetate, if it be too dry, water the drills before you sow the peas, and if your ground be of a light nature, tread them in, which will prevent the hot sun and winds from drying the ground too hastily.

Hoe, rake, and clean the ground between your former sown crops of peas, and set stakes to any of them not yet staked.

Plant beans to succeed those sown the latter end of last month. The long-pod and mazagan are fit sorts for this plantation. Plant them about three feet row from row, and three or four inches plant from plant.

Hoe and rake between the rows of grown beans,

beans, and draw earth to the stems of any that require it.

In planting beans, and sowing peas in the spring and summer, if in light dry ground, I have found it to be a good method, after placing the seeds in the drills, to tread them with the foot longwise before covering them, then cover them and tread and rake them afterwards.

In hot dry weather, peas and beans would be better to be watered.

Where small sallading is required, sow it once a week on a shady north border, or on the north side of a row of tall peas.

Endive may now be sown for a full crop. The green curled and batavian are the best kinds. They may be sown twice in this month to make a succession. Sow the seeds in beds of rich earth; tread them in, and smooth the ground with a rake, give them water in dry weather, and when the seeds come up, weed and thin them if they are too thick.

Plant french beans to succeed those sown last month. They love a rich soil, not of a binding nature. Sow them in drills three or four feet asunder, and set the seeds in the rows three or four inches apart.

If the ground be dry, water the drills before you plant the beans, cover them about three inches deep, and if the ground be light, tread it gently

gently with the foot above the seeds. Make two or three sowings this month at different times, to have a constant supply.

The running kinds should be sown five feet row from row, and if you have not got long stakes to let them run up upon, keep the runners cut off constantly as they appear. This method will make them bear well, and the rows will have a beautiful appearance, as the blossoms are pretty, particularly the red blossom kind, and they continue in bloom several months.

Turnip seed should be sown every ten days or fortnight. Sow it on good ground, and tread or roll in the seed well. When it is coming up, if the fly begin to appear on it, strew over the ground a little soot or lime, if this were done when the seed is sown it would be a mean to prevent the fly.

Hoe and thin those crops of turnips that were sown the former months, and if the weather be hot and dry, the new sown turnips, as well as all of them in their different stages would be better to be watered.

Lettuce seed should be sown so often as to have a supply of plants, to plant at least once every week. The kinds in general most preferable are the black seeded green coss, common green coss, spotted coss, the dutch brown and white cabbage lettuce. The black seeded green

coss

coss is not liable to run early to seed as some of the other sorts, and it is a fine tender lettuce.

Hoe and clean your beds of lettuce, so as not to let the weeds get high among them. Plant out some lettuce once a week at least, and you will have a constant supply of fine ones, if you continue to water them in dry weather.

The seeds of savoys and cabbage should now be sown for winter and spring use. Sow them in beds, and if your ground be light and dry, tread them in, smooth the beds afterwards, and water them in dry weather. If they are planted on a border, which is shaded one part of the day, it will be a good situation for them.

Transplant cabbage of different sorts. Some of the early york and sugar loaf should be transplanted every ten or twelve days, to have a constant supply of young fine cabbage.

Plant out now, if your plants are ready, brussels sprouts, red and green borecole, jerusalem kail, and any other of the like kinds.

Plant out some savoys for an early crop, plant them about three feet apart in the rows, and twenty inches plant from plant.

If you are scarce of ground you may plant any of the cabbage tribe between the rows of early peas and beans, such as can be taken away before the plants planted between them are too much drawn up. You may draw drills for them, or dig the ground, as you think best.

Sow

Sow about the beginning and also about the twentieth of this month, brocoli seeds of different sorts, to succeed those sown in May. Prick out brocoli sown in the former months, and if you have any of the early sort forward enough, plant them out for an early crop; put them in good ground, about thirty inches row from row, and eighteen inches plant from plant.

Plant out cauliflower every ten days, to have a constant supply, water them well in dry weather; and see that they are planted in good ground, otherwise they will do little good.

Sow some cauliflower seed on rich ground twice this month, keep the beds weeded and watered in dry weather. Prick out young cauliflower plants in a little bed; they will make good roots for transplanting when you want them.

Every fortnight sow a few carrot and onion seed, to have a constant supply of young ones.

Keep your carrots and parsnips free of weeds, either by hoeing or hand weeding

In this month if your leeks in the seed bed be strong enough, you may plant them out in beds. Draw little drills for them, eight or ten inches apart, and plant them about six inches plant from plant. Their roots should be shortened a little, and the hanging tops cut off.

Hoe the beds of salsafy and scorzonera, cut up all the weeds, and leave the plants about four or five inches apart.

If

If the cardoons in the spring were not sown in trenches, it will now be a good time to transplant them; chuse a piece of deep ground, make trenches in it four feet apart, and about a foot deep, put some dung in the bottom of each trench, and dig it in; take up the plants with a spade; cut the ends of the top roots off, and the tops of the long leaves; then plant them about eight or nine inches apart, and give them water.

If burnet, summer savory, basil, capsicums, &c. were not planted out last month, let it be done the beginning of this month.

If any of your herbs are in flower, you may cut and dry some of them for winter use. Cut them in a dry day, and lay them in a shady dry place. Those now in flower will probably be balm, mint, pennyroyal, &c.

If you have any seeds of curious plants, gather them before they are so ripe that they fall out of the pods.

Cucumbers in frames, and under hand-glasses, should be watered in dry weather.

Celery plants early raised will be fit to plant out in trenches this month to blanch. Chuse for this purpose a piece of good ground; mark it out three feet trench from trench, allowing about twenty inches for the trench; the rows will at that rate stand three feet ten inches apart. Dig out your trenches about a foot deep, and having

having laid some good dung in them dig it in; then take up your plants, and cut the tops of the long leaves off, and also the long straggling roots, and plant them in a row, in the middle of the trenches, about four inches apart. Give them water to settle the earth about their roots, and continue to water them now and then in dry weather, till they begin to grow.

Your crop of early onions sown in February or early in March, should be hoed or hand-weeded: leave them four or five inches apart. If you intend to have some small ones for pickling leave a bed as thick as they can stand, and do not hoe but hand-weed them.

Towards the end of the month, you may plant out endive. Set the plants in good ground, about one foot row from row, and eight or ten inches plant from plant in the rows. You need not plant out many to depend on, for at this early season they are apt to run to seed.

Hoe and thin your crops of red, white, and green beet. Leave the plants about seven or eight inches apart; if you happen to be scarce of plants, do not destroy any, but take them up where they are too thick, and plant them out in a bed, they will grow and do very well, if you give them water in dry weather till they strike root, and begin to grow.

You must take care not to keep your asparagus beds

beds too close cut now; let a good many run, and after the twentieth of the month, you must give up cutting, or else you will hurt your beds for another year.

This is still a good time to plant slips of sage, rosemary, suthernwood, lavender, hyssop, summer savory, &c. Plant them in a shady border, and give them water in dry weather.

Plant out from the seed beds, savory, sweet marjoram, hyssop, thyme, cardus, marigolds, angelica, clary, and other aromatic and medicinal herbs which were sown in the spring.

Plant out also fennel; and sow the seeds of chervil for a succession, it is an annual plant, and dies as soon as it produces its seed, it should therefore be sown frequently. It is much used in some kitchens.

Plant out slips of tarragon. This is an herb used by some in sallads.

Let all your beds of young plants be weeded, and hoe and rake every part of the garden where you can, to keep down the weeds.

Water, if you can, every thing in dry weather which requires it.

The weather is rather too warm now for mushrooms. If exhausted dung from the linings of your melon beds be laid against a north wall, and spawn put in it, and covered about two or three inches thick with earth, you will have

have a chance to have plenty of mushrooms from it. The dung should be such as will raise no artificial heat, and it ought to be in rather a dry state, inclinable to produce mushroom spawn: to a practical person this will easily be known by its appearance and sweet agreeable smell.

In sauces, in ketchup, and other forms of cookery, mushrooms have been long used. We are informed they were highly esteemed by the Romans, and are so at present by the French and Italians, and they are held in esteem among the higher classes in Britain. The ancient writers on medicine seem to agree that mushrooms are in general unwholesome, and the moderns concur in the same opinion. Instances are on record of their fatal effects, and most authors agree that they are fraught with poison.

There are several kinds of mushrooms so nearly resembling the right sort, that none but practical well skilled persons can distinguish them.

I have seen very bad sorts of mushrooms selling in London, and the people buying them. I have sometimes told them they were not the right sort, but they said they would do for ketchup.

I am inclined to think that the true kind of mushroom is not of a poisonous nature: I have frequently

frequently eat them freely without any ill effects.

The true sort is gendered in rotten sweet dung, and in fields pastured with sheep, and other cattle. The spawn is stringy and white, and has an agreeable sweet smell. The mushrooms at first are like a pea; when older and beginning to spread, the under part is of a livid flesh colour, the upper outside brownish; the fleshy part is thick, and when cut it is very white: it smells sweet, and is so agreeable to the taste that it may be eat raw.

My opinion is that no dung ought to be made into a mushroom bed, before it has been strongly heated, and turned frequently, so that all kinds of spawn in it may be destroyed; and those employed in gathering mushrooms in the fields, or in collecting spawn to plant on beds, ought to be extremely cautious lest they should collect such as are absolutely poisonous. I would advise that no spawn be planted till the mushrooms are seen beginning to grow out of it, and then a skilful person will know clearly whether or not it be of the right sort.

On this subject of raising mushrooms it may be observed how widely I differ from a late writer, Mr. Walter Nicol. He advises that a mushroom bed be made gradually of fresh dung from the stables, that it ought not to undergo

any

any kind of fermentation, that mould of decayed leaves of trees be mixed among it, between the layers: no spawn is to be put into it, but he does not say how thick it is to be covered with mould, or whether it is to be covered with any at all.

I believe it is not to be depended on, that a bed made without spawn being put into it, will produce mushrooms, and if it do, there is no certainty what quality they will be of. Mould of rotten leaves gender spawn, which produces a bad kind of mushrooms. Where leaves fall and rot in plantations, in summer and autumn mushrooms will be found growing; but they are not of a good quality. I never knew good mushrooms grow naturally near trees, and on dunghills, mushrooms of an unwholesome nature are found growing frequently.

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On

## On the FRUIT-GARDEN,

*For June.*

Grape vines against walls will now grow fast; let them be gone over every week. Cut off all the tendrils and useless young shoots, and stop the shoots before the bunches of fruit. Train up the shoots for bearing next year straight, and to a proper length before you stop them. Keep the trees moderately thin of leaves, that the sun may shine through them on the wall occasionally, and that there may be a free circulation of air among the leaves and shoots: take care that the branches be nailed securely to the wall, for fear they be blown down by high winds.

Trees on espaliers now require attention: they produce more shoots than can be trained in, cut off all the luxuriant and superfluous ones, leaving well placed middling sized shoots to supply the place of any old branches that it may be thought necessary to cut off.

After the trees are trimmed and the shoots tied up, hoe and rake the borders; if they are

kept free of weeds, it will be a mean to prevent the snails from creeping up to hurt the fruit. Cherry trees on espaliers should be netted when the fruit begins to turn red, to keep the birds from eating them.

Apricots, nectarines, and peaches will this month need much attention and labour to keep them in good order. They should be gone over frequently, and if there is any appearance of mildew, which always begins near the extremities of the shoots, rub the affected parts with sulphur, and strew some on the leaves. The best time to do this is in a calm morning, before the dew be evaporated from the leaves.

Cut off all the luxuriant shoots from the trees, unless there be a vacancy which requires to be filled up with them; in that case, shorten the luxuriant shoots down to where you wish shoots to come from them, and they will send forth what are called midsummer shoots, which if trained, and their leaves kept moderately thin, will ripen for bearing wood the succeeding spring.

All dead branches should be taken out, and cut away the cankered parts: if any of the shoots that are cankered be cut half through, it will not hurt them, but help the tree to cast forth its contaminated juices, and dry the inner wood, the over-dampness of which stagnates the

the juices that are carried up by the nature of vegetation between the bark and wood, and when these receive stagnation, they break out in gum and canker, and cause the bark to die on some parts of the tree, and will perhaps kill it if assistance is not given to help the tree to purge itself of corroding juices drawn into it from unwholesome soil.

Thin the trees of all superfluous weak shoots, leaving them regularly supplied with young wood in every part, nail the shoots in straight, in places where they do not interfere with the fruit, thin the fruit if they are too thick on the trees, and nip off the leaves where they are crouded, so that the air may have a free circulation through every part of the tree, and that the sun may shine on the wall here and there among the fruit and branches to warm the air about them.

In warm dry weather wash the trees out of an engine with clean water, it will refresh them, and be the means of preventing them from being infested by the red spider, which is very prejudicial to trees and fruit, when it comes thick upon them.

Water now and then in dry weather all newly planted fruit trees, and if they are against walls train up their shoots in a regular spreading manner. The way to train a tree of any sort on

a wall, is to lead the shoots on each side of the tree on the wall, about nine or ten inches from the ground, and lay in the rest of the shoots at regular distances between them, so that every part of the wall may be covered equally with the branches, and the walls ought not to be over-crouded with leading branches, if they are, air will be prevented from circulating duly among them, and there will not be room to lay in, and ripen the summer shoots of peaches, nectarines, apricots, and some of the other kinds of trees, so that if your trees are not kept sufficiently thin, they will probably get bare of young wood towards the bottom, and become less productive.

If you have any trees of last year's budding whose stocks were headed down last spring, the shoot from the bud should be tied to the part of the stock left above the bud. If any of them are growing luxuriantly strong you may head them down to three or four buds, they will throw out side shoots which you may tie to stakes in a direction for future training. Suffer no shoots to spring from the stock; for if you do, they will deprive the bud of its nourishment, and hinder its growth.

Examine all the fruit on your trees carefully, and if there are any unshapely ones pull them off, and see that no nails or shreds are too close

to

to the fruit. The fruit should not stand nearer together than about four inches stem from stem, otherwise they will not have room to swell, if they are sorts which grow to a good size.

Plum, pear, and cherry trees trained against walls should be attended to, all foreright shoots ought to be cut off, and no long shoots left but leaders, and some where there are any vacancies required to be filled up. Where the leaves overcroud the fruit nip some of them off, leaving only a gentle shade to them. In dry weather those trees would be better to be watered all over occasionally with clean water out of the engine.

Net up your cherry trees on the walls to preserve them from the birds.

Young shoots must be left every where on the morella cherry tree, and trained in for bearing next year in the same way as the young wood is in a peach tree.

Currant trees trained against walls and palings should be attended to, their leading shoots are to be nailed in, and all the foreright ones cut off, leaving studs for bearing.

The strawberry beds in bearing will in dry weather require water frequently. If the weather is hot, every other day will not be too often to give them water.

Destroy weeds among gooseberry, raspberry, and

and currant bushes; if the weeds have got long, rake them in heaps at each end of the rows and carry them off. Hoe all your fruit-tree borders and rake them, keep them clear of weeds and every kind of litter, this will be the means of preventing insects from coming on the trees.

Endeavour to destroy all sorts of vermin which creep upon the trees, and eat the leaves and fruit; these are slugs, snails, &c. After rains, they are most likely to be found crawling in the morning and evening, on the borders and up the trees among the shoots and leaves.

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## On the PLEASURE or FLOWER GARDEN,

*For June.*

If the auricula plants were not shifted last month, it should be done the beginning of this month; let the pots stand where they may be shaded in the heat of the day on shelves or on a bed of coal ashes to prevent worms from creeping into the pots; water them in dry weather as often as they begin to get dry.

The

The flowering and ever-green shrubs should be examined, if they have made any strong disorderly shoot; these, either by cutting them out, or shortening them as may appear most proper, should be reduced to order; shrubs of all kinds ought to be kept from interfering with one another, and from spreading too far to injure the more low growing plants near them.

Shrubs planted last spring, must be watered now and then in dry weather. Likewise water all the pots of scarlet lychnis, double sweet-williams, campanulas, rose campions, double rockets, &c.

Also remember to water seedling polyanthuses, auriculas, and all other seedling plants.

Look over the herbaceous, perennial and biennial flowering plants; cut off all straggling decayed or broken shoots, and tie up any that require it. Many of the annual plants too will require tying up; and some, such as the sweet pea of different sorts, will want stakes to run up upon.

Honeysuckles of various kinds, and jasmines formed into heads for blowing, should have the luxuriant shoots, when they appear above the heads, cut in, or taken entirely out as you see most proper.

Plants raised from the seeds of carnations and pinks, will in this month probably be fit to transplant.

plant. Dig a bed of good earth very fine, rake it smooth; make your bed about three feet wide, plant them in rows six inches apart, and put the plants about three or four inches from one another. Water them gently, and continue to do so in dry weather. In the autumn, they should be again transplanted, setting them about eight inches asunder.

Examine your pink and carnation seedlings of last year now in blossom, and mark all of them that are worth preserving. They may be increased by layers or cuttings. Those from seed bring a variety of flowers differently marked, but perhaps none like the original, nor very good ones; it, however, sometimes happens that valuable new flowers are obtained from seed, which on that account should be sown every year, for it is the only way to procure new varieties.

If the slips of carnation plants are grown long enough they may be laid. The method is, get some fine mould in readiness, and a parcel of little hooked pegs made of fern or small branches of trees; clean away the weeds and any litter on the mould about the plants; fill the pots with mould up to within half an inch of the rim; when this is done, cut a few of the leaves off the lower part of the shoot, and top those on the head of the shoot about an inch or two down, then with a sharp knife about the middle

middle of the shoot, cut between two joints a slit half through the shoot, turning the edge of the knife upwards, cut the slit past the first joint to the middle between it and the one above it, then making a hollow in the mould, bend down the cut part of the shoot and peg it down to the earth, turning its head upward, cover the slit part about half an inch thick with mould;—thus proceed till you lay all the shoots that are fit, give them some water to settle the earth about them, and continue to give them gentle waterings in dry weather, and they will strike root freely.

Tie up the carnation stems, and if you wish very fine flowers, cut off some of the buds of the smaller size, which will strengthen those that you let remain.

The flower leaves of carnations are very apt to burst forth at one side, a few days before the time of the opening of the blossoms, and if they are permitted to do so, the flowers make a very loose irregular appearance; to prevent this, take small slips of wet bass, and tie round the middle of the pod where it is most swelled, this will prevent the flower from bursting forth at one side, and to enable it still further to blow regular, cut the flower cup open in several places.

Some have a stage for carnations, with a co-

vering on it to keep the sun and rain from the flowers while they are in bloom, this preserves the blossom long in beauty, but it is not good for the plants to be excluded from the sun and dews, therefore, shading of them should not be continued too long. The plants, however, receive no injury by being shaded four or five hours in the heat of the day, and to be screened from heavy rains will do them good.

Pinks may now be increased by cuttings if they are in blossom. Dig a bed of good rich earth about three feet wide, and as long as you want it, set hand lights on it, you can spare them now from the cucumber ridges; make a mark round the glasses, set them off, and dig out the mould to the extent of the mark about half a foot deep, sift it in again through a coarse sieve. Then take slips from the plants, cut the leaves off the hard lower end of them, and cut about an inch of the leaves from their extremities; then cut a little bit off the hard end, and prick them with a little stick, into the sifted mould an inch apart, water them gently, and set the lights on them close that no air can get in; give them a strong sun heat and no air till they begin to grow; the sun will not scorch them if they are kept moist, by this means they will strike quickly. If you prefer it, you may prick them into a cucumber or melon frame, they will take

take root fully as well in it, as they will have a more powerful heat when the sun shines than under hand glasses.

By this method you may readily propagate almost all kinds of common plants, the closer and warmer they are kept the sooner they will take root; the hottest sunshine will make them vegetate quickly, but they must be sprinkled often with water, and covered with mats in the night.

In this manner it is a good time now to propagate the china and moss roses, and any other curious sorts that are not readily propagated by layers.

By giving them a powerful moist heat and light, almost every kind of the most tender exotics may be propagated by cuttings. Make cuttings, leaving a little of the hard perfectly ripened wood to go into the earth, plant them in pots in mould suitable to their nature, plunge the pots in clumps or single in a pit or frame, in tan or leaves with heat in them, but the warmth in the tan ought not to rise above blood heat; set bell or hand lights on the pots of cuttings, give them water every morning about eight o'clock, if the sun shine, or any time of the day he breaks out; in very hot days it may be necessary to sprinkle them with water twice a day, for the air must be constantly kept moist

moist about them. Keep the double glasses close till the plants begin to grow after they are rooted, then admit a little air to harden them. They should not be shaded in the hottest sun till you give them air, then shade them a few hours in the middle of sunshine days. They will strike in a pit or frame where the tan is near the glass without bell glasses over them. Cover them at night with mats, if the nights are not very warm. If your heat in the tan rise above 100, it will destroy them; you had best, therefore, be on the safe side, for if it stand at 80 in the night time it will do.

You may propagate carnations by cuttings planted and managed in the same way as directed for pinks.

Also in the same manner you may propagate fibrous rooted perennial plants, such as lichnideas, double sweet williams, rose campions, double rockets, scarlet lychnis, &c.

Autumnal blowing bulbs should now be taken up and replanted; some of these are the guernsey lily, colchicums, autumn crocus, belladonna lily, &c. After the bulbs are taken up let all offsets be taken off and planted, each sort by themselves, you may plant the roots again immediately or let them lie a few days out of the ground.

Take the opportunity of moist or cloudy days

days to plant out the different sorts of annuals which required to be forced in the spring to forward them in their growth, such as stocks, china asters, marvel of peru, china pinks, french and african marigolds, &c. plant them in little beds, or in clumps in the flower borders; keep them watered in dry weather till they have made roots.

You should now plant out in borders or into nursery beds, to be planted out in autumn or in the spring; seedlings of greek valerian, canterbury bells, rockets, scarlet lychnis, campanulas, foxgloves, hollyhocks, tree-primroses, columbines, &c. If you plant them in beds, set them about six inches apart, and give them water in dry weather till they have made roots to support themselves.

Take up curious hyacinth-roots which were laid sidewise in a bed of earth to perfect their roots. They had best be taken up in a dry day, and spread upon mats in a shady dry place for a few days, then clean them and put them in a dry airy place, till the time of planting commence.

Take up also the roots of anemonies and ranunculus as soon as their leaves are withered; these roots require a good deal of care in taking up. To get all the roots and their offsets clean out of the ground, it may be necessary to sift the

the earth of the beds as low as they are planted, taking it clean as you go, and search in the sieve the lumps of earth for the roots.

If their leaves are decayed, take up the roots of narcissus, tulips, and jonquils; dig them up in a dry day, lay them in a shady dry place till their tops and fibres be quite dried up, and in wet days you may pick, sort, and lay them up in a dry place on shelves or in boxes, till they are wanted to plant.

All tender annual exotics, such as balsams, tricolors, cockscombs, globe amaranthus, &c. should now be transplanted, put one plant into each pot in good mould. They will do well in any of the forcing-houses where they can have plenty of air. Give them gentle waterings when they begin to get dry; some of these kinds, particularly the egg plant, are liable to be infected with insects, therefore sprinkle them over the leaves now and then with clean water, and you may smoke the house with tobacco: a few of them may be put in the flower borders; if the summer prove hot, they will blow there very pretty.

You should now sow some of the finest kinds of hardy annuals, they will blow in the autumn, when the more forward sown ones are over.

If you have plenty of rose trees to spare, head down some of the different sorts, by which means

means they will probably come into blossom in the autumn, when the others have done blowing.

You may also head down some of your forced rose trees to make them blow in the autumn. This method weakens the plants, as it causes them to bloom twice in one year, contrary to the nature of them.

Seedling flower plants of all kinds should be taken care of, they ought to be kept clear of weeds, and have gentle waterings in dry weather.

Go round your flower borders and edges of plantations, and tie up all flower plants that require it, whether they be shrubs, herbaceous plants, or annuals.

In dry weather, take care and water now and then all new planted trees and shrubs.

Clip box edgings, and keep the grass edgings on the sides of gravel walks and borders in good order.

If they require it, you should clip hedges of hawthorn, beech, lime, privet, hornbeam, elder, &c.

Hoe and rake in dry days all your flower borders, keep them neat and clean at all times.

Keep your gravel walks weeded and clear of litter, of leaves, or of any thing else; roll them well,

well, particularly when the surface is dry, after a shower of rain.

To keep your lawns and grass walks in good order, they will require to be mowed and swept once a week in dry weather, and twice a week in wet weather.

You may towards the end of the month bud curious sorts of roses, such as do not put forth suckers very freely, so as to be increased readily thereby. The best stocks for budding them on are those that grow strong, such as the damask and frankfort kind.

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## On the NURSERY-GARDEN,

*For June.*

Towards the end of the month, you may begin to bud apricot trees and some of the forward kinds of peaches and nectarines. These are generally budded on plum stocks raised from the stones; when they are three years old they will be of a good size for that purpose. Cherry and plum trees may also be budded.

The trees which were budded the preceding year should be attended to. All shoots from the

the stock ought to be cut off as soon as they appear. If you are not in a sheltered situation, the vigorous growing shoots should be supported to prevent their being broken by the winds.

If you are desirous of having young fruit trees to form heads soon for walls or espaliers, cut down the young shoots from the buds of last year to five or six inches, they will soon put forth shoots which you may tie to stakes; in a direction for training.

Look over new grafted trees, and where they shoot strong, endeavour to keep them from being broken by high winds. If there be any of the clay on, let it be taken off, and untie or slacken the bandages as you see most fit; and if the graft and stock be so united that it will bear it, cut the upper part of the stock with a sharp knife smooth, that the graft may cover it over easily in its growth with young wood and bark.

If the mildew begin to appear on any of the shoots, strew them with flour of sulphur, and if the green insect appear on them, scatter lime or soot on the affected parts, which will prevent the insects from feeding, and smother many of them. The best time to do it is in a calm morning before the dew be evaporated. Snuff is a good thing to scatter on trees infested with insects;

but I understand it is become a very dear article.

You may now lay down the young shoots of hardy wooded exotic trees and shrubs. Choose such branches as will easily bend to the ground, and have plenty of young shoots on them. Secure the branch with strong hooked sticks, and proceed to lay the shoots about three inches deep, fasten each of them down with a peg, cover them with the mould, keeping three or four inches of their top above ground, and form the earth round the whole of them in such a way as to retain the water to be given them in dry weather. Give them water immediately after laying, and let it be repeated occasionally as you see need.

Probably these young layers may be rooted by the month of November, when they may be transplanted into a nursery bed.

Roses and many other shrubs may be propagated by this method.

Seedlings of arbutus, evergreen oaks, portugal laurels, hollies, junipers, cedars, &c. should be kept free of weeds, and have gentle waterings in the evening in dry hot weather.

About the end of the month you may bud the finer sorts of rose trees that do not take root very freely by laying, bud them on the shoots of rose trees which grow vigorous.

The

The latter end of the month you may transplant seedling pines and firs. Dig a spot of good light ground, make it out into beds three feet wide, with alleys eighteen inches broad, and in cloudy days prick out the plants three inches apart; as soon as they are planted, water them and continue to water them in dry weather till they be well rooted. They should be shaded in hot days. This may be done by putting an arch of hoops across the beds, and drawing mats on them when the sun shines warm.

If this method is practised, the plants will be well rooted in the course of the summer and autumn, and it will enable them to endure the winter better than if they were continued in the seed bed. This method of transplanting ought not to be neglected where the seedling plants stand very thick in the original beds.

If the weather prove dry, shrubs and trees of all kinds planted late in the spring should be watered. Water also in dry weather, the beds of seedlings of all sorts of trees and shrubs.

In dry days, hoe up the weeds every where between the rows of trees and shrubs. If this be done when the weeds are young it will save labour, as the ground will not require raking, and the hoeing is much easier performed then when the weeds are suffered to grow high.

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THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES,

*For July.*

THIS is generally the warmest month in the year, and the pines will not, in any part of it, require the assistance of fire heat, unless the weather happen to be uncommonly cold; but it will be necessary that a good heat be continued in the tan bed. Examine it, and if the heat be declined so that the pots can admit of being put into the tan as deep as the rims of them; fill up the vacancies between them with fresh well prepared tan; level the pots that they may hold water, and see that the tan be close to the sides of them, that the heat of the bed do not escape. Previous to this, set out any plants whose fruit are cut, if you have others in fruit among your successions to fill up their places.

Give

Give plenty of air every fine day, and if the nights are warm, let some remain at the houses during the night, in such a way that if it happen to rain, it may not fall on the pines.

If your fruit happen to be backward in ripening and the weather prove wet and gloomy, it may be requisite even at this time of the year to make a little fire occasionally, for the fruit will not come forward quickly without plenty of heat as well as air, and whenever we find a deficiency in the natural climate, we must endeavour to supply it by the assistance of art.

*Height of the Thermometer in the Fruiting-House, for July.*

| | D. | M. | N. | E. | | D. | M. | N. | E. |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 72 | 85 | 77 | | 17 | 62 | 95 | 72 |
| Watered | 2 | 72 | 90 | 76 | Watered | 18 | 68 | 80 | 75 |
| | 3 | 71 | 97 | 77 | | 19 | 74 | 80 | 75 |
| | 4 | 71 | 95 | 76 | | 20 | 72 | 95 | 75 |
| | 5 | 72 | 87 | 76 | | 21 | 70 | 95 | 71 |
| | 6 | 74 | 94 | 78 | | 22 | 68 | 94 | 75 |
| Watered | 7 | 75 | 92 | 76 | Watered | 23 | 70 | 95 | 76 |
| | 8 | 70 | 96 | 77 | | 24 | 70 | 90 | 74 |
| | 9 | 72 | 82 | 71 | | 25 | 68 | 95 | 75 |
| | 10 | 68 | 100 | 76 | | 26 | 70 | 95 | 76 |
| | 11 | 71 | 92 | 73 | | 27 | 68 | 80 | 74 |
| | 12 | 71 | 93 | 70 | | 28 | 72 | 80 | 71 |
| Watered | 13 | 67 | 95 | 73 | Watered | 29 | 67 | 90 | 72 |
| | 14 | 65 | 93 | 74 | | 30 | 70 | 88 | 75 |
| | 15 | 68 | 80 | 70 | | 31 | 68 | 95 | 76 |
| | 16 | 65 | 94 | 68 | | | | | |

Besides

Besides watering the earth in the pots in which the roots of the plants grow when it begins to get dry, the leaves and fruit should be watered now and then till they are all wetted with clean water out of a fine rosed pot, the water should be about eighty degrees warm, or as warm as the medium heat of the air in the house.

The best time to water over the leaves, is about eight o'clock in the morning or about four in the afternoon, though it will do them no harm to water them any time of the day if you keep the air in the house sweet, and up to a heat strong enough for the growth of the pine plant.

When any of the fruit are full swelled, do not water them over the fruit or leaves, but it is necessary even then to have the earth about their roots moderately moist, otherwise the fruit would flag for want of nourishment. It should also be observed that after the fruit is swelled to a pretty good size; water should not be poured into the crowns of the fruit so plentifully as to stand in them above a day.

I would still give a caution to take care not to over-heat the roots of your fruiting pines, you had best, if you are not sure to be out of danger, have your pots stand one third out of the tan than run any risk with them; but you may

may depend that a faint heat in your bed will not swell off your fruit to a good size.

If it so happen, that at any time you find your tan bed getting two dry, which, however, will not happen if you have not too great a body of tan not well prepared, pour water into it now and then between the pots, this will cause a fine moist heat to arise among the plants to help to nourish them, and it will likewise enable the tan to retain its heat longer than if it were suffered to become dry, for no body of vegetables will retain heat after the moisture in them is evaporated.

If you see occasion for it, support your fruit with sticks to make them stand upright.

Strong suckers will sometimes come up at one side of the fruit and bend it to the opposite side; other plants will send up three or four suckers which will so surround the fruit as to make it stand perfectly upright.

If you wish to have uncommonly large fruit, when you see the suckers coming up, destroy them by twisting out the hearts of them with an iron instrument about twenty inches long, made for the purpose. This is the method that a gardener practised at Kelham, near Newark upon Trent. By this method he seemed to be getting short of plants. His hot-houses stand in a warm sheltered situation near the river Trent.

Trent. They are small low houses, easily kept to any degree of heat required.

He happened to have strong plants, some of which had not fruited the preceding year as was expected, and by being kept in a vigorous state of growth, and the suckers destroyed, they could not miss of producing fine large fruit. I called to see his plants. There are no vines in the houses to shade the plants from the full influence of the sun. This is right, being consistent with nature. I saw a few insects on his plants, but not so numerous as to hinder the plants or fruit in their growth.

Keep your tan bed free of all kinds of fungous stuff, which is apt to grow out of the surface of it; and endeavour, if it breed, to destroy the spawn which runs near the surface, makes it crusty, and prevents the heat from rising freely among the plants; when you find it in such a state, loosen, and break it with the hand, or with a small hand three-tined fork. See that your house is clean and free of any sort of litter that might raise unwholesome vapours in it.

Your succession plants will now demand attention, whether they be in a house, a pit, or in frames; you should take care to have a good strong heat in the tan bed, and do not have your pots plunged too deep, nor too fast in it.

The

The plants will require frequent waterings, and you may pour it among the leaves or into the centres of them. It is a good sign to see them growing broad leaved, and the water standing constantly in their hearts in the summer months, nor will it hurt them at any time, if there be a sufficient degree of heat kept in the house. Water them all over occasionally with clean water from 70 to 85 degrees warm. Give them plenty of air in fine days, and shut them down now and then in an afternoon with a strong heat at them. If the nights are warm, you may leave both at your fruiting and succession pines some air all night; leave it in such a way as if it rain it may not fall on the plants.

If your forwardest succession plants have filled the pots quite full of roots, you had best shift them into those of a larger size, about the beginning of the month.

You should examine well the heat and condition of all your tan beds, that you may be led to look forward to have a preparation of what quantity of tan you will want next month.

Exotic plants and cuttings in the hot-houses or pits, should be taken care of and watered when they need it.

Grape vines should be constantly kept in order, stop them as they want it, thin their leaves, and keep them tied up to the rafters. They

They ought not to be suffered to shade the pine plants.

Crowns and suckers of plants that have done fruiting, if you have got any quantity of them, may be potted. Pull off a few of the bottom leaves, put them into pots in good earth, plunge them in a pot or frame in tan where there is a sufficient heat. Keep them very warm, and give them no air till they make roots and begin to grow. In very hot days shade them with mats from between ten and eleven o'clock till about two in the afternoon. When they begin to grow, give them plenty of air, which will make them grow broad in the leaves, and stocky stout plants.

In watering your pine plants of all sizes, remember that some sorts require less water than others, the queen and sugar-loaf require more water than the black jamaica and antigua.

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On

## On the GREEN-HOUSE,

*For July.*

Green-house plants require frequent waterings. If the weather be hot, and the pots much exposed to the sun, it is likely they will need a gentle watering every afternoon six days in the week. Keep the pots clear of weeds, and the dead leaves should be picked off the plants whenever they appear.

As the green-house will now be at liberty, you may set into it during the summer, any exotic plants you have in the hot-houses.

Lemon and orange stocks which were raised from seeds, if they are grown large enough may be budded. They are in a proper condition for budding when the bark of the stocks parts freely from the wood, and when the buds of the trees to be increased by this method readily separate from the shoot. Buds from shoots two years old will unite with the stock, but if you can get buds from shoots of the present year's growth, they will be likely to unite more readily. After budding,

budding, the stocks should be set in a place where they will grow freely, either in the green-house, or in a frame in which is a gentle tan or dung heat.

Green-house plants may still be propagated by cuttings or layers.

If the pots require it, you may put fresh earth on the tops of them; loosen and level the earth on their surface, and fill them up to within about half an inch of the rim of the pots, this will leave a vacancy to hold water; press the earth down gently with the hand, and water the pots of mould with a rose on the water-pot, which will keep the earth level in them.

In this month, if any of the green-house plants stand in need, they may be shifted into larger pots.

The plants should be looked over occasionally, and any straggling luxuriant shoots either shortened or cut entirely off, and any shoots that require it tied up, that the plants may constantly appear in a handsome neat condition.

This is a good time to plant cuttings of succulent plants, such as torch thistles, ficoideses, indian figs, sedums, euphorbiums, &c. You may also increase aloes of different kinds; this is to be done by slips or suckers, which spring from the stem of the plants near the ground, and sometimes

times from the roots not much below the surface.

If the young fruit on orange, citron, and lemon trees, be too thick, it should be thinned before it become large, otherwise it will weaken the trees; the fruit should be thinned, and left thicker or thinner, according to the strength of them, observing to leave on the most promising young fruit.

Observe to keep all the pots of green-house plants free of weeds, and they should now stand in the most conspicuous sheltered situations.

Any cuttings of green-house plants which were planted early, and are well-rooted, may now be transplanted into little pots, one in each; and if you have seedlings strong enough, they may be picked out four or five in a pot.

If you have grapes in your green-house, which should never be without, if there is glass on the roof of it, stop the vines before the fruit, tie up the shoots for bearing next year, and keep the plants moderately thin of leaves, that the fruit be not too much shaded.

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On

## On the FORCING-HOUSES,

*For July.*

The grapes in the early forcing-house will probably now be over, and if they are, you may take the glasses off, and tie up the shoots securely, that the winds do not break them down.

The vines in your latter forcing-house will require constant attendance; stop the shoots before the bunches, and tie up carefully the shoots for the bearing wood the ensuing year. Keep them sufficiently thin of leaves, and if the berries on the bunches require thinning, let it be done carefully with a sharp-pointed scissars.

The border in which the vines grow, should be watered well now and then. Admit air freely into the house every fine day, and if the nights are warm, you may leave a little at it all night.

Take care of any kind of plants you may yet have in the forcing-houses; keep them clear of weeds, and give them water when they want it.

The peaches and nectarines in the first forced-house will now be all over; therefore, let the glasses be taken off, tie up all the shoots that require

require it. If there are any luxuriant or superfluous shoots on the trees, you may cut them off.

In dry weather, you should water the border, which will make the roots grow; and every part of the trees, if they are in good health, will grow, and the bearing wood for the ensuing season be brought to maturity.

If any green insects were appearing on the trees, before you took the glasses off, you should have given them a large smoking of tobacco.

Mildew is very apt to appear, at this time of the year, on the trees; if you see the least appearance of it, strew some flour of sulphur on the affected parts. If the weather prove dry, sprinkle the trees all over their leaves with water; this will refresh them, and be a mean to keep them from the red spider.

Those peaches and nectarines that are in a later forcing-house, will be coming in to succeed the first forced ones. If they have begun to ripen, do not give them water over the fruit and leaves; let the fruit be laid open from shady leaves, to admit the sun to shine on it; keep the shoots regularly tied up, and give a great quantity of air.

The cherries will be all over in the forcing-house, the glasses should consequently be off. If your trees want it, this is a good time to dig in

in some manure among the roots of them: very rotten dung, or vegetable mould, will do for that purpose.

The figs in your house will probably be ripe, or ripening; keep their shoots tied up, and the trees pretty thin of leaves, so that the sun may not be hindered from shining on the fruit occasionally. In fine days, give the house plenty of air, and in warm nights leave air at it all night; but in such a way, that rain, if it come, do not fall on the fruit.

In your rose-house will now be different kinds of tender annuals, such as balsams, cockscombs, egg-plants, sensitive plants, globe amaranthus, &c. and tuberoses; these should all be taken care of, by keeping them clean and free of weeds, and by giving them gentle waterings when they begin to get dry. You may smoke the house with tobacco once in ten days, or a fortnight, which will destroy some sorts of insects.

If you have grapes in the rose-house, they should be well managed; if required, water the border in which they grow; let the plants be stopped, thinned of leaves, and the shoots tied up neatly under the rafters, so that they do not too much shade the plants underneath them.

Whatever seedlings or cuttings of curious exotic plants you have in any of the forcing-houses,

houses, let them be attended to, in keeping them free of weeds, and in giving them gentle waterings when they require it.

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## On the FORCING-FRAMES,

*For July.*

Melon plants will now be in full bearing, and they will require constant attendance. Not to suffer the frames to become too crouded with shoots, the weak superfluous ones ought to be cut entirely out, and the others stopped before the fruit a joint or two; and when young showing shoots are getting near the sides of the frame, they should be stopped before a joint that shews fruit well, and has the rudiment of a young shoot coming out beside it.

As the leaves get thick, keep cutting off the oldest of them. This ought to be done, at least, three times a week; by which method they will be nearly always in one medium state of thinness, and the plants and fruit will derive advantages which they would be deprived of, were they to

be suffered to become overcrouded with leaves and shoots, and then a great many cut out at one time.

The fruit should lie upon dry tiles, stones, or slates, and no leaves or shoots ought to be suffered to lie upon it. When it is young, it is better to have a gentle shade of leaves; but when it is full swelled, it should be entirely exposed to the sun.

Keep the mould in the frames free of weeds and dead leaves; give the plants plenty of air in fine days, and water as often as they require it. In hot weather, it may be necessary to water them twice a week, besides sprinkling their leaves occasionally; after sprinkling or watering in an afternoon, the lights should be shut down with a strong heat in the frames. Indeed, melons will not come to good perfection, unless they have a strong heat occasionally, of 85 and 90 degrees in the shade, and with such a heat, they must have a sufficiency of water.

The mildew comes on melons sometimes. It is occasioned by unsweet vapours, arising from a stagnation of the dung in the bed, from the boards of the frames, or from some unhealthy particles in the earth or water.

To prevent the mildew, when the frames are perfectly dry, let them be clean scraped, and painted twice over; have your bed made in a way

that

that the water will run readily through it, and not to stand about it, but run off quickly by a descent or a drain; let your mould be sweet, by taking it from the surface of a quarter of the kitchen garden where the mould is of a rich loamy nature, or fresh rich loamy earth, from the surface of a common, broken small, and exposed to the frost and air during the winter, before you use it, and never water your plants but with sweet clean water; stinking dirty water is not natural to them.

If the mildew be on melon plants, they will produce neither good nor wholesome fruit; therefore, when it happens, you had best destroy your plants, or endeavour to cure them of the malady. If you wish to cure them, get some good hot dung in readiness, by shaking it over two or three times till it be sweet, which you may know by the smell; wheel the linings away from your affected beds, leaving any of the sweet unspent dung to mix among that which is to be put up; make the sides of your bed upright, and if it be wet, make holes in the sides of it on a descent upwards, that the wet may run out of it downwards, then put a strong lining round it, and keep it, as it sinks, raised to nearly on a level with the surface of the earth in which the plants grow; when the plants are moist, strew them all over with flour of sulphur; keep as strong a

heat in the air of the frames as the plants will bear, till the mildew disappear; before you shut them down, which may be between two and three o'clock in the afternoon, sprinkle them with water 100 degrees warm.

Take care of the melon plants whose fruit are setting and swelling. Stop the shoots before the fruit, keep the leaves and shoots regularly thin, and do not let the shoots get crouded about the sides of the frame; give the plants air and water as they stand in need of them, and after sprinkling in afternoons, shut them down with a strong heat.

If melons are of a large kind, no more than two fruit should be left on a plant to swell off at one time; if they are of a small sort, three or four fruit may be left on each plant.

At this time of the year, melons will do without heat in the linings; but I found by experience, that they do best by keeping a heat in the linings all the summer. If a heat be kept on constantly in the linings, and the plants watered sufficiently, they will continue to produce fruit sometimes till the middle of October.

Melons may be planted out about the beginning of this month; they will require no heat immediately under them: give them a very strong top heat, and water enough, till they are well-rooted and begin to grow, then give them air,

air, more or less, according as the heat of the days are. When the roots are extended to the sides of the frames, you may put a lining of dung to the beds, if you think they want it.

If you have cuttings, or seedling plants of any kind, in your forcing-frames, keep them clear of weeds, and water them when they want it.

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## On the KITCHEN-GARDEN,

*For July.*

As your peas and beans appear coming through the ground, continue to sow more, for a succession. The white blossom and mazagan beans are now the most fit sorts to plant, and you may sow some of the early and late kinds of peas. Hoe and stick all your former sown crops of peas that require it, and top and draw up earth to your beans.

Now is a good time to plant out a full crop of savoys; get a piece of good ground ready, draw shallow drills in it, about thirty inches or three feet

feet apart, row from row; tread the drills with your foot longwise, then plant the savoys about eighteen inches plant from plant, give them water, and continue to water them in dry weather, till they have taken root and begin to grow. Plant them two or three different times in this month, as your plants are fit for it.

Plant cabbages of all sorts, for winter and spring use. If you have not ground enough at liberty, you may plant them between the rows of peas and beans; by the time the plants are struck and beginning to grow, the peas and beans will be ready to take up.

Make plantations of the early york cabbage every ten days, to have a constant supply of fine young tender cabbage.

Sow the seeds of york cabbage two or three times this month, they will be useful for colworts in the autumn and winter; sow the seeds on rich ground, and water them frequently. If they are sown on a shady border, it will be a good place for them in hot weather.

Take the advantage of showery weather to sow turnips; sow them on good ground, and roll or tread them in well with the feet; make sowings of them twice or thrice this month: hoe those that want it which were sown last month.

Sow the seeds of carrots and onions about once a fortnight, to have a constant supply of young ones.

ones. Hoe or weed the former sown crops of onions and carrots.

About the beginning of the month, plant a crop of french beans. Choose a piece of light rich ground for them, in a sheltered situation. If the ground be dry, after you draw the drills, which should be thirty inches apart, water them to moisten the earth before you sow them. Plant the beans about four inches apart, and cover them about two inches deep. If the weather hold warm and dry, examine them, to see if they have moisture enough to cause them to vegetate and come up; if they have not, which may be known in four or five days, you must water them. This rule should be observed in dry weather, in the planting and sowing peas and beans, and all other seeds.

Brocoli seeds should be sown in this month for a late crop. If you have got it, sow the seeds on a shady border of rich earth, tread them in, if the ground be not of a heavy nature, smooth it afterwards with a rake, and if the weather prove dry, water them when they want it.

Transplant brocoli of all sorts for a full crop. It ought to be planted in good rich ground. Draw drills three feet apart, tread them with your foot longwise, unless your ground be very strong; set the plants, about eighteen inches plant from plant, in the rows; see that you put in

in no plants that have bad roots, or any that have not good hearts; as soon as they are planted, give them water, and if the weather prove dry, water them now and then till they begin to grow.

To have brocoli plants for a succession, transplant some into beds out of your seed beds; this is a good method on two accounts, it will keep the plants back in their growth about a fortnight, and make them grow more stocky than if they were transplanted immediately from the seed-bed into the ground, where it is intended they shall produce their heads.

If you wish to have a regular supply of cauliflower, you should plant out some every ten or twelve days. These plants will not produce large fine heads, except they be planted in deep rich ground; plant them in little drills, to hold water; put them thirty inches apart in the rows, and about sixteen inches plant from plant. Hoe up the weeds between the rows of old cauliflower plants, and give them plenty of water, especially when they are forming their heads.

Sow in the beginning of this month a few cauliflower seeds for a late crop.

Radish seed may now be sown on a shady border; give it water in dry weather.

This is a good time to sow black and white turnip rooted radish. Sow the seeds separately in

in beds, in an open exposure, if the weather prove dry, give them water, and when they come up, thin them out to the distance of five or six inches.

Take up shallots to preserve for winter use. In many gardens there are found delicate plants to raise: they are very liable to rot in the ground, and therefore should be taken up as soon as the stems begin to decay. They grow best in a rich loamy sandy soil.

If all the leeks you want were not transplanted last month, this is a good time to do it. Dig a piece of good ground, draw little drills in it, about ten inches asunder: dig up the plants from the seed bed, then cut off the extremities of their leaves and roots, and plant them in the drills about five or six inches apart. Plant them an inch or two deeper than they were in the seed bed, and if the ground be dry, give them water to settle the earth about their roots.

Keep sowing the seeds of round spinach, that you may have a constant supply. You may sow it in drills between the rows of late peas or beans, if the weather be dry, you must water it, otherwise it will not grow.

If cardoons were not transplanted last month into the trenches where they are to be blanched, they should be transplanted about the beginning of this month. Make trenches for them about ten

ten or twelve inches deep, sixteen inches wide, and about three feet and a half apart. Dig dung into the bottom of the trenches, and after trimming the roots and leaves of the plants, set them about eight inches asunder, in the middle of the trenches. Give them water to settle the earth about their roots.

Sow mustard, cress, and radish seeds, for small sallad, if it be required, in a shady border.

Now is a good time to plant a full crop of celery: choose a spot of deep ground for that purpose. Dig out trenches about eighteen inches wide, ten inches deep, and three feet trench from trench. Dig good rotten dung into the bottom of them, take up the plants out of the beds into which they had been transplanted, with a spade or trowel, cut off the extremities of the roots and leaves, and plant them in rows in the middle of the trenches, about four inches plant from plant. Give them water as soon as planted, and continue to water them in dry weather, till they begin to grow, and afterwards if you wish them to grow fast.

Transplant celery out of the seed-bed into beds of rich earth. Shorten the roots and tops a little, plant them into the beds about four inches apart, and give them water as soon as they are planted.

Transplant

Transplant endive; it may be planted in any open part of the garden. If you are scarce of ground, you may plant it in rows on the ridges between the rows of celery. Draw shallow drills for it, and set the plants in them a foot apart. Till they begin to grow, give them water in dry weather.

Sow endive seed for a succession. You had best, if you wish a regular succession, sow some about the beginning of the month, and more about the middle of it.

The different sorts of lettuce seeds, which you wish to propagate, should be sown every ten days, that you may have a constant supply.

Transplant lettuce out of the seed beds at least once every week. Plant them in good ground, in beds, about a foot row from row, and six or seven inches plant from plant, in the rows. Give them water, and if you do not water all your lettuce plants well in dry weather, they will not be good.

If you are saving any seeds of curious esculent plants, take care to gather them before they shake out, or the birds eat them.

Now is a proper time to cut herbs for drying, for winter use. The sorts are balm, mint, pennyroyal, hyssop, marjoram, camomile flowers, marigolds, &c. Herbs may also be cut for distilling, such as peppermint, lavender, and many

many other kinds. They should be cut in dry weather, and laid or hung up in an airy shady place.

When crops of any kind are over, the ground should be cleared, and got ready for winter crops of different kinds.

Destroy weeds when they are young in every part of the garden. Endeavour never to suffer them to come into seed. If they are permitted to bring their seeds to maturity, they will shake out on the ground, and it will not be easy to get them out of it again. The seeds of different kinds of weeds will lie in the ground several years, some of them growing every year, as they happen to get into that part of the ground near the surface, which is favourable for causing them to vegetate.

If toward the end of the month your early crops of onions are come to their full growth and their stems dying, they should be pulled up. Spread them in the sun till their stalks be dry and perfectly withered; then cut them and the roots off, and lay the bulbs up in a dry place for winter use.

Plant brussels sprouts, jerusalem kail, green and red borecole. Set them in good ground, about thirty inches or three feet row from row, and about eighteen or twenty inches plant from plant in the rows. Give them water in dry weather.

ther. If you have no ground clear for them, you may plant them between the rows of french beans.

You may transplant into beds, rooted slips of sage, balm, pennyroyal, winter savory, hyssop. &c. Give them water in dry weather, till you perceive they have made roots by their beginning to grow.

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## On the FRUIT-GARDEN,

### *For July.*

Look over the peach and nectarine trees frequently; cut out any superfluous or luxuriant useless shoots, which they may have made, nail up straight to the wall all shoots reserved for bearing wood next year. If the leaves are crouded, thin out some of them, so that the fruit may not be shaded too much.

In case there is any appearance of mildew, rub the affected part of the shoots with sulphur, and strew

strew some on the affected leaves. If the weather prove dry, and dew do not fall plentifully in the night to moisten the leaves of the trees, wash them with the engine occasionally in an afternoon, early enough that they may be nearly dry before sunset.

If there be any curled or dead leaves on the trees, they should be nipped off; and any insects that are found on them, which can be destroyed by the hand, it should be done.

Hoe the borders, and rake them frequently, so that they may be kept perfectly clean, and free of weeds. If the weather be very dry the trees would be better to have water now and then poured on the border about their roots.

Examine the apricot trees, and if there are any foreright or other useless shoots on them, let them be cut off, and train in all shoots that you think may be wanted next season for a choice of bearing wood.

Pear, plum, or cherry trees against walls should also be examined, and any shoots cut off that are weakening the trees or shading the fruit. Nail in fast to the wall any branches or young shoots that require it, and let the trees be kept in a neat orderly condition at all times.

Grape vines against walls will require looking over often. Stop the shoots before the bunches of fruit: train up those shoots carefully that are reserved

reserved for bearing next year. If any of the strong shoots are displaced by the winds, let them be fastened up, and keep the trees moderately thin of leaves, so that the rays of the sun and the air may have free access among the shoots and bunches.

Fig trees against walls ought to be attended to; train up to the wall as many young shoots in every part of the trees as you think there is need of, for next season. Thin the leaves of them, that the sun may shine on the fruit some parts of the day, and suffer not the shoots or leaves to lie close to the fruit.

Search about the borders, and fruit trees of all kinds, in dewy mornings, and after rains, for snails and slugs and other sorts of insects which eat the leaves and fruit.

Earwigs are very hurtful to peaches, nectarines, and apricots, when they begin to get ripe. To destroy them, take the hollow stalks of beans after they have done bearing, cut them in pieces about a foot long, stick them here and there among the branches of the trees, and every morning take them out, and blow the earwigs or other insects that may take shelter in them, into a pot or a pail of water. As you empty each stalk, stick it among the branches of the trees again.

If the buds will come clean from the cuttings, and

and the bark rise kindly from the stocks, you may now bud trees of any kind that can readily be improved by that method.

Fruit trees on walls or espaliers which do not produce good fruit, may be budded in every part of them, with such sorts as you like. In the following spring, cut off the shoots before them, and as they are able to bear it, train them in regularly, and the succeeding year you will probably have such fruit from them as you desire.

Take care and keep those kinds of strawberries that are in blossom or in fruit constantly watered in dry weather.

This is a good time to pot strawberry plants for forcing next season. Take good strong healthy plants, trim their leaves, and cut off that part of the root which has black fibres on it. Plant them in good loamy earth, in pots, four or five plants in each pot, or, if your pots are small, three plants in each; plunge them in old tan, or in some sheltered border, and give them water as often as they want it.

When the fruit is perfectly ripe, save the seeds of strawberries, gooseberries, currants, and raspberries. This is to be done by bruising the fruit and washing out the pulp from the seeds in clean water. When the seed of each sort is separated from the pulp, spread it out in a dry airy room, till it is perfectly dry, and then put it

it up in paper till you want to sow it in the spring.

In dry weather, hoe and rake the ground every where, between gooseberry, currant, raspberry, and other fruit trees, and clean the strawberry beds, and all other parts of the fruit-garden of weeds, and all kinds of litter.

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## On the PLEASURE or FLOWER GARDEN,

*For July.*

Care must be taken of the carnations. They will now be in blossom or coming into blossom: tie the flower stalks to straight sticks, and give the flowers all the assistance you can, to make them blow pretty. If the flower is likely to burst out at one side of the flower cup, tie a small bit of bass round it, and open the flower cup in parts where it appears bound, with a sharp pointed knife.

There are many varieties of carnations which

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are named by florists: there are what is called piquettes, the flowers of which have a white ground, and are spotted with scarlet, purple, red, or other colours; another sort is called painted ladies, these have their petals of a purple or red colour, only on the upper side, and white underneath. There are also whole blowers, which consist of bizards and flakes; the bizards are those having stripes or variegations, of three or four colours: the flakes are of two colours only. Of all the sorts, several varieties are raised from seeds. To have the flowers as large as possible, florists cut off all the side shoots from the stems, and allow only two or three of the principal top pods for blowing, and when the bursting carnations are intended: to produce spreading large flowers, they prepare circular card papers, about three or four inches diameter, with a hole in the centre, to receive the lower part of the petals, just below the notches of the cup, for the admission of which a slit is cut for that purpose to the hole, so that the upper part of the petals may be expanded all round the card to their greatest extension, beginning at the lowest next to the card. The whole blowers need not so much attention: the only assistance they require, is, when the flower cup is likely to burst by the multiplicity of petals endeavouring to expand, that

that a small piece of bass or thread be tied round the flower cup.

Give the carnation pots frequent gentle waterings, which will enable them to blow fine, and the layers take root kindly. If the carnations were not all laid last month, it may be done any time in this month, when the shoots are long enough for that purpose. For the method, look back to the directions given last month.

Those who do not choose to be at much labour with their carnations, may just only tie up the flower stalks, lay down the shoots when they are fit, and supply them in dry weather, with as much water as they require. By this management they will blow well enough, though not so large or fine as when few pods are left on; and they will keep in blossom a long time without being shaded, as the upper pods begin to blow two or three weeks before the lower ones begin to open.

Cuttings of double sweetwilliams, pinks, rockets, &c. may still be raised by cuttings: for the method see last month.

Transplant now into beds or flower borders, hollyhocks, french honeysuckles, scarlet lychnis, columbines, sweetwilliams, wallflowers, pinks, stocks, and other seedling, perennial, and biennial flower plants. When you plant them out, if it be dry weather, give them water.

If the weather be warm and dry, you may remove into the open air, some of the pots of cockscombs, eggplants, balsams, tricolors, &c. tie them to sticks to keep them from being broken, and give them gentle waterings as they need it.

Late sown annual flower plants, if any remain in the seedling beds, should be planted out in patches in the flower borders. If the weather be dry, water them now and then till they begin to grow.

Pinks and carnations from seeds sown last year will be in blossom about this time, they should therefore be looked over, and all those not worth preserving may be pulled up. Those with variegated or double striped flowers ought to be particularly examined, and marked, that they may be known from others, and if there are any shoots on them that are fit they should be laid.

Seedlings of carnations, pinks, &c. which were transplanted last month, should be weeded and watered in dry weather.

Auriculas and polyanthus sown in the autumn or the spring, should now, if they are fit, be transplanted into boxes or nursery beds; a shady situation is best for them. Plant them three or four inches apart in light mould, and give them light waterings: as the auriculas are rather

rather tender, they had best be planted in boxes or pots, and then they can be removed under cover when requisite.

Choice auricula plants in pots, should now be paid attention to. Take off all decayed leaves which appear on them. Keep them in a shady situation and clear of weeds, and give them gentle waterings in dry weather, when they begin to get dry.

You may now, if the bark rise well, bud flowering trees and shrubs, such as scarlet, horse chesnut, variegated hollies, jasmines, moss roses, &c.

If bulbous flower roots of any sort remain in the ground, they may, in this month, be taken up. After they are taken up, lay them in a dry airy place, till they are sufficiently hardened, then put them up in paper bags or drawers, till the time of planting.

Crown imperials, red lilies, fritillarias, mortagons, bulbous irises, &c. require not to lie long out of the ground.

Gather flower seeds that are ripe, and cut down decayed flower stems, whenever they become so, and pull up all annual flowers which have done blowing.

Edgings of box, thyme, lavender, suthernwood, &c. should now be cut. You may also clip

clip hedges of all sorts, such as beech, lime, hawthorn, privet, &c.

Put stakes to any flowering plants which are likely to be broken down by the winds, and if the branches of any shrubs are leaning down, either tie them up or cut them off; and let the running shoots of honeysuckles, and other plants formed into flowering heads be cut off as low as the head, or taken entirely out, as you think most proper.

In dry weather do not neglect to water all trees and shrubs which were planted in the spring, and those planted in autumn ought likewise to be examined; for if the weather be hot and dry, they will be better of water.

Keep your gravel walks free of weeds, and roll them now and then to make them smooth; cut edgings round the flower borders and sides of the gravel walks, and mow and sweep your grass walks and lawns often enough to keep them clean and in good order.

Weed all your beds of flowers, and hoe and rake the flower borders as often as they require to keep them neat, and free of every kind of litter.

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On

## On the NURSERY-GARDEN,

*For July.*

If it was not done last month, you may now lay the hardiest sorts of American plants, and those from other climates which are able to bear our winters without shelter. When the young shoots are grown eight or nine inches long, let the hard wood at the bottom of each shoot to be laid, be immediately below a joint slit a little upwards, lay these about one third into the ground, peg them down and turn their ends upwards putting the mould close to them, and forming a kind of bason to make the water stay about them, to moisten them and the mother plant in dry weather. The best earth for laying them in, is a light black earth taken from marsh or heathy commons.

If any beds of seedling evergreen trees or shrubs stand too thick, some of them may be drawn out and planted into beds. Plant them into beds about three feet wide, and set them in the beds about three inches plant from plant: give

give them water, and shade them in days when the sun shines hot.

This month is reckoned the principal season for budding fruit trees, curious flowering trees, and shrubs of various sorts. It, however, depends on the moistness or dryness of the season whether this or the succeeding month will be the most preferable, for if the weather has been very dry, perhaps the bark may not rise freely from the wood.

Peaches, nectarines, and apricots are most commonly budded on plum stocks, which seem to be best adapted for them. They should be raised from seeds, and transplanted once: their size should be from half an inch to an inch diameter in the place where the bud is to be inserted.

Plums are budded on plum stocks, pears upon pear and quince stocks, and cherries upon cherry stocks, raised from the stones of the fruit.

Stocks for dwarfs are generally fit to bud on the third year after sowing the seeds; but when they are for standards, to bud at five or six feet high they require longer time.

To bud trees the following method is adopted: get a budding knife which has a thin blade, with a sharp ivory handle, the use of which is to prepare the buds, and the handle to raise the bark

bark of the stocks, to admit the insertion of the buds. Have some good strong bass in readiness, and good sound cuttings, taken from such trees as you intend to propagate. Let them be such as evidently have fine short buds on them; then with the knife make a cross cut in the bark of the stock, and from the middle of this cross cut, make another downward, at least two inches in length, so that the two cuts together may be in the form of a T; then take one of your shoots, and beginning at the lower end of it, cut off the leaves, leaving the stalks of them, then about an inch below the bud or eye, force your knife into the wood and draw it under the bud, an inch or thereabout above it, and cut the piece off across the shoot, then immediately let that part of the wood, which was cut off with the bud, be separated from it, which may readily be done with your knife, placing the point of it between the bark and wood at one end, and holding the bark with your other hand, pull off the woody part which will readily come from the bark, if the shoot from which it was cut be in a sappy state, then quickly look at the inside of the bud to know if the eye be left; if there is no hole the bud is left, and should be immediately inserted into the stock, observing for the reception of it to raise with the handle of your knife the bark of the stock downwards on

on each side from the cross cut, and thrust the bud in between the bark and the wood, applying it as close as possible. As soon as the bud is put in its place, tie it round securely with bass mat, beginning a little below the cut, and proceeding upwards till you are above the cross cut, taking care to miss the eye of the bud, just that it may be seen through the bandage of bass.

In separating the wood from the bud, if the eye or rudiment of the shoot be hurt, which may be known by its appearing hollow in the inside, it should be cast away, and another taken off from the cutting. About three weeks or a month after the stocks have been budded, they should be examined, when such as have united will appear fresh and full. Those that have not taken will appear blackish and decayed, and the stocks may again be budded in another place. When the buds are fairly united to the stock, the bandages may be taken off, which is all that is required till next spring.

Examine the trees which were grafted in the spring, and also those budded last summer, and take off any shoots that may have arisen from the stocks.

Fruit trees in the open ground, of the dwarf sort, for training on walls or espaliers, whether peach, nectarine, plum, cherry, apricot, or pear, may, with the help of stakes, be tied in a direction

tion for training, which will put them forwarder than if they were left to ramble as nature leads them.

You may now bud rose acacias, scarlet horse chesnuts, striped hollies, jasmines, moss roses, and several other kinds of flowering shrubs, not easily propagated by layers.

Weed your seed beds and beds of layers and cuttings, whenever the weeds are so long that you can easily pull them out. Let every part of the ground between the rows of trees and shrubs be hoed and raked, before the weeds perfect their seeds.

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THE

THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES,

*For August.*

THE pine apples will now, if they are in a good state, be ripe, and ripening fast one after another; but it sometimes happens that too many become ripe together, if that at any time be the case, set the pots out of the house with the fruit on them into an airy cool dry shade, and the fruit will keep a fortnight, or longer if it be set out before it is full ripe. The plants while in this situation should have no water given them: and it may be necessary sometimes, in order to have a succession, or constant supply of

of fruit for a long time, to set some of them out green, into a cooler place, to keep them back; and when you wish to ripen them, take them into the house, and plunge them in the tan again.

If you have any plants among your succession pines, which have showed fruit, as your fruiting plants are ripe, set out the pots, and take those in fruit from among your succession plants to replace them.

Keep the tan-bed in your fruiting-house still in good order, and those plants which have green fruit on them should be watered moderately as often as they require it. Let the house be always sweet and clean. Sprinkle in hot weather the paths and flues occasionally with clear water; but take care not to suffer the air to be so damp as to stagnate about the plants, if it do the leaves of them will appear dirty and greasy. This is caused by damp air, when there is not heat enough to rarify it.

If you wish to have cucumbers in your hothouses about Christmas, get some good boxes about twenty inches or two feet deep, with a few holes in the bottoms of them, to let the water pass through the mould freely: set them on bricks on the back flues of your house, or on strong shelves, fill them within two inches of the top with

with vegetable or other rich light mould, and and set your plants in it about the middle of the month. Give them water when they require it, and you should have a trellis prepared for them to run up upon.

If you wish to endeavour to have french beans green all the year, you should now plant the seeds in pots of rich light earth, and set them into the hot-house on shelves or on the flues. Fill your pots nearly full of mould, after shaking it down that it do not sink much afterwards; then lay four or five good beans in a row on the surface of it, and with your finger push them into the earth just deep enough to give them moisture to vegetate: give them a little water when they begin to come up.

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*Height*

*Height of the Thermometer in the Fruiting-house, for August.*

| | D. | M. | N. | E. | | D. | M. | N. | E. |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 74 | 95 | 75 | | 17 | 68 | 90 | 72 |
| | 2 | 72 | 88 | 76 | | 18 | 69 | 90 | 72 |
| | 3 | 74 | 95 | 76 | | 19 | 69 | 97 | 74 |
| Watered | 4 | 71 | 90 | 78 | | 20 | 64 | 97 | 72 |
| | 5 | 71 | 94 | 78 | Watered | 21 | 64 | 98 | 74 |
| | 6 | 73 | 90 | 74 | | 22 | 67 | 76 | 72 |
| | 7 | 74 | 87 | 74 | | 23 | 66 | 95 | 74 |
| | 8 | 71 | 74 | 69 | | 24 | 71 | 98 | 74 |
| | 9 | 71 | 94 | 73 | | 25 | 73 | 95 | 70 |
| Watered | 10 | 71 | 96 | 75 | Watered | 26 | 70 | 100 | 76 |
| | 11 | 72 | 94 | 74 | | 27 | 72 | 80 | 72 |
| | 12 | 70 | 94 | 74 | | 28 | 71 | 92 | 74 |
| | 13 | 70 | 94 | 74 | | 29 | 71 | 96 | 73 |
| | 14 | 70 | 95 | 75 | | 30 | 68 | 84 | 72 |
| | 15 | 70 | 95 | 70 | Watered | 31 | 67 | 94 | 73 |
| Watered | 16 | 67 | 95 | 72 | | | | | |

If your succession plants are large, and have filled their pots with roots, so that the balls of mould will turn out of them perfectly whole, you should now shift them into large enough pots for them to fruit in.

Previously you should examine well the state of your bed, and if new tan be required, it should be in readiness. If the flues of your house are in want of cleaning or repairing, or if the

the walls of it require white washing, or the wood in the inside painting, set your plants out into some dry place or house two or three days till you get these necessary repairs completed.

As soon as the house is ready and the tan-bed has received a recruitment of new bark, proceed to shift the plants. Having pots and mould, and other preparations made, take the plants one after another, scrape the mould and other rubbish off the tops of them, and pull off as many of the bottom leaves as you think necessary; but do not take them off farther up than the stem is well ripened ready to put forth roots. See that the holes in the bottoms of your pots be open, that the water may have a free passage through them. Put some mould into the bottoms of the pots, and turn the plants carefully out with their balls whole, place them in the fresh pots, and fill up the vacancy with mould, covering the balls with it up to the under leaves of the plants, leaving about half an inch vacancy over the surface to hold water.

Plunge the pots in the tan nearly to their rims, and when the heat comes up in the tan-bed, give the mould in the pots about the roots of the plants a gentle watering.

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On

## *On the best Method of preparing Earth to make the Pine Apple Plant grow quickly.*

Beginning at one side of the dwelling-house, which is large, there is an arched drain carried under it, and passed from thence about a furlong, at the termination of which I made a reservoir, about twenty-five feet in diameter. Through this drain a constant small stream of water ran, which issued from a leaden pipe of an inch bore. This drain in its course received all the refuse from the dwelling-house and offices. That from the water closet, the scullery, the laundry, the dairy, the brewhouse, and the necessaries, was carried into the main drain through smaller drains; and the rains that fell on the dwelling-house and offices washed down the pigeon's dung and soot from the roofs of them, carrying these into the chief drain also, and occasionally I let the water rush from a large cis-

tern, placed not far from the source of the main drain, which carried every thing before it into the reservoir. Near the reservoir, I had a conveniency made, by which I could turn the water past it at pleasure, and in two weeks so dry it, that the mud might be scooped out of it. This I did in the summer, and spread it out thin on the ground till it got perfectly dry, then I had it shovelled up, and laid in a heap for ten or twelve months, giving it in the course of that time several turnings, and when I wanted to use it, I had it run through a coarse sieve.

This process reduced a composition of excrementitious refuse into a sandy, light, rich soil, in which pine apple plants grew, with the assistance of the heat, water, and air I gave them, as quick perhaps as it is possible for the art of man to make them. However, I found it best, particularly for the fruiting plants, to mix it well with good fresh loamy earth.

I have tried pine apple plants in different kinds of earth, and in various compositions of manure and earth mixed together; and I believe good loamy earth, not of a binding nature, but rather sandy, of a yellowish colour, mixed with sheep's dung, to be the best adapted for the culture of the pine apple plant, and most preferable for producing fine flavoured fruit.

The way to prepare it is the following: take hurdles

hurdles and inclose a piece of ground, in depth not less than six inches, answering nearly to the above description; fold sheep on it till it be sufficiently manured, then dig up the surface about half a foot deep, lay it in a ridge not too thick; let it lie about a year to melioate, by the influence of the sun, rain, frost, and snow, during which period it should be turned several times, broken small, and no weeds suffered to grow on it. In winter, if it be spread so that the frost may freeze every bit of it, it will do it good. Pass it through a sieve before you use it.

If you have conveniency, you should prepare some of this kind of mould for your pine plants every year, by so doing you will have a constant supply of excellent earth, which will be found suitable not only for the culture of the pine apple, but for melons, peach, nectarine, orange, and lemon trees, &c.

If you have a quantity of crowns and suckers ready, let them be planted, tear off a few of the lowermost short leaves, to let the roots spring out of the stem of the plant easily; then put them in pots answerable to the different sizes of the plants, plunge them in a bed of warm tan, and give them a strong heat, and shade them two or three hours in the middle of hot days, till they begin to grow; then give them a little

water and air to make them grow strong and short leaved.

Take care of all your succession plants not shifted this month. See that there be a good heat in the tan, and give them water as often as they require it. Suffer no weeds to grow in the earth in the pots, and give them a sufficiency of air at all times when it can be done without cooling the air too much.

Examine well the state of your tan-beds that you may foresee what preparation of tan it is necessary to make for the ensuing month.

Grape vines in the hot-houses, if the crop is over, and they be managed in the manner that all the old wood is to be cut out every year, to strengthen the long young shoots trained up for producing the crop the ensuing season, the branches which bore the crop this year may now be cut entirely off. Cut them out among the young wood, piece after piece, that you do not injure that which you mean to leave, and afterwards tie up to the rafters neatly the reserve of bearing wood.

Any exotic plants that happen to be in the houses you may shift, if they require it. Keep their straggling branches pruned in, let no weeds grow in the pots, and water them when they require it.

Remember in watering your pine plants that the

the black antigua and some other large growing sorts do not require so much water as the queen and ripley sorts do.

## On the GREEN-HOUSE,

*For August.*

The grapes in the green-house will now be swelling fast. Stop the shoots before the bunches, tie up the shoots and bunches that want it, and keep the leaves moderately thin, that the rays of the sun and the air may have free access among them. If the bunches are too crouded with berries, thin out some of the smallest of them carefully with a pair of sharp pointed scissars. Keep the house clean and sweet, and admit air whenever you can do it, without making it too cold.

Green-house plants that were not shifted in the former months may be shifted in this, if they require it. Any long straggling shoots should be shortened or cut off, and the plants, by tying up the shoots neatly, kept in good order. In shifting,

shifting, in general, the matted part of the ball ought to be taken off with a sharp knife, and the plants put in pots suitable to their size. In the fresh pots there thould be just room enough for earth to go round the balls, and cover them over about an inch deep. Give them water as soon as they are shifted, and gentle waterings afterwards when they need them.

If suckers of aloes and other succulent plants have grown large enough for the purpose, you may now plant them in small pots one in each.

Cuttings of all kinds of green-house plants which are well struck and growing, may also be planted out in small pots. Set them in a shady place till they have recovered themselves, and give them gentle waterings occasionally.

Any orange, lemon, citron, or jasmine trees, that were inarched in the spring, if they are well united, may now be cut off from the parent plant. By placing stakes to them, they should be tied up, that they may not be broken by accidents.

The beginning of this month is a good time to bud orange, lemon, citron, and any other hard wooded green-house plants which you may choose to propagate in that way. If any of them that were budded in July have failed, it may now be repeated on them. By budding you

you may have, for curiosity, growing on one tree, oranges, lemons, and citrons.

Keep all your green-house plants free of weeds, and take the dead leaves off as they appear; and if the weather is warm and dry, they will need water frequently.

Green-house plants that have stood in one place for any considerable length of time, should be removed, and the roots that have run through the pots cut from them: were they suffered to stand in one place, all the summer roots would probably run far into the ground, and derive a good deal of nourishment from it, and when pulled up and set in the green-house before winter they would flag, and perhaps lose too many of their leaves.

## On the FORCING-HOUSES,

*For August.*

In your early forced grape-house the fruit will have been over probably a month ago, and your glasses laid aside or left open on the house day

day and night. If it is desired to have grapes early in the spring, you may in this month prune your vines, as the wood will be well ripened, and tie them regularly to the trellis, in that manner to which your method of pruning is best adapted. Put your house in order, and if it be necessary to dig in manure about the roots and stems of the vines, let it be done. If your border be dry, give it a good watering, and if with dung-water, at this time it will help to enrich it. When this is done, draw on your glasses, and keep the air in the house to a moderate degree of heat, and your vines will afterwards shoot out, and if they are in a fit state for bearing, they will shew fruit.

If you have not plenty of vines in other houses to succeed these, it would not be advisable to begin to force at this season of the year, for there are several things that might reasonably be urged against the probability of the success of this attempt to ripen grapes early in the spring; but it may succeed, and therefore it is worth giving it a trial. By custom the vines can be brought, as it were naturally, to shoot forth in the autumn, and their fruit may be set before the shortest days, the greatest art will then, after that, be to preserve them through the dead of winter in a lively growing state. This can be done only by much attention

in

in making gentle fires, and admitting an easy circulation of fresh air in the house every favourable opportunity.

In some of your houses the grapes will now be in perfection. Endeavour to keep them from the birds and wasps: to effect this, fix nets on the parts of the house where you admit air; and fix them in such a way as the sashes will slide backwards and forwards, either in the inside or outside of the nets. The nets should be as thick in the meshes as that a wasp cannot fly through them.

Continue as your vines grow to stop them before the fruit. Tie up the bunches and shoots when they require it, and keep them moderately thin of leaves.

The peaches and nectarines in your latest forcing-house will now be ripe. If they fall down before you gather them, make some contrivance to prevent them from bruising: either lay down something soft on the border or hang up nets for them to fall into. Tie up any shoots that may want tying, and give the house all the air you can, only prevent the rain from falling on the ripe fruit.

Examine your first forced peach house, if the weather prove dry, probably the border will be better of water, and if mildew appear on the trees, endeavour to stop its progress by sulphur

or

or by any better method, if you can find one out.

Examine the border of your cherry-house, and if it be getting dry, water it, and take care that the branches of the trees do not rub one against the other in windy weather, so as to hurt any of them.

The figs in your fig-house will now be ripe, and probably many of them gathered; let those that remain be covered to keep rains from them, and give the house as much air as you can.

In your forcing rose and flower-house you will probably now have cuttings and seedlings of annual flower exotics and other plants; let them be weeded, watered, and tied up, when they want it.

If the weather prove dry, this is a good time to paint any of your hot-houses or others which stand in need of it.

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On

## On the FORCING-FRAMES,

*For August.*

In this month the fruit of the melon plant will be in the highest perfection, and the beds, frames, and plants, will demand daily attendance.

If you have linings at your beds, not covered with earth, as the manner of some is to let the roots out into, let them be raised, if they are not very warm, as high as the mould in which the plants grow. Lay your melons as they begin to swell on tiles or stones to keep them dry, and move the older ones sometimes to prevent them from getting whitish or flat on the under side.

Cut out of the melon frames all superfluous or decaying shoots. Stop the shoots a joint or two before the fruit, and also cut off the ends of the long running shoots immediately before a showing fruit, if there is a leading shoot coming out by the side of it; for you ought to remember, always in pruning melons, that a fruit will not swell well except there be a growing shoot before it, and this shoot, which is called a leader, because it leads or draws the sap from the roots

to

to and past the fruit, should be stopped before a joint that will, if the plant is in good health, sprout out again.

Do not let your plants get too full of leaves, and cut off the oldest and worst leaves first.

If the weather is warm and dry, the melons will probably require water twice a week besides sprinklings; if the weather is wet or cloudy they will not require it so often.

Look into your melons in the morning, and if there is a dew on them standing like little beads round the edges of the young leaves, it is a good sign; but if there is no dew on them, in the form I have described, they are not in a very prosperous condition. The air in the frames is not sweet: they either want water, or sprinklings of water, in the afternoon, or else the heat of the air in the frames is too great in the night. In hot weather melons are better to have air left at them all night, and in very warm weather to take the glasses entirely off in the evening, and put them on again in the morning: by this means the plants will get a refreshment from the dew in the night.

It has been a matter of studious inquiry among philosophers whether dew on vegetables fall on them from the atmosphere or rise on them out of the earth, and I believe on this subject they are not agreed in opinion.

Out

Out of the earth and all kinds of vegetables, there is a continual evaporation of moisture issuing, and in its ascension, according to the temperature of the atmosphere, more or less of it lodges on the herbage and plants of all sorts. The air being constantly mixed with moist vapour, according to the state and density or weight of the atmosphere, more or less of it gravitates to the earth, and hangs on vegetables; it would therefore seem that dew is conjointly, if not alternately, the production of the ascent and descent of moisture.

Melons that were planted last month will perhaps now require gentle linings, and you should consider, that you may make preparation, what quantity of dung you will be in want of the ensuing month.

You will soon want to be making mushroom beds. In the latter end of this month or beginning of next, the linings of melon beds, if there be a little heat in them, and the dung not too wet, is very fit for that purpose.

Get dung put together in a heap to ferment, to make a mushroom bed. If it is rank new dung it will take a long time to prepare, for mushrooms do not require a great heat, but a steady, sweet warmth; it is best therefore to mix new and old dung together, or allow the new longer time to prepare.

On

## On the KITCHEN-GARDEN,

*For August.*

Celery will require to be earthed up in the beginning of this month. Let two men take spades, and go opposite one another, one on each side of the row, and break down the earth fine, and put it close to the leaves of the plants. This should be repeated every week, till the plants are blanched high enough to be fit to take up for use.

Plant two or three different times in the month more celery plants: for the method see last month's directions. If the weather prove dry, they will require frequent waterings. Celery is a plant that loves much moisture and good ground to grow in. If you have any plants left in the seed beds, you may prick them out about the beginning of the month, they will do to plant in trenches next month, to come in late in the spring.

Sow corn sallad or lamb lettuce in this month. It is a hardy plant, which will stand the winter and come in for sallad in the spring.

Sow

Sow chervil, scurvy grass, angelica, fennel, &c. They may be sown in drills where they can easily be kept clear of weeds.

Sow white mustard, cress, turnip, and rape seed once a week for small sallading, it will do best now in small drills on a shady border.

Sow every ten days the seeds of salmon, short top, and other kinds of radishes. Sow them on good ground, cover the seeds well from the birds, and give them water often in dry weather.

Plant out a full crop of endive: plant it in rows a foot apart, and about eight inches plant from plant in the rows. You may make plantations of it three different times this month. Give it water in dry weather till it begin to grow. There are three sorts of endive, the batavian, the green curled, and the white. Tie up forward endive for blanching.

Sow two or three times this month different kinds of lettuce: sow those which you think are the best, or you may sow all the sorts.

To have a constant supply of good lettuce, plant some every week, and keep them well watered in dry weather, or else they will be tough, and run to seed perhaps before they are blanched white.

In the beginning of the month sow carrot seed. If the ground is not a clayey soil, tread them in, and smooth it with a rake afterwards.

You

You had best sow some more carrot seed about the middle or twentieth of the month. Sow them in beds three feet wide for the conveniency of weeding.

In the first or second week of the month, get a piece of good rich deep ground in readiness, by dunging it if it want, and digging it deep for a crop of winter and spring spinach.

When your ground is dug, if it be a light soil, which is best for spinach, tread it with your feet all over, then draw shallow drills, two feet apart, with your hoe flatwise; scatter the seeds of prickly spinach in the drills, and cover them two inches deep, and make the ground smooth with a rake. You should, before you fill up the drills, set a little stick up at each end of them, that, in case of dry weather, you may stretch a line between them, which will show you where the spinach is sown, that you may water the rows if they require it. If the ground was dry on the surface, when you sowed the seed, you should have had the drills watered before they were covered. You may sow again a few rows about the twentieth of the month.

About the tenth and twentieth of the month, you should sow cabbage seeds, to raise plants to plant out in winter and early in the spring: the battersea, yorkshire, and sugarloaf kinds are the best. The forwardest of them will probably do

do to cut for coleworts in winter, and early in the spring. Sow them in beds on good rich ground, and if it be not very heavy soil, tread them in, and smooth the ground afterwards. If the weather prove dry, you must water them, and endeavour to prevent the birds from eating them. This may be done by laying bushes on the beds, till the seeds come up; or, which is better, stick feathers into packthread, and tie it to stakes, above the beds near the ground; these, by the influence of the air, will keep in motion, which will frighten the little animals.

In this month, the whole cabbage tribe are liable to be much injured by the caterpillar; the best way is to set boys or women to pick them off every day: they may be put into a garden-pot with lime in the bottom of it, and destroy them as soon as possible.

At two or three different times this month, plant out the several kinds of brocoli. For this purpose, chuse an open spot of rich deep ground; draw shallow drills, about thirty inches apart, and set the plants, about sixteen or eighteen inches asunder, in the rows; if the weather prove dry, give them water occasionally, till you perceive them begin to grow.

Destroy the weeds among the former planted crops of brocoli; and if the weather be wet, that they do not die, you should rake them off.

 When

When they have grown stout plants, draw some earth to the stems of them.

About the middle of the month, and also towards the latter end of it, sow the seeds of cauliflower to stand the winter; sow them on a little bed of very rich earth, rake the seeds in neatly, and clap the earth of the bed down with your spade flatwise; give them gentle waterings in dry weather, and after they come up, keep them free of weeds.

Plant out, in rich ground, stout cauliflower plants, about the beginning, and again about the middle of the month; set them nearly thirty inches row from row, and about sixteen inches apart, plant from plant; put them in shallow drills, and give them water in dry weather. From these plantations, you will, perhaps, have cauliflowers in October, November, and December.

Sow the seeds of turnip two or three times this month, tread or roll the seeds in, and if the weather prove dry, they would be better to be watered. Hoe and thin the former sown crops of turnips. If insects begin to appear on the leaves of your turnips, sow lime or soot over them.

If it was not done the latter end of last month, dig some good ground the beginning of this month, to sow onions for winter and spring use; it should be rich ground, on which onions have not

not grown the last two years. Divide it into beds three feet broad, with alleys of about sixteen inches wide; sow the seeds, and if the ground be light, tread them in, and smooth it afterwards with a rake, and give them water, if the weather prove dry, to cause the seeds to vegetate and come up. When they are sprung up, keep them perfectly free of weeds. Some winters destroy the plants of common onions; therefore you should sow the seeds of the Welch onion, this sort endures the hardest winters.

The beds of seedling asparagus ought to be kept perfectly clear of weeds. The old beds also, and the alleys between them, should be weeded and hoed occasionally, to prevent the weeds from ripening their seeds.

The stems of those artichokes that have done bearing, should be cut down, and the ground among the plants hoed, and kept free of weeds.

Cardoons in trenches should be earthed up to blanch; let one person keep the leaves together, and another put the earth, being first broken small, round about close to them; repeat this as often as they appear to want it. Hoe the ridges in each side of them, to destroy the weeds.

If your crops of onions are swelled to their full size, and their tops decaying, pull them up, and spread them out to dry and harden. When

the stems of them become dead, gather them up in a dry day, cut off the roots, and long withered stems, and lay them up in a dry room, for winter and spring use.

If you have saved any kinds of superior esculent vegetables to produce seed, gather them before they are over ripe, to prevent the birds from eating them, and before they shake out.

You may still plant out rooted slips, cuttings, or seedling plants of aromatic sweet herbs, such as hyssop, sage, savory, marjoram, thyme, lavender, &c.

If it was not done last month, take up the roots of shallots, garlic, and rocambole; they should be dried, and hung up in bunches in a dry room, for winter and spring use.

Plant out for spring use, green and red borecole, brussels sprouts, jerusalem kail, &c.; plant them in rows, from two feet to thirty inches asunder, and set them about sixteen inches plant from plant in the rows; give them water to settle the earth about their roots, and more occasionally till they begin to grow,

Cut all sorts of herbs, which you wish to dry, in winter, such as sage, balm, pennyroyal, mint, marjoram, tansey, wormwood, &c.; they should be cut when they are in full blossom, and in a dry day. Lay them in a shady dry place, and when

when they are in a state fit to keep, put each sort by themselves, and lay them up in a dry room till they are wanted.

Take up all the stalks of peas and beans that have done bearing, clear the ground of weeds, and prepare it, by dunging and digging, for the reception of other crops.

Hoe up the weeds every where, and if the weather is not dry to kill them, rake them off. Draw earth to all sorts of cabbages, brocoli, borecole, &c.

In the beginning of the month, get a heap of hot dung in preparation for a mushroom bed, and be looking about in old dunghills for mushroom spawn, if you have not got plenty in possession.

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## On the FRUIT GARDEN,

*For August.*

The grapes on the vines against south walls will now be swelling fast; look over them frequently, and stop the shoots that require it; nail

nail any shoots to the wall that may be hanging from it, and thin the leaves, so that the sun may shine on the bunches, and on parts of the wall among them. If the shoots and leaves are so crouded, that the sun cannot warm the wall to which they are nailed, the grapes will not ripen well.

Peach and nectarine trees will now demand attention; go over them, and cut off all midsummer shoots that are crouding the trees, and nail in carefully those shoots that are reserved to choose bearing wood from among the ensuing spring. Suffer not the leaves to be too thick on the trees; the leaves ought not to lie on the fruit; the sun should have the opportunity of shining on the fruit at least some part of the day, unless you wish to keep it back.

Examine the trees minutely, and if the mildew make its appearance, rub the affected parts of the shoots with sulphur, and dust the infected leaves with it.

If the weather be dry and warm, and the fruit not begun to ripen, you may continue to wash the peach and nectarine trees with clean water; and if it is not done already, cut the hollow stalks of beans about a foot long, and stick them here and there among the branches, and take them down every morning; blow the insects which have taken shelter in them, into a pail, pot,

pot, or bottle of water, and stick the stalks up again till next morning.

To keep the wasps, and some other insects from the fruit, take fine clean wool, and spread a thin coat of it over the surface of the fruit. A handy careful person will cover many fruit in this way in one day.

Another method which I have found serviceable, to preserve from the wasps, peaches, nectarines, plums, pears, grapes, and other fruit, is to cover the trees with nets, letting them hang hollow from the trees; the wasps are afraid of being entangled in the nets. Wasps' nests should be destroyed early in the season, if possible; and wasps may be destroyed, by hanging up phials, in which are treacle, sugar, and beer mixed; but, by hanging them on the walls among the fruit, it entices the wasps to come among them.

Go over the fig-trees, and cut off superfluous shoots, and nail the remaining ones to the wall neatly, and nail them to parts where they do not touch the fruit; thin the leaves so, that the sun may shine on the fruit some times in the day.

By hoeing and raking, keep all your fruit-tree borders perfectly clear of weeds and all kind of litter.

If the weather be very dry, peach and nectarine trees, if your ground be light, would be better

better to be watered; trees planted in the spring will not do well without it.

Trees that were budded last month should be examined, and if the bandages pinch the stocks too much, they should be loosened. If any of the buds appear dead, bud the stock in another part, for this is a good time to bud trees if the bark rise well.

If you have peaches, nectarines, apricots, &c. on the walls, which are a kind you do not like, if they are healthy trees, you may put into the different shoots, all over them, buds of different trees, the fruit of which you prefer; and in the spring, if the buds have united, cut off the shoots before them, and train them to the wall in summer, and you will have a chance of having fruit on them the succeeding year.

Currants against walls or palings should now be covered with mats, which will preserve them to a late time of the year.

Stocks budded last year, and also those grafted in the spring, should be looked over, and if the shoots from the buds and graft are alive, cut off any shoots that may have arisen from the stocks.

Strawberry beds in bearing ought to be constantly watered in dry weather.

Plantations of strawberries may now be made; they will get strong and fit to bear fruit next season. Dig a spot of good loamy ground, tread it

it all over, and smooth it with a rake; mark out beds three feet wide, leaving two feet from bed to bed for alleys; make four rows in each bed one foot apart, and set the plants a foot apart in patches, three or four plants in each; put them firm in the ground, and keep them moist till they have made good roots. You may plant runners if they are strong, or old healthy plants, from beds that bear well, will do, by cutting the old black roots from them, and planting those only that have fresh strong fibres. It is a good method, which should not be neglected, to get a change of plants every two or three years; and by sowing seeds every year, new varieties, and some good sorts may happen to be obtained.

You may now plant strawberry plants for forcing next spring; they should be strong ones, and put in pots of any size you think most suitable for the places you have to force them in; they ought to be planted in good loamy earth, free of grubs and hurtful worms.

Examine all your wall and espalier plum, pear, apple, and cherry trees; see that the branches are all secured to their places, that they be not broken down by the weight of fruit or high winds, and cut off all superfluous or dead shoots that may happen to be on them.

Hoe and rake the ground between your gooseberry,

berry, currant, and raspberry bushes, and clear your strawberry beds, that have done bearing, of weeds, old leaves, and all kind of litter.

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## On the PLEASURE or FLOWER GARDEN,

*For August.*

When your carnations have done blowing, cut down their stems close to the plants, and as soon as the layers are sufficiently rooted, cut them from the mother plants, and plant them in good earth in small pots, three or four plants in each pot; give them water, and set them in a frame, shading them, in warm days, till they are able to bear the sun. Keep your carnation pots free of weeds, and water them gently when they begin to be dry.

This is a good time to plant slips of auricula and polyanthus plants; set the auriculas in small pots, and set them in a shady place till they begin to grow. The polyanthuses may be planted in pots, or in a shady border. Seedlings of this kind of plants may now be pricked out, and, if you

you choose, you may now sow the seeds of them; they will come up very well, if they are moistened with water in dry weather, though sometimes they will lie in the ground till the spring.

You may now propagate the different sorts of saxifrage; these are propagated by offsets, which arise from the sides of the plants. The common sorts may be planted in clumps in the borders: the pyramidal saxifrage should be planted in pots; it makes a beautiful appearance when in blossom.

Towards the latter end of the month, if the weather be not too dry, is a good time to increase most sorts of herbaceous plants: this is done by parting and slipping the roots. They may be planted in beds, or in the flower borders among the shrubs, planting the lowest growing ones next the edge. Before they are planted, the roots should be trimmed, and water given them immediately after planting, to settle the earth about their roots.

Support your annual flower plants in pots with stakes, and give them water when they require it.

Your perennial and herbaceous flower plants in pots, if they have done blowing, should have their flower stalks cut down; weed them, and give them water occasionally in dry weather.

If

If you have not carnations enough laid, the beginning of the month is not too late to lay them. You may also lay double sweetwilliams, and any other plants of like nature, that are commonly propagated by this method.

There is the tree carnation, which makes a beautiful appearance when in bloom. It is propagated by layers and cuttings, which may be done now, or earlier in the season.

You may now transplant bulbous-rooted plants, such as crown-imperials, martagon lilies, irises, fritillarias, pionies, &c.; they should be transplanted soon after the leaves are decayed, before they make fresh fibres.

In this month, you may sow the seeds of bulbous flowers. Sow them in boxes or pots, that they may be moved, at any time, to such situations as are thought most genial for them; cover them nearly an inch deep in good earth, and keep them moderately moist; perhaps they may not come up before the spring. It will be several years before some bulbous roots, raised from seed, come into a flowering state. It is, therefore, the curious only, that will wait patiently till that period. They are most readily propagated by offsets from the full grown bulbs.

Perennial and biennial seedling flower plants, such as sweetwilliams, columbines, wallflowers, scabiouses, stocks, &c. may now be planted out in

in clumps on the flower borders, or into beds, to be transplanted in the spring; endeavour to plant them in cloudy days, and if it do not rain, give them water.

Prick out mignonette in pots to stand the winter; put two or three plants in each pot, in light rich earth; give them water, and set them in a shady place, till they begin to grow. You should also sow the seeds of mignonette in pots, and when they are fit, you may transplant them into other pots, leaving two, three, or four, in each pot to blow. If they run up with one shoot, stop them, which will cause them to put forth several shoots near the surface of the pots.

When ripe, gather the seeds of flowers, spread them in a dry place in the sun till they be hardened, then rub them out, and put them up in boxes or paper, till the season in which you want to sow them.

Go over your shrubberies and flower borders, and head down, or cut out all straggling irregular branches; and those that interfere with one another, or are hurting low plants of any kind near them, should either be cut off, or tied up.

Pull up annual flowers that have done blowing, and cut down the decayed stalks of herbaceous plants. Hoe and rake the flower borders,

ders, and keep the grass edgings neat, and free of long grass.

If the weather prove dry, trees and shrubs planted in the spring, would be better of water; let the earth about their stems be formed so as to hold the water, till it sink in among the roots.

Clip box edgings, and all kinds of hedges, such as thorn, holly, hornbeam, lime, elm, elder, honeysuckle, beech, yew, syringo, &c.

Sweep your gravel walks, keep them free of weeds, and roll them occasionally to make them smooth.

Mow grass walks and lawns frequently; sweep the grass off them, and other litter, that they may appear neat at all times.

Look forward, and consider if you shall be in want of fresh earth from heaths and commons, for your American and other curious exotic plants, as this is a good time to get it brought to the parts where you may want to use it.

Ridge up and prepare beds of ground for planting ranunculus, tulips, jonquils, hyacinths, anemonies, narcissus, &c.

If wanted, you may likewise trench and prepare ground for planting trees, shrubs, and herbaceous plants of all sorts.

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On

## On the NURSERY-GARDEN,

*For August.*

If the weather be hot and dry, water the beds of seedling trees and shrubs, and keep them free of weeds; and those transplanted late in the spring would be better to be watered in dry weather.

Go over your trees and shrubs of all sorts, and cut off any shoots near the ground that may be robbing the upper parts of them of the necessary juices, and take out or shorten any strong growing shoots in your shrubs, so as to form them into regular neat heads, in the manner you think most proper.

Train out with stakes in the open ground such peach, nectarine, apricot, plum, pear, and apple trees, as you intend for walls and espaliers. This method will forward them in a way, that when they are planted where they are to remain, they will easily be brought into subjection, and trained in any form you may chuse to adopt.

In the beginning of this month, you may bud fruit trees of all sorts. If any of those that were budded last month, have failed, you may bud them in another part of the stock.

Look

Look over the stocks that have been budded about three weeks or a month; and if it is necessary, untie the bass, that the parts about the bud may not be pinched.

If you have any vacant pieces of ground, if it has not got too hard by the influence of the dry weather, you may trench them, to be in readiness to plant, when the time comes, with such plants as you think fit. The ground may be laid up in ridges that it may be meliorated with the influence of the sun and air.

In moist or cloudy weather, you may transplant, if your beds are too crouded, evergreen seedlings of any sort. After transplanting, they should be watered and shaded in hot days, till they have taken root. The beds also, out of which they were drawn, if the weather prove dry, would be better of water.

Look over the trees which were budded the former year, as well as those grafted in the spring, and cut off all shoots produced below or above the place where they were budded or grafted.

Let the ground between your trees be hoed and raked occasionally in dry days, to keep the weeds from injuring the trees: and by weeding, let your seedling beds be constantly clear of weeds.

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THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES,

*For September.*

THE greatest part of the pine-apple fruit will now be over; and if the number you have remaining to ripen be not many, you had best take them out of the fruiting-house, and put them into a small hot-house, or pit, in a gentle heat, that you may be able to prepare your fruiting-house for the reception of the large fruiting plants for next season.

Having your hot-house cleared of all sorts of plants, and a sufficient quantity of new tan in readiness, begin and carry all the exhausted tan out of the pit, leaving that only which has a heat in it, and is not quite rotten. The tan which

 you

you carry out, if it is worth it, may be sifted, and that which does not run through the sieve, carried into the house again; then fill up your pit with new tan, which is to be well mixed with the old left in the pit. The depth that it will require to be mixed, depends on the size of your pit, the strength of your tan, and the distance the flues are from the sides of the pit. Some have a cavity of from four to six inches only, between the sides of their tan-pit and the flues; when that is the case, so great a body of tan is not required, during the time fires are made, as if the flues were farther from the pit; but the tan is sooner exhausted, on account of the heat communicated to it from the flues. I prefer having paths round the tan-pits and the flues, at least two feet distant from the sides of them; the heat of the tan in the pits is then more steady and more durable, than when the flues are almost close to them.

I have found that when a tan-pit is about six feet wide, and three feet deep, filled with good new and old tan in nearly equal quantities, it is enough to raise and retain a sufficient heat for the growth of the pine-apple for about half a year, with the addition of as much new tan as will keep it up to its original height; at the expiration of which time, the exhausted part of the tan is to be taken out, and the bed recruited with

with new bark, as I have directed to be done in February or March.

Having mixed your old and new tan well together, and levelled the surface of the bed, tread it all over, and level it again; and if you find it too low, lay some fresh tan on the top of it to raise it to its proper height, and dig it with your tan forks twice over, to mix the new and old tan together as well as possible.

When this is done, clean out every part of your house thoroughly; get the flues cleared of soot and repaired, and likewise the glass mended, if any of it be broken, and the inside of the timber work of the house painted, or clean washed with soap and water, and all the walls and flues washed with lime and water.

When the house is ready, if your plants were shifted last month, plunge them in rows a sufficient distance apart; but you had best not plunge them to the rims, till you have ascertained what degree of heat rises in the bed: if they will bear being up to the rims, you can easily afterwards fill up the vacancies about them with tan well prepared. If your plants are not shifted, proceed to do it in the manner directed last month But if they have not filled their pots very full of roots, and are rather small for fruiting, which will sometimes happen, you had best not shift

them till after they have shown fruit in the spring.

*Height of the Thermometer in the Fruiting-House, For September.*

| | D. | M. | N. | E. | | D. | M. | N. | E |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 64 | 95 | 73 | | 16 | 67 | 94 | 75 |
| | 2 | 62 | 97 | 74 | | 17 | 75 | 90 | 74 |
| | 3 | 65 | 100 | 70 | | 18 | 70 | 92 | 74 |
| | 4 | 64 | 103 | 70 | | 19 | 70 | 90 | 70 |
| Watered | 5 | 65 | 102 | 79 | Watered | 20 | 64 | 85 | 74 |
| | 6 | 70 | 102 | 78 | | 21 | 72 | 95 | 75 |
| | 7 | 65 | 100 | 76 | | 22 | 72 | 90 | 72 |
| | 8 | 64 | 102 | 76 | | 23 | 65 | 75 | 67 |
| | 9 | 61 | 100 | 74 | | 24 | 66 | 80 | 70 |
| Watered | 10 | 70 | 94 | 75 | | 25 | 69 | 96 | 73 |
| | 11 | 73 | 82 | 75 | | 26 | 71 | 94 | 73 |
| | 12 | 78 | 92 | 78 | | 27 | 71 | 95 | 75 |
| | 13 | 76 | 92 | 75 | Watered | 28 | 73 | 75 | 72 |
| Watered | 14 | 70 | 80 | 73 | | 29 | 65 | 80 | 73 |
| | 15 | 69 | 80 | 70 | | 30 | 65 | 80 | 72 |

Besides the plants which you have set in your forwardest fruiting, unless it be a large one, you will probably have more fruiting plants of a lesser size, for a succession of fruit. These should be taken care of, and now shifted into larger

larger pots, or else let remain in their present ones till they show fruit some time in the spring, or beginning of summer. But it should be recollected, that whatever number of plants you intend for fruiting, they ought not to be all alike forward; for if they all show at one time, you will have a flush of fruit and a scarcity afterwards. This sometimes will happen with the best of gardeners, and if they chance to live in families who see much company, they are occasionally at a loss to know what to do for a pine-apple, when it is expected from them.

Pay good attention to all your pine plants; see that a good bottom heat be kept at them, pick the weeds out of the pots when they appear, and give them more or less water as they require it. No rule can be laid down for watering, a gardener must be guided, in this respect, by his own judgment; the best way is to imitate and assist nature. I have, in hot weather, and when there was a great heat in the tan-bed, kept pouring water all over a bed of pines for an hour together, out of water-pots with roses on the spouts, as fast as it could be handed to me; at other times, even in hot weather, I did not give them a drop of water for the space of ten or twelve days; and I have often watered plants twice and three times in one day.

All the crowns and suckers that you have obtained

obtained from your plants, should now be planted: have a frame or pit ready for them; pull off some of the bottom leaves, and put them in pots, and plunge them to the rims in the tan; give them a great heat and no air till they begin to grow, then give them a little water and air constantly in fine warm weather.

In watering pine plants it ought to be remembered that some sorts do not require so much water as others. The queens, the ripley, the sugarloaf, and some other sorts require more water than the antigua, the black jamaica, and a few more sorts of the large growing kinds.

If you have grape vines in any of your hothouses take care of them. If you practise that method of pruning by which the wood that bore the crop this season is to be entirely cut down to the bottom, and long shoots trained up this year for next season, from the lower part of the main stem, you may now cut out your old wood, unless your vines be very strong; this will strengthen your wood for bearing the ensuing year.

The french beans which were planted in pots last month, should be weeded and watered when they want it, and if you mean to try to have fruit all the winter, you should plant more this month.

Let

Let any kind of exotic plants which you may have in the hot-houses be kept clean, and watered occasionally as they begin to get dry.

## On the GREEN-HOUSE,

*For September.*

Orange, lemon, and citron trees, unless they stand in warm sheltered situations, had best be removed into the green-house, about the middle of the month; and if in the green-house you have any tender exotics which require the hot-house in winter, you should remove them into the hot-houses, that your green-house may be ready for the whole of your plants.

Most kinds of green-house plants, will in warm sheltered situations in the south of England, stand out till about the middle of October, but as sharp frosts, some years, happen early in that month, it is the safest way to house them the latter end of September.

Before

Before the plants are taken in, tie up any of them which stand in need of it, cutting off or shortening any of their shoots that are not wanted, to make the plants appear handsome and regular in their appearance. Cut off the roots that have run through the pots, scrape off any rubbish and unlevel earth from about their stems, cover the surface of earth in the pots neatly with fine mould; then clean the outsides of the pots and carry them into the green-house, beginning with the tallest ones first in the backside, and finish with the shortest ones in the front. As you place each row of pots, water them gently with a rose on the water pot, to settle the earth on the tops of them level, and give them gentle waterings afterwards when they begin to get dry. Give them, in fine days, as much air as you can, and leave air at them all night unless the nights are very cold.

Cuttings of green-house plants not well rooted, should be put into a frame where you can give them as much heat as they require.

The grapes in the green-house will now be ripe, tie up the shoots and thin the leaves if they want it, this should be done before the plants are taken in.

Grapes in the green-house will hang to be good in November, and sometimes till Christmas, if they are kept dry.

Keep

Keep the green-house clean and sweet, and pick the weeds out of the pots, and the decaying leaves off the plants when they appear.

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## On the FORCING-HOUSES,

*For September.*

The grape-house, if you began to force it last month, must be carefully attended to. If the vines are in good condition, they will in this month be pushing forth young shoots and showing fruit. Give them air in fine days, and if the nights are mild, leave a little at them all night, at the same time making a gentle fire in the evenings, that the thermometer may not be below 60, nor higher than about 65 during the night. It should rise in the course of the day to 70 and 75 degrees. Keep the border in which the vines are planted in a sufficiently moist state, and the air in the house constantly sweet.

In some houses you will probably now have grapes in perfection, and by keeping the houses cool and dry, you may preserve them till late in the season. There are some sorts, such as the

the black muscat of jerusalem, the syrian, tokay, and some others, will keep a long time after they are ripe.

If the crop is entirely over on any of your vines, you may cut out the superfluous old wood, this will be the means of strengthening the bearing wood for the ensuing year. Keep the borders clear of weeds, and if the weather be dry they will be better to be watered.

In case you think it necessary to manure any of your vine borders, this is a good time to do it if the fruit be over. Good rotten dung is the best manure, and you may pour into the borders rich dung water, run from the melon beds or dung hills, when they are in a fermentation.

Your cherry-house will now lie open. Keep the border in which the trees are planted, by hoeing and raking it occasionally, perfectly free of weeds, and if it stand in need of manure, dig in some good rotten dung among the roots of the trees.

In the fig-house your fruit will be all gathered. The glass should be taken off till December, if the weather do not set in very frosty before that time. If the weather prove dry, water the border, and keep it clean of weeds.

All the wood work of your forcing-houses, and the sashes, if they stand in need, should

now

now be painted before the short damp days come on.

The rose-house, if you choose it, may be filled with exotics, or with late flowering plants of any kind, keep them all free of dead shoots, decaying leaves, and weeds, and give them moderate waterings when they begin to be dry; give the house plenty of air in fine days, and if towards the end of the month the nights get very cold, make a gentle fire occasionally to prevent the damp from affecting the tender plants.

Be looking forward and considering what materials of any kind you may stand in need of when you begin to force any of your houses. See that all your flues are cleared of soot, and them and the fire places put in good repair while the weather is fine, that the brick-work and plaster may be perfectly dried before the frost and damp weather set in.

The peach-houses will now be uncovered, look after the trees occasionally, and tie up shoots that may want tying, and cut off foreright ones. If the leaves are over crouded, thin them, and water the borders in dry weather.

Make preparation of roses, and of all other shrubs and flowers intended to be forced in the winter and spring months.

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On

## On the FORCING-FRAMES,

*For September.*

Look after your melons carefully, many of the plants will still be in a vigorous bearing state, but it is probable they will not now require so much pruning and thinning as they did in the former months. They will, however, if they are getting very crouded of shoots and leaves, be better to be thinned occasionally. The fruit should lie dry and not suffered to be too thick on the vines.

At this time of the year, if the plants are in a good condition, the fruit are apt to set very thick, they ought, therefore, to be looked over often, and the most unpromising ones picked off, taking care to leave the fruit on the plants of such sizes as in ripening there may be a probability of having one to succeed the other, so that you may, if possible, never be in want of a constant supply of ripe fruit.

If you intend to have fruit as long as there is a sufficiency

a sufficiency of sun to ripen them tolerably well, you had best put linings of warm dung to some of your beds. These, if applied in time and kept on, will cast a fresh heat into the beds, and with other necessary assistance the plants will grow as long as you want them.

Take out of your frames all dead shoots and withered leaves. Give the plants air every fine day, taking care to shut them down in the afternoon with a strong heat in them; if the nights be warm give a little air all night. If they require it, water them in moderation; they will not now require so much as in the former months.

In changing your linings, the dung that is taken from them, if not too much exhausted or too wet, will do well for mushroom beds.

If you have any frames and sashes at liberty, it is a good time to paint them.

Consider what quantity of warm dung you will be in want of next month, that you may make preparation accordingly.

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On

## On the KITCHEN-GARDEN,

*For September.*

Spinach for winter and spring use, may yet be sown in the beginning of this month if enough was not sown last month. Sow it in drills two feet apart, and scatter in regularly the prickly sort of spinach; if the ground be dry, water the drills before you cover the seeds, cover them about two inches deep, and if the ground be of a light nature, tread it all over, and smooth it with a rake afterwards.

Continue to plant out lettuce, that you may have a constant supply of good ones; put them in ground well enriched with dung, otherwise they will not do much good. The black seeded green coss, the brown dutch, silesia, and white cabbage are, I think, among the best sorts; but you may propagate any kinds that are most desirable to those who are at the expence of raising them.

Sow the seeds of lettuce about the beginning, middle, and twentieth of the month. These will do

do to plant on warm borders and in frames, to stand the winter.

Now make plantations of the largest plants of battersea and early york cabbage. Plant out some in the beginning of the month, and more about the middle of it. They will be fit for use in November and the following winter months. They should be planted in ground well manured, a foot row from row, and about six or seven inches plant from plant. If the weather be dry, give them water, and hoe them when the weeds begin to appear.

In the forepart of the month, make more plantations of brocoli to succeed those planted last month. The plants should be set in rich ground in drills, about two feet apart, and about fifteen inches plant from plant in the rows. Give them water to settle the earth about their roots. Hoe and earth up your brocoli which was planted in the former months; if the weeds have got long, and the weather happen to be moist, you had best rake them off.

Brocoli, and all other plants of a similar kind, are liable about this time of the year to be eat by the caterpillars. The most effectual method to destroy them, is to have them carefully picked off every day by women or boys.

Cabbage plants which have risen from seeds sown last month will, many of them, be ready to prick

prick out in beds to be transplanted in the course of the winter and in the spring, to produce cabbages early. Plant them in beds three feet wide, and about four or five inches plant from plant.

You may yet sow carrot seed for young ones in the spring. Sow the seeds in beds, and if your ground be light and dry, tread them in, and smooth it afterwards with a rake.

About the middle or twentieth of this month, the cauliflower sown last month will be fit to prick out from the seed bed. Choose a bed of rich earth, dig it fine and rake it smooth, then make it out about three feet wide, and as long as you want it, draw the largest of your plants, nip the decaying leaves from them, and cut a little of the top root off, and plant them carefully about four inches apart, and water them gently to enable them to make roots.

If it be not showery weather, water the cauliflower plants which were planted out last month or in July. Let them be kept clear of weeds by hoeing and earthing up, and if the caterpillars appear on them, examine them and pick them off every day.

Two or three times in this month make plantations of endive. Hoe and clean that formerly planted, and tie up to blanch, every week, as many

many as are sufficient to keep you constantly supplied with blanched endive.

About the beginning, and again in the middle of the month, plant out in trenches more celery. Make out trenches as directed in the former months, but as it will not grow so large as that planted earlier in the season, the trenches may be made nearer together; after the trenches are ready, take up the plants with a spade, that you do not strain their stems or roots, trim the tops and roots a little, and plant them four or five inches apart, and water them well.

As your celery which was planted the former months advances in growth, continue to earth it up. Break the earth fine and put it close to the plants on each side, keeping them perfectly upright.

Earth up cardoons as they advance in growth, tie the leaves of each plant by themselves with strands of bass, so that you can conveniently earth them up, then with a spade break the earth fine, and lay it close to their leaves, repeat this as often as they appear to want it.

In the beginning of the month you may sow chervil, and corn sallad seeds, they may be sown in drills or broad cast. They are easiest kept clean when sown in drills.

Prepare dung for mushroom beds by turning it over and mixing well the outside and that in

the inside of the heap together. If you have any dung in a fit state to make up into a bed, let the bottom of it be marked out about six feet wide, tapering it up gradually to the top in such a way as earth can be laid on the sides of it, and as you proceed in making, shake the dung well, and either beat it hard with the forks or tread it now and then with your feet.

When the heat of your mushroom bed has declined to a degree not too warm for the spawn, take the spawn in small pieces, and put it in rows in the surface of the bed, so that the spawn and earth to be put on may meet. For fear of too strong a heat you had best spawn it only half-way up on each side, leaving the upper part unspawned till you are certain that the heat is not too violent. When your spawn is in, take good rich earth of a loamy nature, and cover your spawn with it about too inches thick, beginning to lay it on at the bottom of the bed, beating it firm with your spade. The earth should be in a pliable state, not too wet nor over dry.

The heat that a mushroom requires to make it grow, is on a medium about 65 degrees. They grow well in the natural ground from about the middle of August till after the middle of September, during which time you should examine the neighbouring old dunghills, and mill-tracks, where

where it is frequently found in large quantities, particularly after a dry summer, which evinces the propriety of having the dung, with which a mushroom, bed is made, tolerably dry. If it is wet, though there be a good heat in it, you have reason to be doubtful of your success. They will not grow well on any bed if it be not in a perfectly sweet state.

When any of your melon beds have done bearing you may take the earth off to the dung, and if you find the dung of your bed in a sweet condition, you may level it and spawn it; laying about two inches of earth on it, press it down, and cover it with a little hay or short straw, put the lights on and give air in warm days, and probably you will have a crop of mushrooms.

Mushrooms love to grow in the dark, therefore, all beds ought to be covered whether they are in a shed or in the open air.

In the beginning of the month plant out strong plants of savoy, cabbage of different sorts, red and green borecole, brussels sprouts, jerusalem kail, &c. They should be those that have been transplanted. If they do not come in for use in the winter they will be useful in the spring.

The turnips sown in the former month should now be hoed in a dry day; let the plants be hoed

out regular about seven inches apart, and cut the weeds up clean.

In the beginning of the month, and again about the middle of it, sow radishes for a late crop. Sow them on rich ground well dug, rake the seeds in lightly, and water them if the weather prove dry.

If it be required, continue to sow rape, white mustard, turnip, and cress for small sallading. Sow it in small drills in an open spot of ground.

The stems of artichoke plants which have done blowing should be cut down, and the ground about the plants cleared of weeds. Also in fine days, hoe and clear the ground among all kinds of vegetables, and in every part of the kitchen-garden take care, if possible, not to suffer any sort of weed to bring its seed to maturity.

If it was not done last month, take in your onions in a dry day; and you may, if necessary, in the beginning of the month sow the seeds of onions. The Welch ones will do best now, as it is a very hardy sort, which will stand the winter.

Any seeds of curious esculent vegetables that are ripe, should be gathered in a dry day. The birds are very fond of several kinds of garden seeds, you must try to keep them off with nets,

nets, or by setting up scare-crows to frighten them.

Dig up potatoes and lay them in a dry dark place where the frost cannot get at them, or you may bury them in the ground where the frost and wet cannot penetrate.

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## On the FRUIT-GARDEN,

*For September.*

In the course of this month, fruits of different kinds may be gathered for present use as well as for keeping. It is a sign that they are ripe when they begin to drop from the trees. You may know when apples, pears, &c. are fit to gather by cutting some of them, and if the seeds begin to look brown and ripe you may gather the fruit. Do it in a dry day and lay them in a dry place, spread out so thin that they may not get into a sweat. There are some sorts of apples and pears which must not be gathered till some time in the month of October.

Look over your grape vines on the open walls; in this month they will be ripening their fruit.

See

See that the branches are all kept close nailed to the walls, cut off any superfluous shoots, and thin the leaves that the sun be not hindered from shining on the bunches. If the wasps or birds begin to take them, you must hang nets over them. To preserve them from these animals, some are at the expence to put the bunches into crape, hair, or paper bags.

Peaches, nectarines, and plums, will now be ripe in plenty, and to preserve them from insects, it will be necessary to use the same means as recommended in last month's directions. Hang nets over them to defend them from birds and wasps. Take down the bean stalks in mornings, and blow the insects out of them into a bottle of water to destroy them. Keep your borders perfectly free of weeds, and if any shoots on the trees hang from the walls, nail them in, and cut off any that there is no room for. Any fruit, that are hid among the leaves to keep them back from ripening, you may open up when you wish them to ripen.

In this month you may make new plantations of strawberries, if they are required. The best ground for them is a strong rich loam mixed with perfectly rotten dung. Most sorts of strawberries should be planted in an open situation. Take the opportunity of moist or cloudy weather to plant them. If the weather prove dry, they

they must be kept watered till they begin to grow.

For the conveniency of managing and gathering the fruit, strawberries are often planted in rows along the borders of the kitchen-garden; and some sorts, as the wood and alpine, will do on shady borders, where many other plants do not prosper.

The alpine strawberry will be still in full bearing if you have a good sort of it, and your ground be well adapted for its culture. You must continue to water the beds, for if they are deficient of that necessary article, they will not continue to produce fruit.

If required, you may plant strawberries for forcing. Take up strong healthy plants, and plant them in strong loamy soil, three, four, or five plants in each pot according to the size of the pots you put them in; or you may take up a cluster of plants with a ball of earth at them, and put them in such sized pots as will admit of earth being put round the balls. As soon as they are potted give them water, and continue to water them in dry weather.

If you intend to make plantations of fruit-trees, make preparation for them. In case your border is entirely new, it should be trenched over not less than two feet deep, and if it is necessary to manure it, it should be done with perfectly

perfectly rotten dung, or vegetable mould. The dung for that purpose, ought to have been laid in a ridge for at least one year, during which time it should have been often turned and broken, so as to make it as fine as vegetable mould, after being run through a screen or sieve. If your border have a wet foundation, drains ought to be laid to carry the water off. And remember that your border should be made deep and broad enough, that the roots of the trees cannot run into bad soil. Paving the bottom of borders for peach and nectarine trees is in some places practised, but I consider the former method best adapted for the prosperity of fruit-trees.

Be looking forward and consider what quantities of fresh earth and manure you may have need of in the course of the following year, and prepare accordingly.

Figs on the common open walls will now be ripe and ripening. Keep their shoots to the walls, and the leaves thinned in such a way that the air and sun beams may have free access among the fruit.

By frequent hoeing and raking keep your fruit borders free of weeds, and all sorts of litter. Hoe and rake between your gooseberry, currant, and raspberry bushes.

Dress and manure the strawberry beds which have

have done bearing, and keep them free of weeds at all times.

Weed your beds of seedling strawberries, gooseberries, currants, and raspberries.

Preserve the seeds of all sorts of fruit which you wish to propagate plants from, by sowing them in the spring. Gather them in dry weather, and expose them a few days to the sun till they be hardened, then put them up in paper till you want them.

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## On the PLEASURE or FLOWER-GARDEN,

*For September.*

The stalks of carnations that have done blowing should be cut down, and if any of the layers remain on, they are now to be cut off and potted. Those of them that are not strongly rooted, should be potted and kept by themselves. Put them all in small pots three or four plants in each; vegetable mould, with a small mixture of loam, is good at this season of the year to plant them in. When they are potted give them water, and place them in a melon or cucumber frame.

frame, and keep them warm without any air till they have struck root, which may be known by the appearance of the plants holding their leaves erect. When they begin to grow, give them air more or less as you think necessary.

Take care of those layers or pipings of carnations which were potted out last month. They may stand out in the open air, and receive gentle waterings in dry weather.

The stools of carnations, if there are any shoots that could not be laid, left on them, should be weeded, and fresh mould laid about them on the surface of the mould in the pots; they will do for forcing next spring. Give them water in dry weather.

In dry weather the auricula plants in pots should be watered occasionally, and kept free of weeds. Towards the latter end of the month, they should be removed from their summer situation, and placed where they may have the sunshine at all times of the day, and they had best be set into a frame or other place of protection, that they may be defended from heavy rains and very windy weather.

Auricula seeds may be sown in boxes or pots of fine light mould. Sprinkle them with water in dry weather, and in heavy rains they may be set in houses or frames to prevent the mould from being driven off them.

You

You may also sow the seeds of bulbous rooted plants, such as tulips, ranunculuses, anemonies, &c.

Prepare beds of earth for your hyacinths, tulips, anemonies, narcissus, &c. These roots do best in a sandy soil mixed with vegetable mould, or very rotten dung.

You may now plant out and increase many kinds of herbaceous, perennial, and biennial flowering plants, such as irises, lychnis, pionies, fraxinellas, rose campion, leonurus, golden rod, with a number of other kinds. Take off rooted slips from them and plant them here and there in the borders where there are vacancies, or in beds to transplant in the spring.

Plant out also from the seed beds, stocks of different sorts, wallflowers, columbines, sweet-williams, french honeysuckles, &c. If the weather be dry, water them to settle the earth about their roots.

Plant out mignonette in pots to stand the winter. Put three or four plants in each pot; give them water, and set them in a shady place till they begin to grow, then set them in a sheltered situation, and when cold wet weather comes they should be plunged in old tan in frames, and the glasses put on in cold frosty nights, and rainy, snowy weather.

Seedling stocks may likewise be pricked out in

in pots, and preserved in the green-house, or in other houses or frames, where the heat is not great, all the winter.

If required, you may now plant box edgings. Where edgings of box have grown clumsy and thick, they ought to be taken up and replanted. Divide the plants, having roots at each of them, into slips, get the edge of your walk or border in readiness, and plant them only as thick as the shoots touch one another, so as to form a close edging, immediately after planting give them plenty of water. This work had best be deferred till the latter end of the month, unless the weather be moist and cloudy.

Box edgings and all sorts of hedges may be clipped any time this month.

Go round the flower borders, and cut down the stems of all sorts of herbaceous plants which have done blowing, and pull up all annual flower plants that are dead. Tie up to stakes shrubs that are likely to be broken down by heavy rains or high winds, and cut off straggling useless shoots.

Hoe and rake all your flower borders, that they may be clean and appear neat.

Towards the latter end of the month, if it be required, you may transplant several kinds of flowering and evergreen shrubs; as soon as they are planted give them water.

Mow

Mow and sweep grass walks and lawns once or twice a week, and weed and roll gravel walks as often as they require it.

If your cuttings of pinks were not transplanted last month, let it be done now. Dig a spot of ground, and if it be not of a strong nature, tread it all over and rake it smooth; then make it out into beds three feet and a half wide, and leave eighteen inches between them for alleys. Take up your plants carefully and plant them in rows in the beds six inches apart, and set the plants in the rows six inches asunder. Plant each kind of pinks by themselves, and as you plant them give them water. You may plant some of them in the flower borders; and in the spring, take up every other row, and every other plant in the rows, and plant them here and there about the shrubberies and flower borders; those left in the beds will then stand one foot asunder, they will make a fine show and beautiful appearance when in blossom, and they will be handy to take cuttings or pipings from to propagate more plants next season.

If you have any flower seeds worth saving, if they are ripe, this month is a good time to gather them in. Gather them in a dry day, and spread them out till they are sufficiently hard, then put them up in paper bags or drawers in a dry room.

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On

## On the NURSERY-GARDEN,

*For September.*

Deciduous seedling trees and shrubs which cast their leaves early in the autumn, if the weather be moist may, towards the end of the month, be transplanted from the quarters or seed beds where they have grown too thick; and likewise the young stocks intended for budding or grafting raised from suckers or seeds in the spring may be advantageously transplanted about the end of the month, if the ground is in such a moist state that it can be easily dug.

A variety of young tender trees and shrubs in pots, about the end of the month, should be removed into a sheltered situation that they may be protected during the winter from the inclemency of the weather.

If the weather prove dry in the forepart of the month, seedling trees and shrubs should be watered, and they ought to be weeded occasionally to prevent the weeds from hurting them.

Layers of trees and shrubs laid down last year

year or in the spring, that are strongly rooted, may, if the weather happen to be moist, be separated from the parent plant, and planted in an open spot of ground.

Trees and shrubs of different kinds should now be laid down for propagation. They will make good roots in the course of next summer, and may be taken off, and planted out the latter end of the year.

When the ground is got thoroughly moist, various kinds of shrubs, forest, and fruit trees, may be propagated by planting the cuttings of them. Currant and gooseberry bushes are propagated by this method. Of the sorts most esteemed, take well ripened shoots of the present year's growth, avoiding luxuriant ones arising from the roots of the parent plant. Cut them to about ten inches or a foot long, and having stripped the leaves off the lower part of them, plant them about six inches deep, in beds about three feet wide, and set the plants about seven or eight inches asunder. When they are planted, if the weather be dry, give them water. These will strike root early in the spring, and be fit to transplant in the autumn following.

In a shady border you may plant cuttings of common and portugal laurels, honeysuckles, jasmines, and a variety of other shrubs.

If

If the young shoots be well ripened, you may plant cuttings of lime, beech, elm, hornbeam, &c.

Pears, plums, apples, medlars, &c. may also be propagated by cuttings. To do this, take well ripened shoots of the present year's growth: cut them off with about half an inch of the preceding year's wood at the bottom of them, make it smooth with a sharp knife; let the cuttings be about a foot long, not of luxuriant wood, nor yet too weak, plant them in beds of good earth, about six inches deep, and give them water to settle the earth about them.

The plants raised in this way will not grow so strong as those grafted or budded, but they will do well for dwarfs to plant in places where low growing trees of the fruit kinds are required.

Fruit-trees of all sorts may in the spring before they come into bloom, be propagated by cuttings. Cut young shoots of a moderate size from the trees you wish to propagate, cut from the parent plant with them about half an inch of the preceding year's wood; smooth with a sharp knife the ends of them, then shorten the cuttings to about nine or ten inches, and plant them in small pots, one cutting only in each pot, plunge them in rotten tan or vegetable mould in a hot-bed, taking care that the pot do not stand

in

in a warmth above 80 degrees: keep them constantly in a moist state, and let the heat of the air in the bed be kept up from 60 to 90 degrees.

This method should be put in practice about the beginning of the month of March.

One of my brick cucumber beds is well adapted for striking these or cuttings of any kind which require artificial heat, because the bed is heated by linings only, and therefore the roots of plants in these beds cannot be hurt with too much bottom heat unless the pits were to be filled with fresh tan or dung, which in them there is no occasion for, for any kind of plants whatever.

When the plants are well rooted, begin to give them more and more air to harden and strengthen them. In May or June, if they come on well, they will probably have filled the pots with roots, and may then be shifted into larger ones, or turned out in the open ground.

Peaches, nectarines, apricots, plums, and cherries raised in this way, may do well to keep in pots to set into the forcing-houses early in the spring, as they will be apt to grow more dwarfish than those that are budded or grafted.

In case the weather prove moist, towards the end of the month, young plants of evergreens of most kinds may be transplanted with safety;

water them well to settle the earth to the roots of them, and they will probably make new roots before winter.

If you have any vacant pieces of ground that require manuring, trenching, or digging, to prepare it for plantations of young fruit trees, this is a good time to do it, if the ground be not too hard with dry weather, which sometimes happens in this month.

By hoeing the ground wherever you can, destroy all sorts of weeds; and if the weather be showery, that they do not die, you had best rake them off, otherwise many of them will take root and grow again.

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THE

THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES.

*For October.*

About the beginning of this month, if the weather be cold, it will perhaps be necessary to make gentle fires in the evening, and probably a little in cold mornings; but in this you will be regulated entirely by the weather, and the state of your tan-bed. Fires are not now required to force the pines, but only to keep the damp out of the houses; and it sometimes happens that after a tan-bed has been made to retain heat during the winter, a great heat rises in it, and in that case, if the hot-house be a well built one, low in the ground, and in a sheltered situation, the heat rising out of the tan will pro-

bably warm the air of the house so that fires may not yet be wanted, even though the weather be rather cold.

You should examine well the heat of your tan-bed, and take care that your fruiting plants for the ensuing year are not in too great a heat. If you apprehend that the heat of the bed is getting too strong, draw some of the tan from among the pots clear off the surface of the bed, or if it will do, to save labour, make a hollow in the tan round about each pot, to let the great heat pass off. However, if you observe to go by the directions which I have laid down for preparing a tan-bed and plunging the pots, I am inclined to think you will avoid having the trouble of lowering the tan among the pots or of raising the pots in the bed.

If your fruiting plants were not moved last month into the fruiting-house, this month is a good time to do it in.

Prepare the house for the plants, by making up the tan-bed according to the directions given in the former months. Clear the flues thoroughly of soot, and repair them and the fire-places. Let a bricklayer wash the walls and flues with lime and water. Repair what is wanted in the glass-work and putty, and if it require it, get all the wood-work in the inside of the house painted once

once over. If it do not want painting, wash it clean with soap and water.

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*Height of the Thermometer in the Fruiting-House, For October.*

| | D. | M. | N. | E. | | D. | M. | N. | E. |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 74 | 97 | 72 | | 17 | 59 | 63 | 65 |
| | 2 | 64 | 93 | 70 | | 18 | 63 | 88 | 65 |
| | 3 | 68 | 96 | 72 | | 19 | 61 | 66 | 66 |
| | 4 | 65 | 90 | 70 | | 20 | 63 | 84 | 65 |
| | 5 | 67 | 80 | 70 | | 21 | 63 | 75 | 64 |
| Watered | 6 | 67 | 75 | 70 | | 22 | 60 | 72 | 64 |
| | 7 | 72 | 75 | 70 | | 23 | 62 | 95 | 63 |
| | 8 | 71 | 92 | 70 | | 24 | 61 | 65 | 64 |
| | 9 | 66 | 82 | 69 | | 25 | 60 | 65 | 60 |
| | 10 | 64 | 94 | 70 | Watered | 26 | 63 | 84 | 64 |
| | 11 | 64 | 90 | 68 | | 27 | 60 | 88 | 64 |
| | 12 | 62 | 70 | 69 | | 28 | 60 | 80 | 67 |
| | 13 | 65 | 90 | 68 | | 29 | 72 | 90 | 68 |
| | 14 | 62 | 94 | 70 | | 30 | 64 | 80 | 68 |
| | 15 | 63 | 93 | 66 | | 31 | 66 | 90 | 66 |
| Watered | 16 | 60 | 92 | 65 | | | | | |

If there be much sunshine in this month, and the thermometer stand above 55 in the morning, fires will not be wanted.

Keep your house clean and sweet, and admit air

air into it every fine day. The plants will not require much water this month, especially if they have been lately shifted, and when they are watered, give it to them in moderation.

The quantity of water they will require depends somewhat on the condition of the tan in which the pots are plunged. If the tan be in a dry state, and a strong heat in it, they will require more water than when it is moist, and a less heat in it, so that in giving water the person who manages them must be able to conclude how often and what quantity of water the plants will need.

The french beans and other exotic plants in the house must be attended to, keep the pots clear of weeds, and water them just when they are beginning to get dry.

To have a succession of french beans, you should now plant some in pots. If you have got new seed, which is perfectly ripened, it will grow more vigorous than that of the preceding year. Plant them in rich light earth, three, four, or five seeds in each pot, according to the sizes of them.

It is desirable, if you have many fruiting pine plants, to have a few show fruit in this month: if they go on well, they will ripen at a very acceptable time.

To keep your succession pine plants on in a growing

growing state, they will demand attention and labour. If it was not done last month, let the tan be renewed. Take out all the small rotten tan out of the pits, filling them up to their proper height with new tan, then work the new and old left in the pit well together about three feet deep, tread it all over the surface, and dig it up again, about eight inches deep, that you may be able to plunge the pots easily in it. Having prepared your bed, plunge them immediately in it up to the rims, and give them no water till the heat come up in the tan.

If the weather be cold, make a little fire in the house occasionally, or if you work them with dung heat, you may put a gentle lining to one side of the pit.

Some of your crowns and suckers which were planted in July or August, if they have filled the pots so full of roots that the balls will turn out perfectly whole, should now be shifted into pots a size larger. If this be not attended to, and the roots get much matted in the pots, perhaps they may run to fruit next spring, which will make you short of fruiting plants the ensuing year.

If you have grape vines in the hot-houses, they should be kept tied close under the rafters that they do not shade the pine plants.

Any crowns and suckers which you may have by

by you, if they are well ripened, may be planted in small pots, or two or three in each pot, and plunged in a good heat to make them take root about the beginning of the month.

If the nights are cold, cover the pits or frames in which you have pines with mats; take them off in the morning about eight o'clock, or as soon as the sun shines on them.

## On the GREEN-HOUSE,

*For October.*

In case the green-house plants were not set into the house last month, they ought to be removed into it the beginning of this month. Shorten or cut off any straggling irregular shoots that happen to be on them, and tie up in a neat manner, but not too close together, any of the branches that require it. Clear the surface of the earth in the pots, loosen it a little, and lay on what fresh mould is wanted to raise it to within about half an inch of the top of the pots. Pick all the dead and decaying leaves from the

the plants, cut the roots off that have grown through the bottoms of the pots, and make the outsides of them clean. Bring your collection of plants to the house, and arrange them in regular order, so that they may appear to the greatest advantage. The tallest plants should be placed in the back row, and the others according to their degrees of height follow in regular gradation till you finish in the front of the house with the smallest ones.

Give the green-house plenty of air in fine days; and if the nights are not cold leave some at it all night.

Any cuttings of green-house plants in pots, and not yet shifted, should remain all winter in the same pots, you may keep them in the green-house, or any of the forcing-houses, where the heat is not too great for them.

Tie up your vines in the green-house, and thin the leaves if they are too crouded. Keep the grapes that are on them as dry as you can, and you will probably have them good next month, and perhaps in December.

Young china roses, mignonette, stocks, carnations, double sweetwilliams, and other sorts of flowering plants in pots may be set into the green-house on shelves to preserve them through the winter.

Look over your green-house plants every week, and pick off all the dead and decaying leaves

leaves that appear on them. Pay attention also in giving the pots water, when they begin to get dry. Some sorts of plants require water oftener than others.

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## On the FORCING-HOUSES,

*For October.*

If you began to force grapes in the month of August, in the course of this month they will be in blossom, and probably their fruit set or setting. All possible care must be paid to the regulation of the heat of the air in the house. It will be necessary to make fires in the evening, so as to endeavour to have the thermometer about 60 in the morning, and the heat should rise up in the course of the day from that to about 70, and a little higher if the sun shine. If the days are cold and gloomy, fires should be made in the morning, to warm the house, so that a free circulation of fresh air may be admitted without making the air too cold.

Keep the border in which the vines grow, moderately

derately moist, and let your house be clean and sweet at all times.

Probably in some of your forcing-houses you will now have a crop of grapes in perfection. Let the house be kept clean; and in order to prevent damps, and to keep the grapes perfectly dry, fires should be made occasionally, at the same time having plenty of air at the house, that the effluvia from the flues may not affect the grapes, and that the air may be as cool as possible, taking care that the lights be left in such a manner that rain cannot fall on the grapes.

Let the shoots be kept tied close to the trellis, and keep the leaves of the plants thin, that they do not lie on the bunches. If any of the berries begin to rot, cut them out immediately that they do not affect the others. This should be particularly attended to, and when you want grapes, leave the bunches uncut which are most likely to keep longest.

Vines whose crop of grapes is over should have all the superfluous old wood cut off; and if the glass frames have been taken off in the former months, they should now be put on again to keep the vines dry, giving the house as much air as you can unless the frost set in severe, when it will be best to shut it up close.

Keep your vine borders clear of weeds, and if you think they would be better of manure, dig into

into them some rotten dung, and you may water them with dung water from the melon beds, or with that which has run from a dunghill, when in a fermentation.

Your cherry-house may continue to lie open. Keep the border free of weeds, and if you think the trees require manure, dig into the border about their stems some good rotten dung or vegetable mould.

When the frost begins to set in hard, cover in your fig-house, and lay a sufficient covering of long litter on the border to keep the frost from the roots of the plants.

Examine the peach-houses, and if the leaves are decaying and loose, they should be taken off and carried out, and the house and trees cleared of all sort of rubbish. Cut out of the trees any luxuriant and evidently superfluous wood. Inspect the trees in every part minutely, and if you perceive the bark dying or the gum oozing out of any part of them, cut off the bark as far as it is dead or decaying; and if the branches be strong, that you cannot well effect it with your knife, take a chissel with a semicircular edge, and a mallet, and cut out the wood as far as you see it is affected: you need not be afraid of hurting the tree even if the branches or main stem are cut half away. I have cut sometimes

sometimes more than half of the stems of standard trees away from the ground farther up than where the branches began to separate, which was the means of saving them alive. This method exposes the old wood to the sun and air, by which it is dried, and the tree is thereby assisted in casting off the unwholesome juices, or those kept in it too long for want of a more dry, genial climate.

If the weather in this month begin to be wet and foggy, put the lights on the peach houses to keep the trees dry, but give them all the air you can in fine days, and in the nights, only prevent the rain from falling on them.

In this month make preparation to force roses and any other sorts of shrubs and flowers intended to be brought into blossom early next spring. Roses may now be planted in pots in good earth as before directed, and you may also pot other flowering shrubs, and herbaceous and perennial flower plants of various sorts.

For the same purpose, bulbous roots, such as hyacinths, tulips, jonquils, and narcissus, may also be potted, put them in sandy rich earth, and cover them about an inch deep. Plunge them in light earth or old tan, till you set them in to force.

The rose-house may now be filled with late

blowing

blowing flower plants of different kinds. Keep them clean and watered gently when they want it.

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## On the FORCING-FRAMES,

*For October.*

If the weather prove fine and the sun shine frequently, melons will continue to ripen. In case there be warm linings at any of your beds, keep them up to a proper height. If the brick beds that I contrived are in practice, you may with a lining of dung give them as much heat as you please. Keep the fruit dry by laying the melons on tiles or stones, and put the leaves and shoots from them that they may have the full influence of the sunshine.

Clear your frames of melon stalks which have done bearing, and if it be required you may put the earth in preparation by digging and raking, and set lettuce plants in them. If you plant them on brick beds of my contriving, you may force

force them with a gentle lining of dung any time when you please in the spring.

Endive plants may be laid in frames to blanch and preserve them from the frost.

Make preparations of earth for melons and other plants which you intend to force next spring. If you have collected fresh earth from fields or commons, if you think it is not rich enough mix some well rotted dung among it, or vegetable mould.

If you intend to have cucumbers early in the spring, sow the seeds of them about the middle or twentieth of this month. For the method of propagating them look at my treatise on the cucumber.

Be looking forward and consider what dung and other necessaries you think you will be in want of next month, and make preparations accordingly.

Any melon or cucumber boxes or frames which are at liberty should be repaired and painted in dry weather, if they want it.

If you intend to force asparagus plants next month, cut down the stems of those you intend for that purpose about the beginning of this month, and have a heap of dung in preparation to make a bed for them.

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On

## On the KITCHEN-GARDEN,

*For October.*

In this month cabbage plants of the early kinds should be planted out, to come in early in the spring. Make choice for this purpose of a piece of ground in a warm situation: give it a good coat of dung, and dig it deep and fine, then, if it be light ground, of a dry nature, tread it all over and draw little drills in it one foot apart, and plant the cabbages in them, about seven or eight inches apart: if the weather be dry, give them water to settle the earth about their roots. In the course of the winter, or early in the spring, draw out every other row, and every other plant in the rows; these will do for planting out, or to be used as coleworts. The plants left will then stand too feet apart, row from row, and about fifteen inches asunder in the rows.

If you have any large cabbage plants in seed-beds, plant them out in rows; they will do to use during the winter, and prick out the small cabbage

cabbage plants about four inches apart to stand the winter.

Now prepare a piece of ground in a warm situation to plant cauliflowers, to be protected by hand glass during the winter. The ground for this purpose should be well manured, and dug deep and fine. When this is done, make lines or marks on the ground, four feet apart, and in these lines, at four feet distance in a little hollow place, plant five or six cauliflower plants, about five or six inches apart, give them a little water, and set the hand lights on them, keep the lights shut down for a few days till the plants have made roots, which may be known by their leaves standing erect; then give them air, and in fine days set them entirely off.

Transplant young cauliflower plants into frames to stand the winter, to be planted out in the spring in the open ground.

Prick them into the frames, about four inches apart, give them a sprinkling of water, and shut the glasses down till they have made roots, then give them air, protect them from heavy rains, and shut the lights down in frosty weather.

The large cauliflowers that may be in flower or coming into flower, endeavour to protect. Earth them up well, and if the nights are frosty, lay cabbage leaves on them to keep the frost

 from

from the flowers. If they are nearly large enough for use, dig them up, and lay their roots in sand in a shed or a cellar.

In light warm ground, in sheltered situations, young cauliflower plants will sometimes stand the winter on a south wall border. In hard frosts if hoops and mats are put over them, they will still stand a better chance to survive.

Plant out on warm borders lettuce plants, to stand the winter. The green coss, silesia, and cabbage lettuces are reckoned among the hardiest sorts; but as hard winters are apt to destroy the most hardy kinds of lettuce, it is best to have a reserve in frames.

Set some frames on a bed of good light rich well dug ground, plant in them good lettuce plants, about three or four inches asunder, water them gently to settle the earth about their roots, put the lights on, give them air in fine days, and shut them down in frosty weather.

Spinach sown in August, or the beginning of September, should be hoed and raked clean, and the weeds picked out among the plants.

Clean your endive beds, and in dry days tie up some of it to blanch: if there be the appearance of frosty weather, some of it may be covered up with fern, or long straw litter to preserve it from the frost. It may also be preserved by taking it up when it is pretty dry, and laying

ing it in earth in a close shade, or in melon or cucumber frames where it can be covered in hard frosty weather.

Hoe and earth up cabbages, savoys, brussels sprouts, borecole, brocoli, &c. Draw the earth up to their stems as high as it will lie.

If brocoli be tall in the stems it may be laid to one side, and the earth laid on the stems of it with a spade, and some of it may be dug up and laid into trenches where the stems can be wholly buried. These methods will be the means of keeping it from being destroyed by severe frosts. When it is covered with snow, the frost does not hurt it.

Take the opportunity of dry days to earth up celery, break the earth fine, and put it close to the plants in each side of them.

Cardoons will also require to be earthed up; tie their leaves up with bandages of straw, rushes, or bass; and push the earth close round about each plant, that they may be properly blanched and preserved from the frost.

If a constant supply of small sallading is wanted, you must begin to sow it in pots. Take pots, and fill them within an inch of the top, after being pressed down, with perfectly rotten fine tan, or vegetable mould, sow the seeds thick, and cover them lightly, half an inch deep, set them into the hot-house, and the plants will

come up and be fit for use without giving them any water.

Carrots and parsnips may now be dug out of the ground, their tops cut off, and themselves buried among dry sand in a place where the frosts and rains cannot come at them.

Beet, salsafy, scorzonera, hamburg parsley, and skirrets may likewise be taken out of the earth, and laid among sand in a dry place, that they may be preserved and easily come at in hard frosty weather.

If hard frosts begin to come on without snow, lay some light dry litter, such as fern, on your rows of parsley. This will be the means of preventing the frost from destroying the leaves of it.

Potatoes that remain in the ground should now be taken up, and laid in some dry place to preserve them for winter and spring use.

Beds of sorrel, tansey, mint, balm, &c. should have their stalks cut close down, and be cleared of weeds, and the alleys between them dug.

About the latter end of the month, you should cut down the stalks of asparagus, and carry them away. If you wish to save the seeds of them, now is the time do it. When the stalks are all cleared away, hoe the beds and rake off the weeds clean, then lay a layer of rotten dung on the beds, and dig as much earth out of the alleys

alleys as will cover the dung over about three or four inches deep.

A late author, Mr. Walter Nicol, disapproves of this method; but I apprehend he will not get many gardeners to agree with him. During the winter the juices of the dung sink down among the roots of the plants and feed them; and the roots being cut in the alleys every year, and the alleys filled up again in the spring with the dungy earth meliorated on the beds by the winter's frost, the roots of the plants grow vigorously in it, and are enabled to send up strong shoots.

The author whom I have just mentioned says, "asparagus beds should not lie above eight or ten years." I have seen asparagus beds which, to my knowledge, had been in bearing upwards of twenty years, and continued to produce plentiful crops of fine asparagus; and I have had asparagus cut sixteen years from beds of my own planting, and they continued to produce as large crops of fine grass as they did after they had been cut from eight to ten years.

Balm, tansey, sorrel, &c. may now be planted. Take up suckers from the sides of the old plants, and plant them in beds, or in rows on the edges of borders.

Radishes may now be sown on warm borders, perhaps they may stand the winter, by laying fern

fern or straw on them in frosty weather, and if they do, they will come in early in the spring.

If you intend to force any sort of herbs, they should now be potted: mint, balm, tarragon, &c. may be taken up with balls of earth at their roots, and put in pots, and when you wish to make them grow set them into the forcing-house or a hot-bed.

When they begin to decay, cut off the stalks of seedling asparagus, clear the beds of weeds, and spread two or three inches thick of rotten dung on them, the juice of which, during the winter, will sink down about the roots, and make the plants grow strong.

Towards the end of the month beans should be planted to stand the winter. The early sorts, such as the mazagan, are the best. Plant them in a warm sheltered situation, in drills, three or four inches deep, draw the drills three feet apart, and plant the beans about four inches asunder.

Peas may also be sown on a warm border; sow them in drills about four feet apart, draw them four inches deep, scatter the peas in regularly, and cover them three inches deep. These will be forward, so that they are not to be depended on, they may be cut off by the frosts; therefore you must sow again in the following months. The early frame and hotspur kinds are the best to sow for an early crop.

The

The mushroom beds which were half planted with spawn, if they are become cool enough, should now be finished. Set the spawn into the surface of the bed, in little pieces, about three inches apart, then cover the bed about two or three inches thick, with rich loamy earth, and make it firm, that the spawn may have a steady substance to run in, and produce the fruit to be used.

Mushroom beds may now be made of sweet moderately dry dung, which has been strongly fermented, and the heat in it considerably declined. Make the foundation about six feet wide, and as long as you choose, taper it gradually from the foundation to the top, so that earth may lie on the sides of it: as you proceed in making it, shake the dung well, and beat in the bed, as you go on, firm with your forks, or which, if your dung be light, is better, tread it with your feet now and then.

When your mushroom beds are spawned lay straw or some dry litter on them to keep them dark, and the heavy rains from them, but take care that you do not make them too warm with heavy coverings.

Clear your artichokes of weeds and all sorts of rubbish, and cut the stems of them close down, and in this, or early in the following month, something should be done to them to keep

keep the frost from their roots. If the rows of plants are at least four feet apart, lay a little covering of dung on the plants, then exactly between the rows dig out about eighteen inches wide of earth, and lay it on about the plants, forming a gentle ridge with it, dig out the earth so deep as to cover your plants well, that the frost do not get at the roots of them. Taking out the mould to cover them makes a deep trench which drains the water from the plants during winter, so that the roots are preserved from too much wet, as well as from frost.

If your artichokes stand close in the rows, you had best cover them well with long litter to keep the frost out during winter

## On the FRUIT-GARDEN,

*For October.*

In this month, look over your peach, nectarine, and apricot trees, and cut from them any decaying branches, and luxuriant useless shoots made the by-past season. If you observe the bark beginning to decay on any of the branches, or on the stems of them, cut it off, and if the wood under it be rotting, or appear black, cut it out with your knife, or with a semicircular chisel,

chisel, till you come to sound wood of a right colour, and likewise open up those parts where the gum is oozing out in the same manner, to prevent the canker and rot from proceeding farther. Let the hollow parts made in the trees be cut sloping that the rains may run easily from them. If the branches are any of them pinched by the nails or shreds, unnail them.

Cherry, plum, pear, and apple trees, if the leaves are fallen from them, may be pruned and nailed. Cut out all useless shoots and branches, and do not let the bearing spurs get too far from the wall. If the bark on any of the branches or stems of the trees be dead, cut it off and also cut out the decaying wood, as it is directed to be cut out of the peach and nectarine trees. Nail the shoots and branches firm to the wall, taking off all unsound rotten shreds, but do not put more shreds and nails on the trees than what is just sufficient to secure them to the walls.

If the leaves are fallen from them, gooseberry and currant trees may be pruned; cut out any weakly old branches, and leave strong young shoots from the bottom in their room. Cut off all the shoots made last summer, excepting the studs and the leaders to the bearing branches and shoots to fill vacancies, and they

they should be shortened according to their strength.

After the bushes are pruned, clear away the cuttings, and, if they require manuring, spread some dung round them, and dig it into the ground among their roots cleverly.

To propagate gooseberry and currant bushes, cuttings may now be planted of them, in the manner directed last month.

About the end of the month, plantations of currant and gooseberry bushes may be made. For this purpose, trench a piece of ground two feet deep, level it, lay a good coat of rotten dung on it, and dig it in, a spit deep: then plant the trees five or six feet row from row, and put them four feet apart in the rows; if the weather be dry, give them water to settle the earth about their roots.

If the weather be moist, this is a good time to plant raspberries. Plant them in good well manured ground, four or five feet row from row, and about three feet bush from bush in the rows. Take up good well rooted suckers from about your old plants, trim their roots, and plant three or four in a clump, about five or six inches apart.

All the old branches which produced fruit last summer may now be cut out of your raspberry

berry plantations; but the shoots for bearing, the succeeding year, had best not be shortened before the spring.

If it was not done the preceding month, the strawberry beds should be cleared of all superfluous plants and leaves; and if they want manure, dig in some rich strong loamy earth among them with a small spade, and dig the alleys afterwards.

If they are wanted, plantations of strawberries may yet be made. Plant them in a loamy good soil if you have it. Dig the ground fine, tread it all over, then make it out into beds, with alleys about twenty inches or two feet wide; set your plants in rows, three or four in clusters, about a foot apart, and, if it do not rain, give them water just after they are planted.

This is a good time to be making preparations for planting fruit trees. If you have any borders on the walls that want replanting, trench them two feet or thirty inches deep, or as the depth of your soil may allow, picking all the old roots out of them. Manure them with a little soot or lime, and vegetable mould, or perfectly rotten dung. Let these be well mixed among the earth by chopping it fine; then level your border, which should be at least ten or twelve feet broad, and plant your trees any time when

when it is most convenient in the course of the winter.

If you wish to make for trees a new border of good earth gradually, dig out holes against your wall about three feet deep, of a semicircular form, four feet wide, fill these holes up with good earth above the old border, that when the earth is thoroughly settled, it may stand rather higher than the original border. Tread the earth on the surface, and loosen it again to let the rains sink into it. When it has lain to settle well, the trees may be planted in it. Borders thus made last year should now have an additional quantity of fresh earth put to them, and continue to do so every year after, as the roots of the trees require, till the border be made sufficiently wide.

If you have wall trees of good sorts, which you are desirous to improve, make a mark in a a semicircular form, about two, three, or four feet distance from the stems of them; then in the outside of the mark, dig out a trench three, or more, feet wide, and three feet deep, fill up the space with good fresh earth, of a loamy, but not of a binding, nature. The roots of the trees will grow into this fresh earth, which will enable the branches of them to grow more vigorously, and send forth new shoots. Additions of fresh

mould should be added yearly, as it appears necessary. Fruit trees of any kind, whose shoots are ripened, may be transplanted towards the end of this month.

Pears and apples not gathered last month, should now be taken off the trees, and spread in a dry room to preserve them for winter or spring use.

Any grapes that are yet on the trees against walls may be preserved from the frosts by covering them with mats.

The borders of fig trees may now be covered thick with long litter of any sort to keep the frost from their roots, and when the weather begins to set in severe, cover the trees over with mats, straw, or fern.

Take care of your peach, nectarine, fig, strawberry, and other plants, which you have in pots for forcing in the spring. Keep the pots free of weeds, and plunge them in old tan or light mould, which will preserve their roots from the frost.

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On

## On the PLEASURE or FLOWER GARDEN,

*For October.*

If it was not done last month, auricula plants in pots should be removed into a dry sheltered situation. They will keep very well, during the winter, in melon or cucumber frames, if they are covered up in severe frosty weather with mats, or any other sort of covering.

Let carnation layers in pots be kept free of weeds, and they must stand all winter under coverings of glass, to defend them from heavy rains, hard frosts, and cutting winds; give them water, if they begin to get dry, or let them have a gentle shower of rain.

All kinds of fibrous-rooted hardy flower plants may now be transplanted, and increased by slipping and dividing their roots.

Various sorts of fleshy knobbed rooted plants, may also be transplanted and increased, such as irises, lily of the valley, solomon's-seal, pionies, &c.; they may be planted here and there in the flower borders, and small sticks set beside them, that

that in digging the borders, they may not be injured.

Flowering shrubs may be pruned when their leaves are decayed and fall off. Cut out all the irregular, unsightly, and superfluous branches, and head down those sorts that require it, forming them into handsome bushes, so as not to interfere with one another, nor injure lower flowering plants that may grow near them. Put stakes to any of them that require support, and let the stakes be covered with the shrubs, that they may appear as little as possible.

Pull up the stalks of annual flowers that have done blowing, and also the stalks of herbaceous and perennial flowers that have no blossom on them. Clear the flower borders of all kinds of litter. If the flower borders require manuring, spread some vegetable mould or rotten dung on them, and dig it in carefully among the plants.

Evergreen shrubs of most kinds may now be planted, if the ground is in a moist state. Some of the sorts are the pyracanthus, alaternus, laurels, sweet bay, lauristinus, evergreen honeysuckles, junipers, striped hollies, &c.; firs, cypresses, cedars, yews, evergreen oaks, &c. may also be transplanted.

In the latter end of the month, deciduous trees and shrubs may be removed. Some of these are the plane, sycamore, elm, horse-chesnut, ash, alder,

alder, poplar, oak, beech, lime, maple, larch, spruce firs, weymouth pine, laburnum, &c.; and of shrubs, lilacs, syringos, althea frutex, spirea frutex, honeysuckles, roses, cytisus, jasmines, persian lilacs, mezercons, viburnums, scorpion-sena, &c.

When trees or shrubs are planted, make the holes so large, that the roots may have free liberty to extend themselves in every direction. When the roots of the plant are trimmed, place it in the hole in an upright direction; then holding it, whilst an assistant with a spade covers the roots, shake the tree occasionally, to admit the earth between the roots, and tread the whole over to keep the plant steady.

When arbutuses, china arborvitæ, kalmeas, magnolias, and other such like tender plants, are transplanted, they should be removed with balls of earth about their roots.

If new plantations are making in continuation, or in clumps, the height of each plant, when full grown, and the mode of growth, should be considered, that every one of them may be so planted, that they may appear conspicuous and to full view; also regard should be had to the distance they ought to be planted from each other; for some sorts naturally spread out their branches in an horizontal direction, while others, having an upright tendency, do not so much interfere

interfere with one another: observe that the tall growing ones should be planted most backward, and those of low growth nearest the front. Shrubs should be planted alternately, so that each plant may readily be seen. When they are planted in clumps, they should rise gradually, from the sides to the middle of them.

Towards the end of the month, tulip and hyacinth roots may be planted. Plant each variety in beds by themselves, and the inferior sorts may be planted in the borders, about a foot from the edge, in a straight line. A good soil for these roots is a light mellow earth, of a dry rich sandy nature. Dig the earth very fine, and make the beds about three feet wide; plant four rows in each bed, eight inches apart, and put the roots six inches asunder in the rows; mark out your bed in rows, and with a round blunt-ended dibber, such as makes holes to plant potatoes, make holes in the rows six inches apart, and about five inches deep; put a little sand in each hole, drop the bulbs in, and let a little sand fall on them, and cover them about three or four inches deep.

The beds on which fine hyacinths and tulips are planted, should be situated in a dry part of the garden, in a southern aspect, sheltered from the north and east winds by trees or buildings, at a distance from them. If they are near walls

or hedges, the beds should be five or six feet distant from them, and the drip of trees ought to be avoided.

Those who wish to make a noble appearance with their tulips and hyacinths, should plant six or seven rows in a bed, making the beds about four feet wide.

Tulips and hyacinths may now be put in pots, that they may be made to blossom, during the winter, in frames or forcing-houses. Pot them in light rich sandy earth, and cover them not deeper than an inch. Till you want to force them, plunge them in rotten tan, or light earth.

Plant ranunculuses either before or after winter. They may be planted the latter end of this month, or in November. If the situation and soil is cold and wet, they had, however, as well not be planted till the latter end of January or February. A fresh loamy pliable soil is best for all kinds of ranunculuses. Dig the ground very fine, make it out into beds, about three feet and a half wide, rake the beds fine, then draw drills about six inches apart, and set the ranunculus roots in them four inches asunder, and cover them over about two inches deep.

The roots of ranunculus will remain several days in the ground after planting, before they begin to vegetate; during which time, they swell very much, and are, in this state, very easily hurt by

by the frost, more so than when vegetation has taken place; therefore, as soon as they are planted, if there be the appearance of frost, cover the beds with fern or straw, and if the frost come severe, the covering must be augmented accordingly; but the coverings should be taken off, when the frost does not penetrate into the ground.

About the middle of the month, anemonies may be planted. They require the same mode of culture as ranunculuses, only they are more hardy, and do not require much covering in winter. Plant them in drills, about six inches apart; some sorts may be planted only about one or two inches apart in the drills.

Plant narcissus of different kinds; they should be planted in beds of light rich earth. Set them in rows about six inches apart, and put them about four inches asunder in the rows, and cover them three or four inches deep. Small roots not come to their full size, may be planted closer together in the beds.

Narcissus may be planted in clusters in the flower-borders, and they may be potted for forcing in the winter.

All sorts of bulbous roots may now be planted, such as snowdrops, jonquils, fritillarias, irises, ornithogalums, musk hyacinths, gladioluses, martagon lilies, pancratiums, crown imperials, white

 lilies,

lilies, and all other sorts of bulbous roots which blow in the spring, or in summer.

Plant crocuses; these may be planted in clusters round the borders, or in continued lines, about a foot from the edges of grass or gravel walks. They may be planted with a dibber, or in a drill, and covered about two inches deep; they may likewise be planted in beds, about three inches apart, and two inches deep in the ground.

Plant rose-trees in pots for forcing. Take good loamy earth from a quarter of the kitchen-garden, mix it with very rotten dung, and run it through a coarse screen or sieve; or rich earth, which melons have grown in, is well adapted for rose trees; get pots of a good size in readiness, and take strong plants out of the flower-borders or beds; cut off any straggling shoots, trim their roots a little, and plant them in the pots, taking care to let the mould fall in between their roots, pressing it with your hand so firm as to keep the plants steady in the pots. If you want them, they may be forced the ensuing spring; but it is best to pot them a year at least before they are forced; they will, after that period, be able to produce fine strong rose-buds.

In the autumn, water your rose-trees in pots occasionally, with dung water, which will enrich the mould about their roots.

If you have any walls or palings which you wish

wish to hide, plant against them, laurels, phillareas, lauristinus, or other evergreens.

On account of its beautiful clusters of berries, the pyracanthus is a pretty shrub to plant and train up against a wall. In autumn, its berries are ripe, and they make a very agreeable appearance.

In this, and the two following months, the arbutus, or strawberry-tree, makes a beautiful appearance, when it is in blossom, and, at the same time, loaded with fine red round fruit, like large strawberries.

Layers of trees and shrubs may now be put down to propagate, and cuttings of various kinds of them planted, and layers of last year taken off and planted in nursery beds.

If the ground be moist, this month is a good time to make edgings of dwarf box. Edgings of suthernwood, lavender, thyme, pinks, daisies, thrift, &c., may also be planted.

This is also a good time to plant hedges of phillirea, lauristinus, yew, holly, alaternus roses, sweet brier, privet, hawthorn, &c.

Now is the time to gather and preserve the seeds of several kinds of flowering shrubs, such as hawthorn, portugal laurel, sweet brier, roses, &c. The seeds of trees may likewise be gathered: these are laburnum, sycamore, ash, mountain ash, acorns of oak, cones of firs of different

ferent kinds, beech, horse chesnut, sweet chesnut, walnut, &c.

Mow and sweep grass walks and lawns, and roll them frequently to keep down the worm cast.

Weed and sweep gravel walks often, and roll them to keep them smooth and neat.

## On the NURSERY-GARDEN,

*For October.*

In the beginning of this month, common laurels, portugal laurels, lauristinus, aleternus, phillireas, and all other sorts of evergreen plants, may be transplanted into nursery beds; if the weather be dry, give them water as soon as they are planted.

Transplant into nursery beds, layers and cuttings of last year, which are well rooted. If they are not well rooted, and the wood sufficiently ripened, this work may be deferred till the latter end of the month, or till another season.

Young

Young forest trees may be pruned. It is not proper to strip the stems of these bare of all the shoots, small ones should be left here and there on them; but those that are cut off, should be cut close and smooth to the stem, that the bark may easily cover the parts from which the branches were cut, so that no blemish may be in the wood. As the trees grow up, the stems of them may be gradually stripped of all the side shoots, beginning at the lower part first; cut them close to the stem, for the reason above assigned.

Forest trees in plantations, after they are grown from six to twelve or fourteen feet high, are often, after that, left to nature; and as they grow up, the stems are much excluded from the air, and the side branches on them die, beginning nearest the ground first. This is natural, and in this case, nature may be much assisted, to the great advantage of the timber. To assist the trees in producing sound timber, they should be gone over every year, in the winter or spring months, and the shoots cut from their stems as the trees advance in height, and they ought to be cut off close to the stem of the trees perfectly smooth, that the bark may easily cover those parts where the shoots were cut from. In this pruning, the rotten branches ought not to be excepted.

To

To convince any person that this method of pruning forest trees should be adopted, let them look at timber, after it has been sawn into planks or boards, and they will see in some of it the branches from near the heart go out through the wood, in form as if a hole had been bored with an instrument, and a peg of wood exactly fitted to the hole driven into it. This is frequently very discernible in fir timber, and is called knots by some people.

The seeds of horse-chesnut, ash, beech, sycamore, laburnum, and of some other sorts, may be sown in this month. Dig a piece of ground fine, make it out into beds, and sow the seeds in drills or broadcast, covering them about two or three inches deep.

The seed of hawthorn, holly, yew, &c. may also be sown some time in this month. They should be buried in the ground three inches deep. These, however, lie in the ground more than twelve months before they vegetate; on that account, the most general practice is to bury them a year in the ground before they are sown, and for this purpose a trench is dug in the ground, level at its bottom, and the seeds deposited in it, and covered over with earth about six or seven inches deep; in which situation they remain till the following October, when they may be sown

in

in beds, or kept where they are, and sown in the succeeding spring of the year.

Walnuts, and the acorns of the oak, may be sown as soon as they are ripe. Make beds three or four feet wide, draw drills, about six inches apart, put the nuts in them, and cover them two or three inches deep. Or you may rake the mould off the beds to the depth you intend to plant them, and sow the acorns over the surface two or three inches asunder, press them down, with the spade flatwise, and spread the earth equally over them.

In this month you may sow cherry and plum stones for stocks. Sow them in beds, and cover them with earth two or three inches thick.

Stocks for budding or grafting on, whether from seeds, cuttings, layers, or suckers, may now be planted out in rows, about two feet or thirty inches asunder, and the plants set in the rows, about sixteen inches apart. Small ones, not fit to be planted in rows, may be bedded out about five or six inches plant from plant, till they get another year's growth.

Trees and shrubs of various sorts, may now be propagated by laying. Medlars, mulberries, figs, &c., may be increased in this way.

Cuttings may now be planted of currants, gooseberries, vines, laurels, honeysuckles, jasmines,

mines, elders, willows, privet, and a great number of other sorts of trees and shrubs.

In this month, vacant pieces of ground should be prepared by trenching, manuring, and digging, for planting trees and shrubs of different kinds. If there is time for it to lie to meliorate, it may be laid up in ridges.

New planted evergreen shrubs, if they are large plants, will probably require stakes to support them; tie them to the stakes with bass, or any other soft bandages that will not hurt them.

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THE

THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES,

*For November.*

THE fruiting pine-plants will now be established in the tan-bed for the winter, if every thing has gone on according to expectation. Examine the heat of the bed, and if the warmth of the tan be moderate, and your plants not plunged into the rims of the pots, you may put in some well-prepared tan among the pots; let it be done carefully. If you cannot reach to the middle of the bed among the pots with your hand, take a wooden hoe, or a round-ended stick, to push the tan in with. Set the pots level, and see that the tan be close to their sides, that the heat of the bed do not escape through vacancies.

During

During this month, the plants will require but little or no water; the greatest care should be taken, that the heat of the tan-bed be not too violent, for if the roots of the plants be destroyed by too much heat, too much water, or by any means whatever, the fruit will be but small, and it would probably keep the plants back from fruiting till May or June. In this month and the following, there is little or no natural heat, to assist in causing the plants to send forth young roots from their stems; and, therefore, if the old roots are now injured, the plants must remain in an almost dormant state, till new roots spring from the stems, or unhurt roots, into the mould, and that will not take place, but in a very small degree, before the latter end of January or February.

If any thing occurred to hinder the tan-bed from being made up for the winter, till this time, it should be done as soon as possible, about the beginning of the month.

Make gentle fires in the evenings, and in cold dull mornings. Let the house be kept in a clean sweet state. If you have french beans or exotic plants in it, keep them clean, and give them gentle waterings when they begin to be dry.

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*Height*

*Height of the Thermometer in the Fruiting-House,*

*For November.*

| | D. | M. | N. | E. |
|---|---|---|---|---|
| | 1 | 64 | 80 | 67 |
| | 2 | 64 | 72 | 66 |
| | 3 | 63 | 68 | 64 |
| | 4 | 62 | 68 | 64 |
| | 5 | 59 | 65 | 65 |
| | 6 | 63 | 80 | 65 |
| | 7 | 62 | 78 | 64 |
| | 8 | 62 | 84 | 64 |
| | 9 | 60 | 80 | 64 |
| Watered gently. | 10 | 57 | 80 | 64 |
| | 11 | 64 | 68 | 65 |
| | 12 | 64 | 67 | 65 |
| | 13 | 63 | 84 | 64 |
| | 14 | 64 | 74 | 66 |
| | 15 | 65 | 72 | 65 |

| | D. | M. | N. | E. |
|---|---|---|---|---|
| | 16 | 65 | 70 | 64 |
| | 17 | 61 | 66 | 64 |
| | 18 | 60 | 72 | 66 |
| | 19 | 67 | 75 | 65 |
| | 20 | 64 | 85 | 65 |
| | 21 | 61 | 67 | 65 |
| | 22 | 61 | 68 | 64 |
| | 23 | 62 | 67 | 63 |
| | 24 | 60 | 66 | 64 |
| | 25 | 61 | 67 | 64 |
| | 26 | 61 | 67 | 63 |
| | 27 | 59 | 84 | 62 |
| Watered a little. | 28 | 60 | 68 | 62 |
| | 29 | 59 | 72 | 65 |
| | 30 | 63 | 68 | 65 |

Attend carefully to the succession plants. If the beds have not been made up for the winter, it should now be done. Take all the rotten exhausted tan out of the pit, and if it is rough and worth sifting, run it through a screen or sieve; cast the round tan into the pit and level it, then fill it up to its height with fresh bark, and work the old and new well together, about three feet deep,

deep, level it, and tread it all over the surface, and dig it up again a spit deep, and plunge your plants in it up to the rims of the pots. Make the fires a little larger than usual, till the heat come up in the tan-bed.

Let the house be kept sweet and clean constantly; make gentle fires in the evenings, and in cold gloomy days.

Pine-plants in pits or frames, without fire heat, must have a gentle lining at them in cold weather, and cover them up at night with mats.

Grape vines in hot-houses should now be pruned, and tied up close to the rafters.

To have french beans early, plant some now in pots, in the manner directed in the former months. Plant them in moist mould, and they will not need to be watered till after they come up.

Cucumber plants in the hot-houses, sown in August, should be kept clean, and watered when they begin to be dry.

Take care of exotic plants in the hot-houses; keep them free of weeds and dead leaves, and give them gentle waterings when they want it.

If you have any crowns or suckers not planted, hang them up in the hot-house till the month of March.

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On

## On the GREEN-HOUSE,

*For November.*

Look over the plants carefully every other day, to see if any of them stand in need of water, and if you perceive any of them beginning to be dry, give them a moderate watering. Pick off from the plants all the dead and decaying leaves, and suffer no weeds to grow in the pots. If the nights are cold and damp, make gentle fires in the evening, and in very cold days, just to keep the house dry, that damp may not affect the plants or bunches of grapes, that may yet remain on the vines. Give the house plenty of air in fine sunshine days and in mild weather, and when you have fires, keep a draft of air constantly at it, even during the night, which will prevent the effluvia that arises from the flues from injuring the ripe grapes.

If you have green-house plants, or cuttings of green-house plants of any kind in frames, give them air in fine weather, and if the nights are cold, cover them up with mats.

If

If you have any room in the green-house, set in young china roses, mignonette, stocks, and any other kinds of flowering plants in pots, that may require protection from the cold weather in winter.

The bunches of grapes, if you have any remaining in the green-house, should be examined frequently; and if any of the berries begin to rot, cut them out, that they do not affect the adjoining ones; and the leaves on the vines, when they decay, should be taken off.

If you have any unsightly myrtles, or other hardy green-house plants, you may turn them out of their pots into the ground in a sheltered situation; prevent the frost from getting at their roots by mulching, cover them with mats in hard frosts, and they perhaps may survive the winter.

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On

## On the FORCING-HOUSES,

*For November.*

The grapes on the vines, which were begun to be forced in August, will, in this month, be set, if they have flourished according to expectation; they will now require a great deal of care and good management: fires will be wanted every evening, and endeavour to make them steady, that in the morning the thermometer may stand about 60, or not lower than 55, and if it be not sunshine in the morning to raise the heat of the house, it will be necessary to make a fire to raise the heat, in the course of the day, to 65 and 70, admitting a little air during a part of the day. When the sun shines, the heat should rise a little higher, observing to have a free draught of air coming in and going out of the house, when the thermometer rises to above 65. If the border, or any part of it, be in the inside of the house, keep it in a moderately moist state. When such early forcing is attempted, the stems of the vines at least ought to be planted in the inside of the house. I am of opinion, that forced vines should always be planted in the inside of

the house, and their roots have liberty to run out; for this purpose, I have advised the building a forcing-house, with openings in the front wall.

You will observe to stop the shoots at a sufficient distance before the fruit, and train up young wood for the next year's crop.

If the roots of the vines run into the border in the outside of the house, cover it, to a considerable distance from the house, with long dry litter of fern, stubble, or straw, just so thick as to prevent the frost from freezing the surface of it.

Late grapes in houses will require attention; go over them frequently, and if any of the berries begin to rot, cut them carefully out of the bunches, that the others may not be affected by them. When the leaves begin to decay, take them off. Keep the house in an airy cool state. If the weather be wet, damp, or foggy, which it mostly is at this time of the year, make a fire occasionally to keep the grapes dry; but keep air constantly at the house, while there is heat in the flues.

If any grape houses are uncovered, put the glasses on them in the beginning of the month, to keep the wood dry, and the frost from affecting the plants, observing to open the sashes to admit air every fine day.

The vines in forcing-houses, where the grapes are

are over, may now be pruned. The manner of pruning must be suited to the strength of the vines, and to the method you have adopted. If you practise the spurring method, and your main branches be about two feet or thirty inches apart, if the vines are in a vigorous state, the bearing spurs may be left about a foot asunder, leaving only one or two good buds on each spur; but if your main branches are farther apart than three feet, the spurs may be left a little closer together.

It may be necessary, sometimes, to train a vine in one single branch the whole length of the house, and longer, by turning it back again; if that should happen to be the case, and the plant strong, the spurs may be left on, only seven or eight inches apart. However, the pruning of vines, and of fruit trees of all kinds, in regard to the quantity of bearing wood to be left on them, must be according to their strength, and submitted to the judgment of the person who is entrusted with the management of them.

In pruning vines, if what is termed the old method be used, the young shoots should be shortened to three or four eyes; and if the new method be practised, cut down to the bottom all the wood that bore the crop the preceding season; and also cut down, to near the lower part of the stem, a young shoot or two, to send forth

a supply of long branches to succeed the present ones. Leave on each plant, according to the age and strength of your vines, one or two of the best budded long shoots produced last summer, and lay them in, at such lengths as you conceive the plants are able well to support with a burden of fruit on them.

By some writers on gardening, much stress is laid on the modes of pruning and training; but I am of opinion, that to have good crops of grapes, much more depends on the soil they are planted in, and the climate in which they are kept, than on any methods of pruning or training that have been, or ever can be adopted.

The chief thing in pruning fruit trees is to leave on a sufficiency of bearing wood, and to keep the trees moderately thin of shoots and leaves during the growing season. This requires art; but it will not do, unless the trees are planted in soil suitable to their nature, and the climate in which they grow be a genial one, neither too hot nor too cold, nor over dry, or too full of moisture.

In case severe frost comes on before you begin to force your grape vines, lay a covering of any kind of litter on the border, to keep the frost from the roots, and shut the house close during the frosty weather, except in days when the sun shines.

I have

I have been informed by a native of Germany, that in some parts of that country, before the severe frosts set in, they lay the branches of their vines down and cover them with earth, to preserve them during the winter.

In the south of England, I have known vines greatly hurt by frost, when the borders were bare of snow, and destitute of any kind of covering, to prevent the frost from penetrating far into the ground.

I do not approve of taking vines out of hothouses, after they have ripened their fruit, and letting them remain out during the winter, or any part of it; though the vines may sometimes do well when this method is followed, it is not imitating nature. If they are left out, they should have some kind of protection. They may be stretched out on the border, warmed by the influence of the heat from the flue, near the front wall, or covered with mats in frosty weather.

Your cherry-trees in the cherry-house may continue fully exposed, till within a fortnight or three weeks before you begin to force them. Cherry-trees are very hardy, I have never known them to be injured by the most severe frost.

The border in which the trees of your fig-house

house grow, should be covered with long dry litter of some sort, to keep the frost from their roots; and either the glasses must be put on the house, to keep the hard frosts from the branches of the trees, or they should be covered with mats or straw.

To keep the wood of your trees dry, the glasses should be on your peach-houses. Give them all the air you can, only prevent the rains from falling on them. Examine every part of the trees, and cut off any decaying shoots that may appear, and if any dead bark, canker, or gum, be observable on them, open the parts, and cut out the affected wood in the manner as directed last month.

The rose-house should now be prepared for commencing forcing, about the beginning or middle of next month. Get the flues made perfectly clear of soot, and repair them, taking care to secure them with plaster, that no smoke can come through them into the house among the flowers. Paint the inside wood work once over, or else wash it clean with soap and water, and get all the walls in the house washed with lime and water.

Roses, and various other flowering shrubs and perennial and herbaceous plants, may be potted for forcing, any time this month.

Bulbous

Bulbous roots may likewise be planted in pots, to set into forcing-houses or frames, to bring them into blossom at an early period.

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## On the FORCING-FRAMES,

*For November.*

Cucumber plants, the seeds of which were sown last month, should be transplanted about the beginning of this month, into the beds where they are to produce their fruit, or into small pots, that they may be planted out towards the latter end of the month.

Those who wish to have asparagus in winter, should, in this month, begin to force it. The common way to do it, is, having a quantity of good dung well prepared, by putting it together in a heap to ferment, that the rancidity of it may be evaporated, by turning and mixing it several times when there is a strong heat in it; make it up into a bed about three feet high, and four

four or five inches larger all round than the size of the frames, which are to be set upon it. When it is made, set the boxes and glasses on, and let it heat and stand till it is sweet, which may be known by the smell of it; then tread it level, and loosen up the surface again. that the heat may have free liberty to arise. After this is done, lay on the surface of the bed from six to eight inches of vegetable mould, or any other sort of light earth that the heat may easily ascend through, and of such a texture as does not retain water. Take up plants, no matter what age they are, which produce fine asparagus, trim their roots, and place them in rows on the beds; when one row is laid, strew a little fine mould among the roots, then proceed in the same way with one row after another, keeping them on a level, as the surface of the bed at first lay, till you have finished planting them; then lay among the buds and roots some fine vegetable, or other light rich mould, working it in among them with your fingers, and cover the buds over about one inch thick, and above that lay three inches in depth of vegetable mould, not very rotten, but such as the water will run quickly through. If you have not got vegetable mould of this description, old tan, not very fine, will answer the purpose equally well. If there is a strong heat in the bed, let the glasses remain off till it begin to decline.

 When

When the asparagus bed has, after planting, stood two or three days, when the heat will have begun to warm the roots, give the plants a sufficient watering, pour it out of a pot with a rose on it, to imitate a shower of rain; let the bed have enough to moisten the mould well, and to wash it in among the roots. As the surface of the dung in the bed is loose, it will pass into and through it freely, without creating a stagnation in the mould, or any part of the bed. When the heat of the bed begins to decline, put on the glasses; and if the bed be in good condition with regard to heat, much air need not be given, till the buds of grass are nearly about coming up, when it should be admitted more plentifully.

Give the plants now and then a watering, as before directed; and in case, after planting, you should find the bed getting too hot, which will sometimes happen from the mildness of the weather, pour water plentifully all over the surface, letting most fall on the middle, which will cool and sweeten the bed, and enable the plants to send up fine shoots.

The outsides of the bed will become cold before the middle of it; to remedy this, when it is necessary, lay some dry litter of straw, stubble, or fern, all round it, and when the heat begins to become too little, remove the temporary linings, and

and make a gentle lining of dung at one side of the bed, and when it declines in heat, make one at the other side of it, and so on alternately.

When the asparagus is about two or three inches above the mould, it is fit to cut, which may be done carefully with an asparagus knife, or it may be broken off from the roots with the finger and thumb; but whichever of the methods is practised, care should be taken not to injure the buds that are coming up.

Mr. Walter Nicol, a late writer on gardening, in giving directions for forcing asparagus, when the bed is about to be planted, orders "to cover the whole with squares of turf." By this method, he says "a rank steam is effectually prevented, which is of no small importance in the forcing of asparagus." If the bed contain rank unhealthy steam, to prevent it from contaminating the air in the frame, it would have been more reasonable to direct the whole surface of it to be covered with sheet lead, or some other metal, through which certainly the steam of dung could not penetrate. This, in effect, Mr. Nicol seems to acknowledge, for he afterwards says, "it sometimes happens that a little will rise, if the dung did not undergo a proper fermentation." After dung has undergone a proper fermentation, the steam arising out of it

will be sweet, which, instead of hurting asparagus, or plants of any other kind, will nourish them, if it be properly applied.

Laying turf on hotbeds, for forcing asparagus, melons, and cucumbers, is strongly recommended by Mr. Nicol. He says, the turf keeps down the rank steam from injuring the plants, and prevents the heat of the bed from burning their roots. Long experience, however, in managing hot-beds has convinced me, that turfing the surface of them has a different effect. The method is an old one, and is, as far as I know, now justly exploded, and unpractised by every good gardener.

Turf laid on the surface of a hot-bed, prevents the water from sinking freely into it, and if there be a sufficient heat in it for winter forcing, unless it receive water, it must become dry and husky; and when, in that state, vapours uncongenial to the plants arise out of it, and the detention of the water on the surface of the bed among the mould, by means of the turf, causes a stagnation, which sours the earth and contaminates the air, so that neither the earth, nor the air in the frame, is well adapted for the growth of plants, especially of tender ones.

If there be unhealthy contaminated air in a hotbed, instead of endeavouring to confine it down in the bed, the surface of the dung in the frame ought to be frequently loosened, to give the

the foul air free liberty to rise and pass out of the frames; and as it is impossible for those who force asparagus, melons, cucumbers, &c., on beds of hot dung, to have the air arising in the frames continually sweet, they should take care to leave the lights in such a way, that the external air may, at *all times*, have a free ingress and egress to the plants. See my treatise on the cucumber, where this subject is more largely commented on.

Those who have got brick beds, such as are described in the former part of this work, may force asparagus on them by the help of linings only, where no steam can enter the frames to injure the plants.

Asparagus may be forced by the assistance of fire heat, with a gentle heat under them, raised by leaves of trees, oldish tan, or dung, in which is a mild heat. The flues should be above the surface of the bed, after the plants are in and earthed up.

The melons will, by this time, be over; take the lights off the boxes which are unemployed in protecting lettuce, cauliflowers, or any other kinds of esculent vegetables or flowering plants, and set them into a dry shed, till they are wanted. If any of the boxes or sashes are in want of repairing and painting, let it be done when they are dry.

Clear

Clear away all the stalks of the melons, and all other kinds of litter from your old melon beds, and take the opportunity of frosty weather to wheel away the old rotten dung.

The mould in which the melons grew being rich, should be laid in a heap somewhere; it will do for fruit trees, or for many kinds of flower plants. If you have not fresh mould for your melons next spring, you may expose it in a small ridge, during the winter, to the frosts, rains, and air, turning it several times, and it will do to plant your melons in next spring.

If you have at liberty a melon brick bed, on the plan I have mentioned, you may dig the earth fine in which the melons grew, and plant lettuce in it. By a gentle lining you can force them in the spring, if you are able to spare the bed from other uses.

In this month, collect leaves of trees to rot for vegetable mould, or to make hot-beds; they answer well to mix among long horse dung.

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On

## On the KITCHEN-GARDEN,

*For November.*

The mushroom beds that were spawned the former months will now require attention. They should be examined every two or three days, for the heat in them will be affected by the variableness of the external air. In windy or frosty weather, they will require larger coverings than in mild weather, particularly if they are in the open air. They should be uncovered about once a week, and the surface of them cleared of any damp litter or mouldiness that may happen to be on it. The mushrooms of those that are in bearing should be gathered before they be too old, and the beds must be covered up according to the heat found in them, or to suit them to the temperature of the weather. If the heat in the beds be nearly gone, and the weather cold, they will require a thick covering; sometimes, perhaps, a foot or eighteen inches deep.

Any mushroom beds not finished, if they are become cool enough, should be spawned. Put the spawn in very thick, if you have got plenty.

Cut

Cut down the stems of asparagus if it was not done last month. Clear the beds of weeds and litter of all sorts. Spread rotten dung on the beds, and earth them up in the manner as directed last month.

If artichokes were not dressed and secured from the frost last month, it may be done any time this month before hard frosts come on. Cut down the stems and leaves to the ground, and cover them four or five inches thick with earth dug from between the rows, or with litter of any sort, to prevent the frost from freezing the roots of them.

Earth up cardoons, if they require it. The leaves of each plant should be tied together with bass, hay, or straw bands; and fine earth put up close to them to blanch them and preserve them from the frost.

In a dry day, tie up endive to blanch. Also, fern or any other long litter not too heavy, may be laid on some beds to keep the frost from the plants, and blanch them. If you have a dry cellar or shed, you may lay some in, or into melon or cucumber frames, which can be covered up in frosty weather, the glasses will keep the plants dry.

To have a constant supply of small sallading, sow rape, mustard, cress, &c. once or twice a week in pots, in the manner as directed last month, and set them into the hot-house.

Lettuce

Lettuce plants may yet be pricked out in frames to preserve them through the winter, and if you wish to bring them to perfection early in the spring, by the assistance of artificial heat, you may plant some in such brickbeds for melons as are described in the former part of this publication. By applying a lining of dung, the bed can be warmed whenever you choose it. Lettuce in frames, if they have taken root, should have the glass taken off, or plenty of air given them every fine day.

Continue, as they require it, to earth the rows of celery up in fine dry days, if such happen to be at this season of the year.

If you have any potatoes yet remaining in the ground, they had best be taken up before hard frost comes on; or if the ground be dry, you may let them remain, and cover them up with long litter to keep the frost from them, and take them up as they are wanted.

Dig up carrots, parsnips, red beet, salsafy, scorzonera, skirrets, hamburg parsley, turnip-radish, horse radish, &c. and lay them into sand, in places where the frost cannot get at them.

Lay a thin covering of fern or straw on some of your rows of parsley, to preserve it in hard frosts when there is no snow on the ground.

If you sowed any radish seeds last month, to stand

stand the winter in the open ground, lay a light covering of dry straw on them in frosty weather.

In this month, you may sow peas in a warm sheltered situation. They will have a better chance to stand the winter than those which were sown last month. Draw drills for them about four feet asunder, and four inches deep; sow the peas of early sorts, and cover them three inches deep.

Plant early kinds of broad beans. Put them in rows about three feet asunder, about three or four inches deep in the ground, and as far apart, bean from bean.

If it was not done last month, you may prick out cauliflower plants to stand the winter in frames; set them about three inches apart and keep the lights close till they have struck root.

The cauliflower plants under hand-lights, should have air in fine weather, and keep them free of dead leaves and weeds.

Look over autumn cauliflowers frequently, and when the heads begin to appear, lay large cabbage leaves over them, or the leaves of themselves to protect them from frost and heavy rains. The full grown heads may be taken up, and their roots laid into earth or sand, where they can be sheltered from bad weather.

When the weather is open, cabbages may be

 planted

planted any time in this month. Stir and hoe the ground between the rows of cabbages planted the former months.

Brocoli and all kinds of cabbages should now have the earth drawn up as high as it will lie to the stems of them.

Hoe and rake the ground between the rows of spinach, and keep the plants perfectly clear of weeds.

Trench and manure vacant pieces of ground, that it may be ready to plant or sow in the spring.

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## On the FRUIT-GARDEN,

*For November.*

Plum and cherry trees against walls, and espaliers, may now be pruned and nailed. Cut out any dead or superfluous shoots, and if the studs or bearing spurs are getting too far from the main branches, shorten them in judiciously, making your cuts clean and smooth. If there are any vacancies, lay in young shoots to supply them. Take off all rotten shreds, clear the trees of dead leaves or other litter, and nail

or

or tie the shoots steady to their respective places, but it is best not to put nails and shreds thicker on them than is necessary to prevent the winds from tearing them down.

This month is a very good time to prune gooseberry and currant bushes. Thin them out as directed last month, and when they are finished, clear off the cuttings and dig the ground between the rows, laying some manure on it first, if the plants require it.

If it is wanted, make a new plantation of gooseberry and currant bushes; and it is a fit time in open weather, to propagate these plants by cuttings.

Go over the peach, nectarine, and apricot trees on the walls, and take off from them most of the nails and shreds, leaving only as many as can keep them to the wall, so that in windy weather, the branches do not rub one against the other. Inspect the trees carefully, and if you perceive gum or dead bark on them, open the parts thus affected, and cut out the dead or infected wood as directed in the former months. Also cut off any decaying, or luxuriant superfluous shoots. Make your cuts smooth and sloping, in such a manner that the wet may not lodge on them.

Clear your trees of all dead leaves, cobwebs,

&c. which hang about them, and rake all sorts of litter from the borders.

Pear and apple trees, either on walls or espaliers, may be pruned and fixed to their places any time in this month. They require the same mode of pruning and training as plums and cherries do.

In pruning cherry-trees, it ought to be remembered that the morella requires nearly the same method of pruning as the peach-tree, only the young shoots are not to be shortened, unless to cause them to put forth more shoots to cover the wall.

If they are wanted, make plantations of raspberries. Take strong well rooted suckers from the old plants. Plant them in good deep rich soil, about four feet row from row, and put three or four plants in clusters, in the rows, three feet apart.

If the weather be open, this is one of the best months in the year for planting peach, nectarine, apricot, pear, plum, cherry and apple trees. They should be taken up carefully, without straining or injuring the roots but as little as possible. Make holes for them that the roots may have room to stretch out in every direction; and do not plant them deeper than to cover the roots immediately proceeding from the stems

about three inches deep. In planting, break the mould fine, that it may fall in among the roots, so that no vacancies may be left; and in filling up the holes, shake the trees occasionally to cause the earth to intermix with the fibres, and when the hole is filled up to the top, tread the mould moderately firm.

Secure new planted trees from being blown down by tying them to stakes, or if they be planted against a wall, fasten them with nails and shreds.

Plant walnut trees in places where there is room for them to expand their large spreading heads. These are generally planted in parks or orchards, not less than twenty or thirty feet asunder.

Nuts and filbert trees of all sorts, may now be planted. These will prosper in almost any soil or situation, and may be trained either as dwarfs or standards.

Mulberry trees may be planted as standards in the orchard, or park, or as dwarfs, against walls or espaliers. If they are for standards, they should, before planting out where they are to remain, be trained with an upright stem, five or six feet high or more, according to the distance the branches are required to be from the ground, and then suffered to branch out at the top. If they are intended for walls or espa-

paliers,

paliers, their stems should only be about a foot high before they are allowed to spread their branches horizontally.

Quince, medlar, and barberry trees, should now be planted; the two former require nearly the same room as apple trees; the latter require no more room than filberts.

Before the frost sets in hard, the borders of fig trees should be covered with litter of any sort, so thick as to keep the frost from the roots of the trees, and their branches should be covered over with mats; otherwise, if severe frost comes, it will destroy the young shoots.

Standard fruit trees of all sorts, may now be pruned. Cut out dead or decaying branches, and where they are getting too crouded, take out some of the worst of them. Make the cuts clean and close to the branches from whence they are taken, that the bark may the more easily cover the wounded parts.

If there remain on the trees any apples or pears, they should be gathered in the beginning of the month.

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On

## On the PLEASURE or FLOWER GARDEN,

*For November.*

If it was not done last month, auricula plants in pots should be removed into a sheltered dry situation, that they may be protected from heavy rains, and cold frosty weather. If you have not a place for this purpose, they will do well enough in a melon or cucumber frame. Let the plants be kept free of dead leaves and weeds, and if they begin to get dry, give them a little water.

Carnation layers in pots in frames should be attended to. Give them air in fine days, keep them clear of weeds, and give them gentle waterings when they begin to be dry.

All sorts of bulbous roots may now be planted; such as hyacinths, tulips, ranunculuses, anemonies, and narcissus. Plant them in beds or borders as directed in the former months. Beds of the finer sorts of ranunculus, hyacinths, and tulips, would be better to be protected in heavy rain and hard frosts, by some kind of coverings. The beds may be arched over with hoops, and canvas

canvas or mats laid over them to defend them from the effects of inclement weather.

The different kinds of flowering shrubs may now be planted. Those of them that have heavy heads, should be tied to stakes, so that high winds may be prevented from blowing them down, or loosening them too much about the roots.

Oak, elm, beach, birch, ash, sycamore, alder, plane, poplar, larch, fir, pine, and all other sorts of hardy evergreens, and deciduous trees and shrubs may be planted. If they are large, most of the evergreens will require to be tied to stakes.

Various sorts of herbaceous, perennial and biennial flowering plants, may still be transplanted; they may be planted in beds or in the borders, in a diversified manner.

Flowering shrubs and evergreens, may now be pruned. When they are pruned, clear the borders of all sorts of litter, and they may be dug or remain till after christmas, when leaves of all sorts from trees or shrubs, will be perished or raked up, so that they will not make a litter after the borders are dug.

Tender exotics plant about in the borders or in beds; such as rhododendrons, azaleas, magnolias, halmeas, and many other sorts, will be better of mulching about their roots, and some

of

of the more tender ones will require, in very hard frosty weather, to be covered with mats The china rose, also, and some others of a delicate nature, should be mulched up about the roots, and covered with some sort of covering, if the frost be very severe, without a large covering of snow on the ground.

If the crocuses were not planted last month, they may be planted any time in this month. Plant them about two or three inches deep round the edges of borders or in beds, about three feet wide.

See that mignonette, stocks, and all other sorts of flowering plants in pots, be protected from severe weather. They should be set in the green-house, or in some other houses or frames, where the air is nearly of a heat capable of preserving green-house plants during the winter.

When you have time, get earth from heaths or commons, and prepare by turning and breaking it occasionally in frosty weather.

This is a good time to plant hedges of hawthorn, beech, hornbeam, privet, hazel, &c. Box edgings may also be planted, and hedges of all sorts of hardy trees or shrubs clipped at any time in this month.

Let gravel walks be swept and rolled occasionally.

If the weather happen to be mild, grass lawns and

and walks, will probably require to be once mown in this month. Keep them clear of leaves and other litter, and of wormcast if you can.

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## On the NURSERY-GARDEN,

*For November.*

All sorts and sizes of trees and shrubs which are of the hardy kind, may be transplanted, and planted any time in this month, if frost and snow do not prevent.

Stocks from the nursery or seed beds for budding or grafting on, may now be planted out in rows about two feet or thirty inches apart, and the plants set in the rows about fourteen or fifteen inches asunder. Those plants in the seed beds which are too small to be planted out in rows, should be bedded in beds about three feet wide and the plants set about four or five inches apart.

Tender sorts of American plants should be protected by mulching their roots, and covering their branches or heads with mats or other coverings in severe frosty weather. All kinds of tender

der plants in pots, should be set into frames or pits, and plunged in old tan or light mould; and in hard frosts, coverings of mats, straw, fern, &c. may be laid over them.

Forest trees of all sorts may now be pruned. Short weak shoots only should be left on the stems, and those that are cut, unless it is designed that they should shoot again, should be cut off close and smooth to the stems, that the bark may not be hindered from covering the cuts as quickly as nature can effect it.

Beds of tender seedlings should have some protection in hard frosts, cold windy weather, heavy rains and snow. For this purpose, hoops or wooden frames may be set over them, and covered with mats at those times when protection is deemed necessary.

The ground between the rows of trees and shrubs which are not intended to be removed in the winter or spring may be dug.

Prepare by trenching, manuring, and digging vacant pieces of ground to be in readiness to plant the ensuing months, with any sort of plants you think proper.

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The

THE

# GARDENER'S REMEMBRANCER.

## On the HOT-HOUSES,

*For December.*

THIS is generally the most gloomy cold month in the year; the pine apple plants will therefore demand attention to keep them in a gentle growing condition. Inspect minutely the heat of the tan-beds; this may be done by placing a thermometer in the tan, with its bulb as deep as the bottom of the pots in which the roots of the pines grow, if the heat raise it above 80, but not to 90, you have plenty of heat for this time of the year, if it rise above 90, the heat is rather too great, and the pots had best be but loosely plunged: if it is below 80, put the tan firm about the pots, and fill the vacancies up between the pots with tan full to their rims.

A person well acquainted with the heat that the roots of a pine apple can bear, will have no occasion for a thermometer in the tan-bed, thrusting down the hand in the tan, or having watch sticks in the bed to pull out and feel occasionally will enable him to determine whether the pots ought to be plunged in the tan to their rims or to stand out of it a little.

Fires must be made every evening in the hothouse, and also in the morning and continued all day, unless the sun shine to warm the houses; but fires should not be made stronger than to keep such a degree of heat as to prevent the plants from being altogether in a dormant state.

If the heat of the tan at the bottom of the pots come down to 80 or below, very little, if any water, will be required during this month. The earth, however, about the roots of the plants ought to be in a moderately moist state. In case the tan-bed was made up in the former months, according to my directions, I apprehend, if the tan was good, the medium heat of the bed, at about eight or ten inches below the surface, will not, during this month, be less than about 85 degrees of Fahrenheit's thermometer.

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*Height*

*Height of the Thermometer in the Fruiting-house, For December.*

| D. | M. | N. | E. | D. | M. | N. | E. |
|---|---|---|---|---|---|---|---|
| 1 | 64 | 68 | 65 | 17 | 59 | 58 | 60 |
| 2 | 61 | 64 | 63 | 18 | 59 | 57 | 59 |
| 3 | 61 | 68 | 64 | 19 | 59 | 66 | 59 |
| 4 | 60 | 64 | 63 | 20 | 56 | 64 | 60 |
| 5 | 59 | 63 | 63 | 21 | 54 | 60 | 60 |
| 6 | 64 | 65 | 64 | 22 | 55 | 72 | 58 |
| 7 | 66 | 64 | 64 | 23 | 52 | 75 | 60 |
| 8 | 60 | 60 | 62 | 24 | 60 | 60 | 61 |
| 9 | 60 | 64 | 64 | 25 | 58 | 80 | 61 |
| 10 | 60 | 63 | 63 | 26 | 58 | 65 | 60 |
| 11 | 60 | 64 | 64 | 27 | 57 | 65 | 58 |
| 12 | 60 | 62 | 60 | 28 | 56 | 85 | 59 |
| 13 | 62 | 60 | 63 | 29 | 56 | 75 | 62 |
| 14 | 59 | 56 | 60 | 30 | 57 | 62 | 60 |
| 15 | 60 | 55 | 60 | 31 | 55 | 85 | 60 |
| 16 | 58 | 64 | 60 | | | | |

Attend to the succession pine plants, and whether the air be kept to its heat by means of fire or dung, let it be kept during this month about the same height as that in the fruiting-house. See that the pots are up to their rims in the tan, and that no vacancies are about their sides to let the heat of the bed escape.

Pines in pits or frames warmed with dung heat should be covered up about three or four o'clock

o'clock in the afternoon, and uncovered in the morning about eight or nine. In very hard weather, it may be necessary, sometimes, not to uncover them in the daytime, only as far as to give them a little light; gentle linings should be kept at them, and in hard frosts raised up as high as the walls, if it is found requisite to keep the air to a sufficient degree of heat. No danger need to be apprehended to arise to the plants, from the steam of the dung getting in among them.

To have a regular succession of french beans, they should be planted at two different times this month.

Take care of the french beans that were planted in the former months, keep their leaves moderately thin, and the mould in the pots free of weeds, and examine them every day to see if they want water, and give them some when they want, about seventy degrees warn.

All sorts of exotic plants in the hot-houses should be looked after, and weeded and watered when they want it.

Towards the end of the month, if you have room, some sorts of fruit and flower plants may be taken into the house to force. Roses and carnations will bear the pine-apple heat. Perhaps, at certain times, the heat of the fruiting-house may be too powerful for them, but that requisite

requisite for the succession plants will suit them. Figs, &c. may also be put into the hot-house, and managed in the way pointed out in the former part of this work.

Sow seeds to raise small sallad in the manner directed in the former months; to have a constant supply, sow them twice a-week.

Set in once a week, to force, pots of mint, &c. if you observe this rule, you will have a constant supply if the plants grow well.

Cucumbers in the hot-house should be attended to. They are very liable in a hot-house, at this time of the year, to be affected by the mildew, when you observe it beginning, rub sulphur on the infected parts. Keep the plants free of dead leaves, and give them water not less than 70 degrees warm, when they begin to get dry.

If the grape vines in the hot-house were not pruned last month, it should be done now, prune them so that their shoots may be trained up under the rafters, or in the back side of the house above the path. Pines will not do well if they are shaded; it is therefore a good method, if vines are planted in the front, to train them up the rafters with bare stems, and let them produce their fruit in the highest part of the house, where they do not shade the pines.

On

## On the GREEN-HOUSE,

*For December.*

The weather being very uncertain at this time of the year and the days short, the green-house will require particular attention. The flues must be warmed with fire heat every evening, and also in cold gloomy mornings; the weather is sometimes in this month so cold that it is necessary to have gentle fires all day.

Take the opportunity of every mild or sunshine day to open the glasses, to let a circulation of fresh air into the house among the plants, which will be a mean to keep them in good health.

In very severe frost, if it happen to be a little on the leaves in the morning, it will not hurt them, but if the earth on the top of the pots be frozen, it is too severe for green-house plants.

Look over the plants frequently, and take off all dead and decaying leaves, suffer no weeds

to grow in the pots, and give them gentle waterings when they appear to need it: at this time of the year they had better be too dry than too wet, but extremes should be avoided, no plant ought to be suffered to flag for want of moisture in the mould, from which it derives its chief nourishment. Succulent plants, such as the different kinds of aloes, sedums, and ceruses, and many soft-wooded green-house plants, do not require much water during the short days in winter.

If any grapes remain on the vines in the green-house, examine them frequently, and if any of their berries begin to rot, cut them out. When you perceive that the bunches will not keep, the best way is to cut them off and eat them.

Pick all the decaying leaves off the vines, and suffer no litter to remain in any part of the green-house.

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On

## On the FORCING-HOUSES,

*For December.*

In this month grapes set and swelling will require particular attention. The flues in the house must not be suffered to become quite cold, therefore the fires will demand attendance very often, and it must be by a skilful steady person. The fires must be kept on gently all day, and attended to till ten or eleven o'clock at night, when they should be well smothered with ashes in the front to keep them in all night. If the weather be very cold, the person that attends the fires ought to be up in the morning about five o'clock. Endeavour to regulate them so that the thermometer in the morning may be about 60, but not below 55, and let it rise gradually in the day-time to nearly 70, and if the sun shine, a little higher, observing to admit air every favourable opportunity.

Stop the shoots and thin the leaves as they stand in need of it, and keep the shoots tied

neatly to the trellis. Give the border in the inside of the house water when it requires it, and sprinkle it occasionally with clean sweet water, which will raise a moisture in the air of the house suitable to the plants.

If there be a tan-pit in the grape-house, which is sometimes the case, let the tan in it be sweet; it ought not to be suffered to become husky and dry by a great heat, for if it is in that condition, the effluvia rising from it will not be sweet, and consequently not well adapted for the growth and prosperity of the tender vine. A tan-bed may be kept from becoming too dry, on account of the great heat in it, by pouring water on it occasionally.

Whatever sorts of plants are in the grape-house besides the vines, let them be attended to. Peach and nectarine trees in pots will do well in it, after their fruit are set and as large as small nuts. Fig trees in pots may also be set into it; and the heat in it will force roses and different kinds of flowering plants.

In the succeeding months let the grape-house be managed nearly in the same way as I have directed for the management of it in this and the preceding and following months. After the middle of January, increase the heat a little gradually, as the days increase in length.

If

If you have good success, the grapes will be ripe at a period when they are counted great rarities, and if you fail, you must console yourself with having used your best endeavours.

In the forcing-houses, if you have ripe grapes on any of the vines, keep as much fire heat in the house as to prevent the grapes from damping.

Grape vines intended to ripen their fruit in May and June, should, about the middle of this month, be begun to be forced. Having the flues cleared of soot and put in good order, and the inside of the house painted or washed, if the vines were not pruned last month let it be done now, then make the house quite clean and begin to make fires. At first keep the heat up to about 55 and 60, and increase it to imitate nature as much as you can. If the vines are in a good state they ought to shoot early in January. In this house you may set pots of peaches, nectarines, figs, &c.

Those who wish to have peaches and nectarines ripe in May, should begin to force them about the beginning of this month. Having the flues cleared of soot and the house clean in every part, begin to make fires, and for some days keep the air in it a little above freezing, the thermometer varying from about 40 to 50 degrees, having a constant draft of air at the house.

house. When the days begin to lengthen, which is after the twentieth of the month, increase the heat to about 55, and in January it may be kept up to 60, and in sunshine a few degrees higher, taking care to have a free circulation of air from without.

When the shoots and flower buds on the trees begin to swell, then prune them. Cut off all useless superfluous shoots or branches, leaving a regular supply of bearing wood in every part of them, and leave neither the very strongest nor the weakest young shoots, but those that are well ripened and have their buds not too far apart. Keep the branches and shoots a sufficient distance apart, that there may be room for training in the young wood, necessary to be left for the succeeding year.

The shoots of peach and nectarine trees are in general better to be shortened. The length which they are to be laid at, must ever depend on the strength or weakness of them, and it should be remembered that there must always be a leading young shoot before the blossom, otherwise it is of no use; and therefore it is found requisite to lay the young shoots of some trees in at full length, because young shoots on them break out only a little before the former year's wood from which they sprung, and from these

these to the extremities are mostly blossom buds, and few, if any, shoot-buds among them. Peach trees that form their bearing wood in this manner resemble the morella cherry, whose young shoots should never be shortened, unless to cause a more abundant number of shoots to come out, to cover the wall they are trained on.

The cherry house may lie open till a week or fortnight before you begin to force it.

If your fig trees in your forcing-house are not covered, it should be done before sharp frosts come on, and the roots of them ought to be covered that the frost do not get at them.

This is the time to begin to force roses. Choose some strong healthy plants that have prominent buds on short well ripened shoots, mould them up and set them into the house, and you had best not prune them, except you are so well acquainted with roses that you are able to know the buds which will produce blossoms, till the buds begin to swell; when in pruning, leave those buds that appear round and most prominent.

If after they begin to blow, which will not be before the middle of January, you mean to have a constant supply of roses, you must take in plants once or twice a week. The number you take in weekly, must therefore be proportioned to the size of your house, and you may allow at

at least four out of a dozen to fail of bringing roses till the taking in after January.

You may also, if you have room and it be desired, set in other kinds of flowering shrubs, perennial and herbaceous plants, and bulbous roots of different sorts.

When the house is in order, and such plants as you mean to force early, set in, begin to make fires. Let the air in the house for the first week or ten days be from 45 to 55 degrees warm, and after that increase the heat gradually, so that the plants may be made to send forth their tender buds vigorously.

Keep the air in the house sweet, and water the plants occasionally to keep the earth about their roots constantly moist, and when the roses begin to shoot, look over them once or twice every day to see that no grubs or insects hurt them. If the green insect begin to make its appearance, fill the house full of tobacco smoke.

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On

## On the FORCING-FRAMES,

*For December.*

The cucumber plants sown in October, will by this time be planted in the frames where they are to produce their fruit. Attend to them in keeping sufficient heat in the linings, in giving them air and covering them up at night; these things must be proportioned according to the temperature of the weather, which you may see for one year, in my treatise on the cucumber.

Asparagus beds should be attended to; give air to them every fine day, and if there be a good heat in the beds, leave a little all night. If the weather be frosty, they must be covered in the afternoon and uncovered about eight or nine in the morning. Linings should be applied to the sides of the bed if the heat in it be much declined.

New plantations of asparagus must be made on warm beds every fortnight, if you intend to have a constant supply of it during the winter and

and spring months, till it come in, in the natural ground.

Give the asparagus plants water now and then if you have a sufficient heat in the bed, and the water which you give them had best not be colder than 60, nor warmer than 75. It may be warmed by setting it into the hot-house a night near the warm flues, or if you set a pot or two of water on the hot flues, cold water may be mixed with it.

Look forward and have a sufficient quantity of dung in preparation. If you force asparagus on dung, you will want a good deal; if you force it on brick beds with linings, or in pits with fire heat, a less quantity will be required.

Those who have no hot-houses, may raise small sallad, mint, &c. on hot-beds of dung or leaves of trees, but on these it is very apt to catch the damp in the winter months.

In frosty weather clear the melon ground of dung, wheeling it to such quarters of the kitchen-garden as may require manuring. It may be laid in heaps till the ground is cleared of certain vegetables in the spring.

Cauliflower plants in frames should be kept clear of weeds, and have air in fine days. If the sun shine, the glasses may be taken off during the time that the sun shines on them, and if the nights are not frosty, leave air at them all night.

Cauliflowers

Cauliflowers also under hand-lights must be attended to; weed and pick the dead leaves off, and give them a little air in mild or sunshine days.

In this month collect leaves of trees for making hot-beds; the oak and beech are the best on account of their durability, but a mixture of all sorts will do, if they are brought together when they are not too wet. They may be thrown up in large heaps till the spring, and made up in beds without mixing them with any thing besides, or they may be mixed with dung.

Prepare, turn, and mix mould for pines, melons, cucumbers, fruit trees, and for different kinds of exotic and flower plants.

If you have any melon or cucumber frameats liberty, get them cleaned, repaired, and painted in dry weather if they want it.

Radishes may now be sown on a gentle hot-bed; when they are coming up, give them a good deal of air that they may not be drawn up long shanked. In fine days take the glasses entirely off; thin the plants when they have expanded their seed-leaves.

If you have a frame for preserving peas in winter, and to bring them in early, the beginning of this month is a good time to sow them.

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On

## On the KITCHEN-GARDEN,

### *For December.*

Peas should be sown, if the weather be open, in the beginning of the month; if these come up before the frost destroy them, there is a probability that they will survive the winter. Sow them in some sheltered part of the garden. Draw drills for them four feet apart and four inches deep, scatter the peas of the most early sorts regularly in the drills and cover them up lightly about three inches deep; if there is the appearance of hard frost without snow, lay two or three inches thick of light old tan or vegetable mould on them to keep the frost off. When the peas have vegetated, before they come up to the covering, draw with a hoe or rake the covering to one side of the rows, and when the peas are come up or coming through the ground, if the weather be severe it can be scattered on again.

The peas sown in the former months, should

have some light earth, vegetable mould, or old tan drawn to the stems of them.

If you have got a close paling or wall, about three or four feet high to spare, stretching from east to west, you may sow a row of peas on the south-side of it, and if you can contrive to defend them from hard frosts and heavy rains, by training them up against it in the spring, you may obtain peas very early.

For fear the former sowings do not stand the winter, you should plant more broad beans of the most early sorts.

Draw up earth lightly to the stems of those beans which are risen above the ground.

It is not too late to do up your asparagus beds, if any thing prevented you from doing it in the former months.

Take care of cauliflower plants sheltered by glasses or coverings of any kind, take off the coverings or give them air in fine days, and keep them free of weeds and dead leaves.

Lettuce plants under hand glasses should have plenty of air in fine days, and be weeded when any begins to appear, and all the dead leaves taken from among them.

In open weather earth up the celery as high as it will bear, break the earth fine and lay it up light. If frosty weather begin to set in, take peas

peas-haulm, or any light litter, and cover the rows of celery which require no more earthing up; this will preserve it from the frost, and you will be able to take it up, when the ground is hard frozen, without breaking it.

Earth up cardoons if they want it, and lay long litter of any sort on them in frosty weather, when the snow does not cover the ground.

Protect endive by putting it under cover, or by laying light coverings of fern or straw on it.

If the weather be open, cabbages of any sort may be transplanted.

Mushroom beds must in this month be well looked after. About once a week or ten days uncover them, take off carefully all the damp litter, gather the mushrooms if there be any on them; and put a covering of dry hay next to the beds, and lay a thick covering of straw and mats above the hay, thick enough to keep out the frosts and rains.

If you have a close shed for a mushroom bed, and a flue in it to warm the air in cold weather, make a fire now and then to keep the air in it from 50 to 60 degrees warm. After the bed has begun to bear, examine it when you gather the mushrooms, and at any time if it appear to want water, after the fruit are gathered, water it with a fine rosed pot till it is moderately moistened.

moistened. The water ought to be about the same degree of heat as the air in the house which surrounds the bed. Keep the bed covered with hay about four or five inches thick.

In open weather, draw earth to the stems of brocoli, savoys, and all sorts of cabbages that require it.

Artichoke plants not covered last month with earth or long litter, should not be deferred longer than the beginning of this month. If frost be in the ground to hinder you from laying earth, from between the rows, on and round the plants, cover them with litter of any sort not too wet.

This is a fit time to trench and manure vacant pieces of ground.

Take up and lay into sand, carrots, parsnips, and all other sorts of tuberous rooted plants.

Cover with light litter rows of parsley, to preserve it from severe frosts.

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On

## On the FRUIT GARDEN,

*For December.*

In open weather, fruit trees of all sorts may be transplanted. Rotten light dung should be laid round the stems of new planted tender trees to protect their roots from severe frosts.

This is a good season to manure fruit borders which require it. Dung perfectly rotten or vegetable mould may be dug into them, or if they be of a light kind of soil, marl or rich loamy earth may be mixed with them; dig the borders deep three times over, which will mix them sufficiently.

If strawberry beds have not in the former months been cleaned and dressed, it may now be done in open weather. Clear away from the principal plants all runners and small plants, and lay some rich loamy earth between the plants, and dig it in neatly; after the beds are thus finished, dig the alleys and the work is done.

See that the roots of fig trees are secured from

from the frost and their branches covered with mats, or thatched with straw.

Prune gooseberry and currant trees, clear away the cuttings and dig manure in round about them. These kinds of fruit-trees, or cuttings of them, may be planted in open weather.

Plum, pear, cherry, and apple trees of all descriptions may now be pruned, and those against walls and espaliers, in fine days, should be nailed and tied to their places where they are to remain during the ensuing season.

If peaches, nectarines, and apricots were not unnailed the former month, let it be done in this month; leave as many nails and shreds on them, as will prevent the branches from rubbing one another in windy weather.

Cover with litter the roots of grape-vines against walls to keep the frost from them, and if the frost come very severe, the branches would be better to be covered with mats. The vines may now be unnailed, but the pruning of them had best be deferred till February or March.

Young fruit trees in orchards or plantations where hares can go, should have bushes tied round their stems, that the hares may be prevented from gnawing the bark off.

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## On the PLEASURE or FLOWER GARDEN,

*For December.*

Take care of auricula and carnation plants in frames. In severe frost, the glasses should be kept close, and in the night time covered with mats; keep them free of weeds and dead leaves, and when they require it, give them a little water.

Flower plants in pots, such as double rockets, scarlet lychnis, double wall flowers, and herbaceous plants of various kinds, to blow early next season, should be protected in cold weather; plunge them in tan or rotten leaves, and put glasses over them.

In open weather, most kinds of flowering shrubs may be transplanted with safety. Put stakes to those that are likely to be blown down by the winds.

Attend to beds of choice ranunculuses, tulips, hyacinths, and anemonies, arch the beds over with hoop sticks, and cover them in bad weather with mats.

Forest trees may be planted any time in this month, when the weather is open; if they are tall, they will require to be tied to stakes, that high winds may not displace them.

Shrubs of all kinds may now be pruned, and the borders dug. Cut out all rambling luxuriant shoots that appear to be superfluous, and form the plants so that they may appear in a regular manner, and not croud one another. Several sorts will require stakes to support them, and the stakes should be covered with the branches, that when the leaves are expanded they may not appear. Clear the borders of all sorts of litter, and dig them neatly.

The roots of tender shrubs should be mulched with light dung to keep the frost from them; and several sorts of exotic plants, such as the magnolia, rhododendron, azaleas, and kalmeas, in hard weather, will be better to be covered with mats.

Many sorts of shrubs may be increased by suckers; the lilac, syrengo, spirea frutex, and several kinds of roses, put forth plenty. They may be taken up and planted in nursery-beds five or six inches apart, and in a year or two transplanted to where they are wanted.

Hedges of hawthorn, beech, hornbeam, blackthorn, &c. may now be clipped. If hedges have been suffered to grow irregular, and their bot-

toms become bare and naked, they ought to be plashed down; this is to be done by cutting the branches half through near the ground, they will then bend easily in an horizontal direction, twisting them with some of those ones which are left upright. When this is done, top at the proper height, the whole line of the hedge, that it may appear uniform.

Where they are wanted, hedges of various kinds of trees and shrubs may be planted any time this month when the weather is open.

Prune forest trees of all sorts which require it, the method of pruning them may be seen in the former months.

Trench or dig any ground you intend to plant with shrubs or flowering plants of any kind the ensuing months.

Bring from commons and heaths, such kinds of earth as is suitable for different sorts of delicate plants, and in frosty weather it may be broken small and laid in ridges to meliorate, and for some sorts of plants, some of it may be mixed with vegetable mould or rotten dung.

Clear lawns and grass walks of leaves and litter of every kind, that the grass may not be injured. If they are rolled occasionally, it will do them good.

Box edgings may now be planted along the sides of gravel walks, or wherever they are wanted,

wanted, and gravel walks may be laid at any time when the weather will permit.

Collect leaves of trees of all sorts, and lay them in large heaps to rot for vegetable mould. If you intend to make hot-beds of them they should be raked together when they are not very wet, but if you intend them for rotting only, they may be brought together as wet as possible.

## On the NURSERY-GARDEN,

*For December.*

To propagate trees and shrubs, layers and cuttings of them may now be put into the ground, and some sorts of them propagated by suckers.

In open weather, transplant young trees and shrubs of all sorts, excepting those that are delicate and tender, and hardy trees and shrubs may be pruned at any time in fair weather.

Take care of tender exotics in pots, such as the arbutus, cedar of lebanon, china arborvitæ, cypress, and many others; during the winter, they should be plunged over the pots in old tan

or

or light earth, to preserve their roots from the frost, and in hard weather, they would be better to be covered with mats.

Transplant in open weather all kinds of seedling trees and shrubs which require it.

Vacant pieces of ground should be trenched, to be in readiness to plant or sow. If it is to lie during the winter, it should be laid in ridges, to have the advantage of the frosts to meliorate it.

In frosty weather, prepare and mix compositions of earth for tender plants of various kinds.

Hedges of privet, yew, and other evergreens, may be planted to protect tender plants in windy weather, and hedges of most kinds of trees and shrubs may be clipped and plashed, if they require it.

Stocks to bud and graft on may be planted, set them two feet or thirty inches row from row, and from twelve to sixteen inches plant from plant in the rows.

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On

ON THE

# QUALIFICATIONS

OF

# A GOOD GARDENER.

To be a good gardener, a man must have a little education, and not only be steady, industrious, and thoughtful, but also possessed of knowledge and genius adapted to his profession; and whoever undertakes the management of a large garden where there are hot-houses, takes upon himself a business of importance, which for a time he may love, but he need not expect that health of body and tranquillity of mind in the exercise of his employment, which are held forth by some who are theorists in the occupation. The employment of a good gardener, is, through all the seasons of the year, a continual round of labour and toil, for which he deserves to have an adequate reward.

Though

Though it frequently happens that a man who can do little more than hoe, rake, dig, and plant cabbages, takes upon himself the charge of a garden, yet there are not many businesses but which may be learned in less time than that of a gardener; and where gardening is carried on to any great extent, there is such a multiplicity of work of different kinds, and so numerous a variety of things which should be remembered, that the most skilful in business and strongest of memory may sometimes neglect that which ought to be done, unless he has recourse to some memorandum either of his own writing or of that of others to put him in occasional remembrance. This being a fact, which I believe most gardeners confess, that which I have published may give some assistance, especially to aspiring young men, whose inclination leads them to follow the employment of a gardener.

It was between 51 and 52 degrees of north latitude where I resided upwards of thirty years, in the constant practice of gardening, that that I wrote this memorandum of the methods and times of propagating and cultivating the different kinds of fruits, flowers, and vegetables, and therefore, though the times of beginning to force, sow, plant, &c. which I have mentioned, may naturally enough be by some persons supposed to be best adapted to the climate in which

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I so long practised, yet, on due consideration, I apprehend the Gardener's Remembrancer will be allowed to be equally useful in other places, for it should be recollected that the season most proper to do the several works of gardening is not exactly the same every year, even in the same garden, and that soil and situation make no small difference every year, in the distance of a few miles.

These observations chiefly respect locality of climate. In regard to latitude, without considering soils and situations, by observations which I have made in travelling through the kingdom, I think about four days of difference of warmth in every degree of latitude is a near enough calculation. According to this computation, suppose the proper time to sow in latitude 51 was on the first day of any of the spring months, the fit time to sow the same kind of seed in latitude 56 would be about the twentieth of that month. But on whatever day of the season seeds are sown in the degrees of latitude mentioned, the difference between the time of their ripening, exclusive of locality of soil and situation, is, I am persuaded, not less than three weeks.

There is often a difference in forwardness of a fortnight or three weeks between one season and another, therefore the same work may with advantage

advantage be performed a fortnight or three weeks earlier or later in one year than in another; consequently practitioners must be guided in many operations by their own observation and judgment, for it is not possible to lay down rules for performing and managing the different branches of gardening suited to the variations of seasons, soils, and situations, nor for preventing failures, which may be occasioned by unfavourable weather, bad seeds, and unhealthy plants, with a variety of accidents too tedious farther to describe, and too intricate to be always guarded against, even by the most skilful attentive gardener.

## On the KITCHEN and FRUIT GARDEN.

The best ground for a garden, is a deep loamy earth not of a hard binding nature in summer, nor very retentive of rain in winter; such a soil as can be worked any season of the year without much difficulty, is a desirable one for a kitchen and fruit garden.

It

It should be remembered, that there are no kind of fruit trees or esculent vegetables, which require less depth of earth to grow in than two feet to bring them to the best perfection in their season. For when in their prime, if the roots even of peas, spinach, french beans, lettuce, &c. be minutely traced, it will be found that they penetrate into the ground at least two feet below the surface, if the soil be in a condition to allow them.

A garden ought to be made on ground not of a springy nature, and if this rule be observed, draining will not be wanted, for when ground is sufficiently prepared, for the growth of fruit trees or esculent vegetables, by trenching, manuring, and digging, it is brought into such a porous temperament that the rains pass through it without being detained longer than necessary.

A dry fertile valley, sheltered from the east, west, and north winds by hills, rising grounds, high buildings, or groves of tall trees at a distance, and well supplied with water, is a suitable spot for the purpose of being made into a garden either for fruits, flowers, or esculent vegetables.

To cultivate a walled garden most advantageously, it should be surrounded with a paling of some sort, at a distance from the wall of thirty or more feet. This paling will be found very useful, either by way of a nursery, to bring young

young dwarf fruit trees of different kinds into a state of training, to be transplanted when required to fill up vacancies on the higher walls, or for trees of dwarf kinds to produce fruit in that situation.

The slips of ground between the paling and garden walls thus inclosed, may be cultivated to advantage by planting in them strawberries, gooseberries, currants, &c. and vegetables of different sorts. Where a close paling cannot conveniently be had, a garden may be surrounded with a hedge of evergreen or deciduous plants, but hedges are apt to harbour and breed insects, and they drain the ground greatly of moisture near them.

In laying out a new fruit and kitchen garden, or in putting an old one in order, examine well the depth of the borders and the quality of the earth which compose them; if the earth be of the right sort, but not three or four feet deep, carry as much loamy earth on them as to make them a sufficient depth, spread some rich manure on them, and mix the whole so well together that the one cannot be distinguished from the other, taking care to pick out all stones, old roots, and whatever would interrupt the roots of the trees, to be planted, in their growth.

If the borders in the garden do not consist of such earth as will suit the trees you intend to plant

plant in them, wheel the whole of it out, to the width of ten or twelve feet, on the surface of the other parts of the garden, and bring in, in its room, earth adapted for the growth of the kinds of fruit trees intended to be planted in it.

In putting an old garden in order, or in making a new one, if the borders on the walls lie a little higher than the rest of the garden, no ill effect will arise either to the growth of the trees or in the appearance of the garden, if it be judiciously laid out.

A garden had best be nearly of one depth of earth all over, the parts where the walks are to run not excepted, if fruit trees of any sort are to be planted within sixteen feet of them. Five or six inches deep of gravel for a walk in the kitchen garden is enough.

If it is intended that a garden shall produce plentiful crops of esculent vegetables, wall trees and espaliers only should be planted in it, for vegetables of no kind can prosper well under the drip and shadow of standard fruit trees. These therefore ought to have a place appropriated chiefly for themselves.

In planting fruit trees on walls, the distance between each should be proportioned according to the sorts, and the height they are to be trained; and in this business the nature and properties of the soil ought not to be forgotten; for

for trees, of course, require more room in a rich fertile soil, than they do in a more poor and hungry one: and some trees of the same kind, on account of their quick growth, want more room than others.

Peach and nectarine trees, in good ground, where the wall is ten or twelve feet high, should be planted from twelve to sixteen feet apart. If the trees are small when planted, they may be set only six or eight feet apart, and when they require more room to spread, every other one can be taken up.

Apricot, cherry, plum, and fig trees may be planted sixteen or eighteen feet apart. Pear and apple trees require to be put a greater distance from another, at least those of strong growing sorts.

Trees for espaliers should be planted farther apart than those on walls, because they cannot be suffered to run so high, and therefore every leading branch must be trained horizontally.

When a garden is about to be planted with fruit trees, that they may come into a bearing state soon, and add to the probability of their continuing long in a prosperous state, it is best, if they can be had, to make choice of those not very young, but such as are healthy and have been transplanted several times; and if they have been in a state of training for two or three years,

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and some of them a longer space of time, these ought to have the preference.

In every garden where there is any great extent of walling, and peach houses, a certain portion of wall, about five or six feet high, should be allotted for training young peach, nectarine, and other fruit trees, that they may be ready to replace any in the houses or on the higher walls that may happen not to grow well, or chance to be sorts not approved of.

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## On the MANNER of PLANTING FRUIT TREES in a FORCING-HOUSE.

Since this began to be printed, a book called "The Forcing Fruit Gardener," has fallen into my hands; and as myself and the author of it, Mr. Nicol, who has had a little practice in the business, will be found, on observation, to differ in our ideas, which ought not to be mere speculative or theoretic ones, on important branches of gardening, I believe, though he seems to think otherwise, that our readers should know

know why we who pretend to be instructors of others differ so widely ourselves, not so much about the way of conveying instruction as in recommending some methods which each of us say are the most suitable ones to be adopted in endeavouring to produce abundant crops of the choicest kinds of fruits and esculent vegetables.

When a peach-house is to planted, Mr. Nicol says " Maiden, or one year old trained trees, are to be preferred to any other; riders of the same age should be planted between the dwarfs. Head them down to two or three eyes on each shoot, if maiden, and to the last eye on each branch, if one year old trained trees. When their growth is stopt for the first season, cut them back from one half to a third of their lengths, next season leave them generally three fourths of their whole length. Fire heat should not be applied sooner than the third season, and then only to ripen the wood in the autumn; but even the fourth season the trees will bear but very gentle forcing. I would observe that peach trees, if forced every year, will wear out in the course of twelve or fourteen; and therefore, about the eighth or tenth year, young dwarfs should be planted where the riders stood, and the old dwarfs should be converted into riders by degrees, as the young ones advance."

If it were necessary to adopt Mr. Nicol's me-

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thods of process of planting, and beginning to force peach and nectarine trees, it is probable that a number of gentlemen might be deterred from building forcing-houses, for, I believe, not many would like to incur such an expence, if fruit could not be obtained by means of them, earlier than on the common walls, in a shorter time than four or five years: but many years have elapsed since it has been undeniably proved, by a series of practice, that a crop of peach, nectarine, and other fruits, may, by forcing, be obtained from trees even in the same year in which they are planted, without doing them the least injury: and it has been as clearly proved that trees may be forced every season and last more than twice the number of years mentioned by Mr. Nicol; so that the reasoning which he uses makes it appear that his knowledge respecting some branches of gardening on which he writes is not very extensive.

When forcing of trees is mentioned, it is meant to convey the idea, that to bring fruit to maturity earlier than our climate does, it is necessary to use art to assist nature. Sheltered situations and garden walls are the first and most simple methods used, next glass frames, then dung heat, fire heat, &c.: and these different modes of assistance having been so long in practice,

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there remains no doubt but by a judicious application of either of them, fruit trees, which are exotics, can be, and have been, enabled to continue in a healthy fruitful state a much greater length of time than if totally exposed.

No methods yet contrived that I have heard of are so well adapted for sheltering and forcing fruit trees as glass frames and fire heat; and if peach-houses are well constructed, and the trees planted in enough of good earth, I believe they will, if they be managed in a practical scientific manner, last longer than in any other place which they can be planted in, in this country.

Trees intended to be forced, either to ripen their fruit or wood in the course of the summer, ought to have the artificial heat, by whatever means it is raised, applied to them in the forepart of the season, so that they may begin to grow before those of the same kind planted against walls in the open air. Whether trees have fruit on them, or are designed to produce the following year, they should, if possible, grow in a climate capable of ripening their fruit; and if a tree in a peach-house bring its fruit to perfection, I have no doubt but its wood for the ensuing year may also be sufficiently ripened, without the application of fire in the autumn. For these reasons I differ widely from Mr. Nicol in his method of making fires in the autumn

autumn to ripen the wood of fruit trees—it is contrary to nature, and therefore must have an ill effect.

In some years after peaches, nectarines, and other kinds of fruit, are ripened on the open walls, the autumns are so wet, that the wood cannot attain to that degree of firmness of texture as in dry autumns; but where there are peach-houses, the trees in them may, and ought to be protected by having the glasses over them in all unfavourable weather, even after the fruit are over.

The reason that rainy damp autumns are not favourable to fruit trees, is, though the branches may not shoot, they then grow quickly in bulk, and the vaporiferous element, or surrounding air, not being in proportion to the quantity of sap drawn into the branches by the roots, the wood is left too full of undigested food; and hence, as the trees are not in a state so able to resist the severities of the winter and spring seasons, as if the autumn had been better adapted to their nature, diseases for a time imperceptible, are generated; and the trees, till they be enabled to recover their strength, rendered less productive.

I have frequently advised that trees designed to be forced, ought to be planted in good loamy well prepared earth of a medium texture, nei-

ther too light nor of a strong binding nature, and if it be necessary to put manure among it, they should be mixed so well together, that a distinction may disappear. If the composition of earth and manure were run through a coarse screen, that process would mix it effectually, and separate the worst from the best. Make the border four feet deep, and as broad that the roots cannot reach bad soil. It is better to cut the roots off than to suffer them to grow into earth not adapted to nourish the tree with wholesome food.

Before a peach-house is built, trees to plant in it ought to be in readiness. If they are growing on the same premises where the peach-house is building, it will be an advantage; and if it can be avoided, no tree should be planted in a forcing-house, unless the fruit of it has been seen and tasted. The trees ought to be well trained ones, and not less than five feet high. It is of no consequence what age they are, if they be healthy, well-rooted, and in a bearing state; and if, since they were budded, they have been transplanted two or three times, they are the more fit for transplanting again

When every thing is got in readiness for the reception of the trees, unnail them and dig a wide semicircular trench four feet from their stems, and full as deep as the roots go; then by

by little and little, with a pointed stick, work the earth out among their roots, (taking care to break as few as possible,) till the trees be undermined, so that you may lift them out of their places without straining their roots, and having holes previously prepared about seven or eight inches deep; set them in one after another, training their roots out regular at full length, and having cut the ends of them smooth, cover them, that at their extremities they may be about seven inches, and at the stem about four inches deep. They may be planted any time, when the weather is not frosty, between the months of October and March.

The glasses may be put on in February, and fires made about the middle of March. Keep the thermometer, with the influence of fire, to about 55, and increase the heat progressively as the days lengthen. With sun-heat the house may be kept nearly to the same degree of heat as is directed for forcing trees established in the ground for some years. The borders must be kept in a moist state, and when the trees are ready to come into blossom prune them, and lay the shoots in thinner, and cut them shorter than if they had not been transplanted, and the fruit for the first season ought not to be left very thick on them.

These methods which I recommend are not theoretical

theoretical ones, for I have put them in practice myself several times successfully, and the trees continued to grow vigorously while I managed them, but what became of them afterwards I cannot tell.

I disapprove of Mr. Nicol's method of planting dwarf trees in peach-houses, between those that are wearing out; neither do I approve of his manner of turning decaying dwarf trees into riders in forcing houses of any description.—Such theory to the theorist will certainly be exceedingly pleasing, but it is to be doubted whether the recommender has had an opportunity of practising what he recommends; for there are not, comparatively, many gardeners that reside so long in one place of servitude, even as the time which Mr. Nicol says a peach-tree can live and prosper in a peach-house before it begin to "wear out."

When trees begin to "wear out," it is a sure sign that the border, for the growth of these trees is wearing out also; and as a peach-house, by the methods I have described, can be soon replenished with capital bearing trees; it is best to take the old decaying ones out, and either make a new border, or turn over the old ones two or three times, picking out the old roots, and mixing with it manure of an enriching nature.

A

# METHOD

## TO INCREASE MUSHROOM SPAWN.

About the beginning of summer, collect a heap in nearly equal quantities of cow, horse, and sheep dung; add to it some rotten fern leaves, mix the whole together in the way a bricklayer's labourer makes mortar, spread it on a floor in a cool shed where it cannot dry too hastily, make it about six inches thick, beat or tread it firm, and as soon as it is in a fit condition, cut it with a spade into pieces, in the form of bricks, set them to dry till they can be conveniently handled; then with a knife make a small hole in the middle of each, and put a little good mushroom spawn into every hole, closing it up with a bit of that which was taken out, pile the pieces up in a heap in a hollow manner, that the air may pass through freely to dry them gradually, and cover it with mats or any other light covering to keep it dark. When the spawn has extended itself through every part of the prepared pieces of dung, lay them out separately to dry,

dry, which will prevent mushrooms from growing on them.

If mushrooms are suffered to grow out of spawn, they exhaust it, but if the pieces of dung which contain the spawn be dried and laid in a dry place, the spawn will keep good a long time. Whilst writing this, I received the following letter from an experienced gardener, October 29th. 1806.

"SIR,

"AS you are desirous to know the method by which I make mushroom spawn, I fail not to give you the desired information. It is as follows—In the beginning of the month of May, I collect about two cart loads of horse dung from the fields, or if I take it from the stables, I separate it entirely from the straw, for I have found by experience that the spawn will he much stronger if no straw be mixed with it. I then add to it six barrows of fresh soft loam, two barrows of soil scraped from the road, and one barrow of coal ashes sifted fine; these I have turned and mixed till they are well incorporated. I then spread this mixture on the floor of a dry shed, about a foot thick, gives it a gentle watering, and spreads over it a small quantity of spawn from an old mushroom bed. After this, it

it is trod as firm as possible, and I find it does it good to tread it well two or three times a week. In this situation I let it remain till it is converted into a solid mass of good heavy spawn, which generally is about the end of August, when I cut it into lumps nearly a foot long, and lay them up edgewise to dry. By this method I have never failed to have plenty of good spawn of the true sort; you may know if it is the true sort by its smell, it smells exactly the same as a real mushroom, which is very different from the other species of the fungous tribe.

" I generally begin to make my mushroom beds in the beginning of September, in the open air, which I find to be much better than in sheds. To two cart loads of fresh stable dung, I add an equal quantity of old dry linings from melon or cucumber beds, mixing them well together in a heap, and after letting it lie about a fortnight, it is fit to make into beds. The method of which, and manner of spawning, I need not acquaint you with, as in these I differ not from other gardeners.

" The coverings which I find best for mushroom beds, is soft hay and mats over it. I cover my beds very thin at first, and increase the coverings as the heat of the beds decline.

" Since I adopted the above methods, I have never

never failed of having plentiful crops of mushrooms, and whoever chooses to put my method in practice, I am persuaded will have the same success. I shall be glad to see you whenever you can make it convenient.

"I am, &c."

I altered the language of this letter, which no doubt the author will excuse.

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## *On the* DISEASES *of* VEGETABLES.

There is animal life, and there is vegetable life. Animals live, grow, die, and are turned into earth, from which they originally proceeded; and when that which constituted them is rotten, and converted into earth, out of it do grow vegetables which are the only food of some kinds of animals, and part of the food of others. Mankind kill and eat many species of the brute creation; and some brutes, when they can, destroy and eat mankind.

Though

Though the whole of the earthly animal race are subjected to disease and death, it is the nature of some of them to live to a much greater age than others. Animals, especially human, are the subjects of a variety of diseases, which destroy vast numbers of them before their time, or before they arrive at the age which is natural for them to live; and various, among mankind, are the seemingly apparent causes of diseases, as cold, hunger, gluttony, debauchery, &c.; nor are those in the bloom of life, who live in moderation, and have all the conveniencies which this world can afford, exempted from disease or death—and all the methodical rules, and medicines, prescribed by the most eminent physicians, often prove abortive, both in preventing and in curing the simplest disease, even in those in youth, at a period when the animal œconomy of itself uses the most powerful natural efforts to cast off disease and avoid death.

Different parts and climates of the world are adapted to different kinds of animals, and after change of place, and long habit, the constitution and shape of animals are somewhat altered by the natural influence of the climate in which they originate and abide. Animals and vegetables bear a similarity, in some repects, to one another. Vegetables have their origin from the earth;—they live, grow, are diseased;

diseased ; they die, and are turned into earth of a blackish light texture, which is a nourishing food for many kinds of plants. And after vegetables, whether in seed or in plant, are removed from their native climate into another, in the course of time, their shape and constitution are somewhat changed by the influence of the climate in which they grow.

On the surface of the ground throughout the habitable world, there are innumerable tribes of vegetables, and although they all grow out of the earth and receive their nourishment from the same elements, many of them differ much in their manner of growth, as well as in their natural properties. Some of them are nutricious food for man and beast, others are poisonous. It is the nature of some to live to a great age, others are of shorter duration; they spring up and in a few years die—many grow from seed, and die in the year in which it is sown, and numbers are destroyed before their time, by the effects of accident and disease of different kinds.

Though diseases incident to vegetables are not so perceptible as those which affect animals, yet it is not improbable but that they may, naturally, be as numerous. An opinion of the nature of disease in man, is formed from what he relates, as well as from the appearance of his body ; and

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an idea of the nature of disease in the brute is suggested by the appearance of its body, and its manner of acting. But the nature of disease in a vegetable, can be known only by its appearance, and therefore disease in trees which live long, and in those of a less durable nature, may begin and make considerable progress, before it can be discovered by those who are not very skilful practitioners.

Occasional causes of disease in vegetables are, severe frost without snow, poor unwholsome soil, too much wet weather, excessive dry weather, little sunshine, cold cutting winds, a thick foggy atmosphere, and bright sunshine immediately after.

Symptoms of disease in vegetables, particularly in fruit trees are, leaves not of a natural green colour, decaying branches, curled leaves, the juice coming out in gum, ragged young leaves, shoots springing out of the roots at a distance from the stem, weak blossoms, and many of the fruit falling off before they come to maturity.——Thus,

I have enumerated apparent causes, and symptoms of disease, in vegetables. With regard to the diseases themselves, they seem not to be few in number. But as in vegetables they are more intricate, and for the reasons I have assigned, not so easily discovered as in animals, their

names

names are few and imperfect, some of them being inapplicable to the nature they discover:—the symptoms or effects of disease in trees and other vegetables being, I believe, frequently taken for the disease itself.

In the course of this publication I have noticed the names by which diseases incident to fruit trees, and other kinds of vegetables are usually called—I have, to the best of my knowledge, described, as well as I could, their causes and effects, and have given the best methods which I have been able to invent; and also those which I learned from others, for their prevention and cure. I have only, therefore, now farther to observe, that in the cultivation of all sorts of fruits, flowers, and esculent vegetables, good earth and genial climate, are the chief things; and that disease in vegetables of every kind, originate from the nature of the soil in which they grow, as well as from the influence of the atmosphere with which they are surrounded, and as disease in mankind, in youth, often baffle the the skill of the best physician, so disease in trees, which naturally live long, frequently prove incurable, though under the management of the most ingenious gardener.

A LIST

# A LIST of PLANTS for the KITCHEN GARDEN.

ARTICHOKE
- French
- Globe
- Jerusalem

BASIL
- Sweet
- Bush

BEAN
- Mazagan, early
- Portugal
- Longpod
- Windsor
- Spanish
- Sandwich
- Red blossom
- White blossom

FRENCH BEAN
- White, early
- Speckled, red
- Speckled, black
- Yellow
- Black
- Canterbury

CLIMBING SORTS
- Scarlet
- White
- Black

BEET
- Red
- Turnip rooted
- Green
- White

BORECOLE
- Red
- Green
- Fringed

BORAGE

BROCOLI
- Roman
- Early red
- Cauliflower
- Late purple
- Branching
- White

BURNET

CAPSICUM
- Long pod
- Bell shaped
- Cherry shaped

CABBAGE
- Red
- York, early
- Small dwarf
- Sugarloaf, early
- Large do.
- Scotch, winter
- Large hollow
- Russia
- Imperial, early
- Drum head
- Turnip rooted
- Turnip stalked
- Sea

CARROT
- Orange
- Horn, early

CARDOON

CAULIFLOWER
- Early
- Large white

CELERY
- Solid
- Upright
- Red stalked

CHERVIL

CAMOMILE
- Single
- Double

CHIVES

CLARY

CORN SALLAD

CORIANDER

CRESS
- Curled
- Broad leaved

CUCUMBER
- Short, early
- Long prickly
- Long green
- White prickly
- White turkey
- Patagonian

DILL

ENDIVE
- Green curled
- Batavian

Batavian
White
FENNEL
GARLIC
Large rooted
Small rooted
Gourd
Orange
Round
Long
HYSSOP
LEEK
London
French
LOVE APPLE
Red
Yellow
LAVENDER
LETTUCE
Green cos
Black seed
Spotted cos
Silesia
Egyptian
White cabbage
Brown cabbage
Imperial
Prussian
MARJORAM
Sweet
Winter
MARIGOLD
Lemon coloured
Orange coloured
Double blossom
MELON
Cantelupe
Rock do.
Orange do.
Scarlet do.
Green
Netted
Smooth
Persian
Water
MINT
Spear
Pepper
MUSHROOM
MUSTARD
White
Brown
NASTURTIUM
ONION
Portugal white
Spanish white
Deptford
Spanish, red
Portugal, red
James's
Welch
ORACH
PARSLEY
Common
Curled
Hamburgh
PARSNIP
PEASE
Frame, early
Charlton
Golden
Leadmans dif.
Marrowfat
Rose
Patagonian
Rouncival
Sugar
Egg
Hotspur
Spanish
Marrowfat dif.
PENNYROYAL
POTATOE
Dwarf, early
Kidney, early
Champion
Manley, early
Round white
Red
American
PURSLAIN
Golden
Green
RADDISH
Yellow, early
Short topped
Salmon
Red
Turnip, white
Turnip, black
Horse
RHUBARB
RAPE
ROCAMBOLE
RUE
ROSEMARY
Green
Variegated
SCORZONERA
SALSAFY
SAGE
Red
Green
Broad leaved
Small leaved
SAVOY
Green
Yellow
SAVORY
Summer
Winter
SHALLOT
SKIRRET
SORREL
Common
French

SPINACH

SPINACH
Round
Prickley
SPROUTS
Brussels
Scotch
Jerusalem
TANSEY
TARRAGON
THYME
Common
Lemon
TURNIP
White, early
Round
Norfolk
Red
Russia
French
Yellow
Oblong
Swedish
WATER CROSS
Baum

## A LIST of some HOT-HOUSE PLANTS.

Adam's needle
Chocolate tree
Madagascar rose
Palm tree
Brasilian myrtle
Barbadoes flower
Robinia
Sugar cane
Bastard helebore
Barbadoes cherry
Indian mango
Perennial martinia
Allspice tree
Screw pine
Cabbage tree
Dragon tree
Pome rose
Superb lily
Logwood tree
Ceylon nickar tree
Melon thistle
Star apple
Seaside grape
Wake robin
Mahogany tree
Double nasturtium
Cinnamon tree
Pepper tree
Lead wort
Guava tree
Soapberry tree
Indigo tree
Cardinal flower
Cape mallow
Bread tree
Humble plant
Arabian jasmine
Asphodel lily
Sago palm
Coral tree
Indian fig
Cotton plant
Peruvian tree
Silk cotton tree

Lily thorn
Balsam tree
Coffee tree
Custard apple
Indian tamarind
Onion tree
Passion flower
Jamaica dogwood
Red Jasmine
Shrub trefoil
Indian mastic
Malabar nut
Scarlet campion
Manna tree
Indian chesnut
Plantain tree
Olive tree
Tallow tree
Indian spurge
Cassuava plant
Cap jasmine
Oriental grewia
Sand box tree
Guinea pepper
Snowberry
Ginger tree
Mountain ebony
African aloe
Jamaica liquorice
Indian waltherea
Jamaica dogwood
Barbadoes olive
Ethiopian brunea
Caper bush
Dwarf palm
Fiddle wood
Bamboo cane
Amaryllis lily
Sensitive plant
Jamaica volkameria
Silvery tomentous
Barbadoes flower
Mammee tree
Love flower
Indian vervain
Spreading browallia
Indian shot
Papaw tree
Cocoa palm
Calabash tree
Ethiopian flag
Guinea lily
Spotted alstremaria
Indian agrimony
Tree house leek
Great portlandia
Scarlet flower
Brasil plum
Elephant's foot
Colt's foot
Japan rose
Wild sena
Jesuit's bark
Cocoa nut
Cashew nut
Ethiopian gourd
Indian bondue
Elm turneria
Glossy ranvolfia
Trumpet flower

---

A LIST

# A LIST of some GREEN-HOUSE PLANTS.

Orange
Lemon
Citron
Silver tree
Oleander
Blue lobelia
Loblolybay
Silvery coronella
Caper shrub
Shrubby burnet
Jerusalem sage
Rest harrow
Lion's tail
Geranium
Heliotropium
Ragwort
Dittany
Canary lavender
Injuba tree
Persian cyclamen
Indian clutia
African sumach
Milk wort
Virginia silk
Moon trefoil
Camphire tree
Diosma, sweet
Winter cherry
Chrysanthemum
Myrtle
Candy tuft tree
Shrubby gorteria
Adrangea
Staff tree
Sorrel tree
Mediterranean heath
Sparrow wort
Climbing mediola
Lantana sage
African keggelaria
Scented gnaphilium
Shrubby foxglove
Scarlet colutea
Canary flower
Long buflea
Birth wort
Indian jasmine
Ethiopian bupleurum
Milk vetch
Silver bush
Verbena, sweet
Catalonian jasmine
African honeysuckle
Euphorbia
Goldy locks
Ethiopian arum
African aster
Ragwort arctotis
Silvery convolvulus
Thyme leaved brunea
Swallow wort
Aloes of sorts
Jupiter's beard
Althea hermania
African bladdernut
Naval wort

Ilex clefortia
Shrubby marigold
Tree asparagus
Ethiopian flag
Shrubby scabious
Golden rod tree
Tree wormwood
Rock rose
Germander tree

## A LIST of FRUIT TREES.

PEACHES.

Royal george
Montanbon
Nobless
Early ann
Red magdalen
French mignone
Galand
Old newington
Admirable
Early avant
Chancellor
Nivette
Late newington
Double swalsh
Double montagne
Teton de venus
Early newington
Late violet
Red nutmeg
Incomparable
Millets mignone
Catharine

NECTARINES.

Fair child's, early
Scarlet
Roman
Newington
Elruge
Temple
Golden
Violet
Murray
Early nutmeg
Brugnion

PLUMS.

Early morocco
Early damask
Orleans
Green gage
Primordian
Black damask
La royal
Great damask
Egg plum
Apricot ditto
Catharine
Red imperial
Drap d'or
Imperatrice
Damson
Winesour
Violet perdrigon
Blue gage
Bullace

GRAPES.

GRAPES.

White muscadine
Black ditto
White sweet water
Black ditto
Black hamburgh
Syrian
Royal muscadine
Early july
White muscat
Black ditto
Black frontinac
White ditto
Grizzly ditto
Red hamburgh
Tokay
White muscadel
Black ditto
Black cluster
Miller grape

PEARS.

Jargonel
Green chissel
Windsor
Chamontelle
Colmar
Catharine
Beury de roy
White beury
Winter beury
Orange bergamote
Gansels ditto
Summer ditto
Autumn ditto
Summer bonchretien
Winter ditto
St. germain
Hamden's bergamote
Virgou leuse
Brown beury
Cadilac, baking
Worster ditto
Parkinson's baking

CHERRIES.

Early may
May duke
White heart
Black ditto
Bleeding ditto
Ox ditto
Corroune
Arch duke
Carnation
Kentish
Amber
Turkey
Portugal
Morella
Common black

APPLES.

Dutch codlin
Common ditto
Juneting
Golden pippin
Ribston ditto
Nonsuch
Nonpareil
Golden rennet
Aromatic pippin
Lemon pippin
Loan's pearmain
Winter ditto
Kirton ditto
French ditto
Summer queening
Winter ditto
Royal russet
Wheeler's russet
Golden russet
Aromatic russet
Redstreak
Stone pippin
Quince apple
Newtown pippin

APRICOTS.

APRICOTS.

Masculine
Moor park
Peach
Brussels
Breda
Turkey
Algiers
Orange
Transparent
Alberge
Portugal

FIGS.

Black ischia
Early white
Brown malta
Marseilles
Common blue
Large white
Genoa
Brunswick
Brown ischia

GOOSEBERRIES.

Early red
Early black
Smooth green
Hairy green
Amber
Hairy red
Dutch red
White crystal
Large hairy red
Large yellow
Green gascoin
Rough yellow
Lancashire, many varieties

CURRANTS.

White grape
Common white
Common red
Champaign
Black

RASPBERRIES.

White fruited
Large red
White antwerp
Red antwerp
Double bearing
Red cane

MULBERRIES.

Black
Red
White

QUINCES.

Pear
Apple
Portugal

WALNUTS.

Double, late
French
Round
Thin skinned

FILBERTS.

Cob nut
Red skinned
Barcelona
Cluster
Hazel nut

MEDLARS.

Dutch
English
Oriental

BARBERRIES.

Scarlet
White
Stoneless

STRAWBERRIES.

Scarlet
Red wood
White wood
Carolina

Chili
Hautboy
White pine apple
Red pine apple
Alpine
Prolific

## A LIST of PLANTS cultivated in GARDENS for DISTILLING, or MEDICINE.

Angelica
Anise
Lavender cotton
Bugle
Solomon's seal
Cat mint
Suthernwood
Camomile
Stachys
Comfrey
Tarragon
Mother of thyme
Tansey
Dwarf elder
Wormwood
Feverfew
Hyssop
Lavender
Baum
White lilies
Liquorice
Lovage
Marjoram
Marshmallow
Marigold
Spearmint
Thyme
Dill
Tobacco
Elecampane
White poppy
Rosemary
Roses
Sage, red
Sage of virtue
Savory
Carduus
Saffron
Sweet sicily
Scurvey grass
Clary
Peppermint
Dragons
Parsley
Pennyroyal
Violets
Fennel
Rue

A LIST

## A LIST of TALL-GROWING DECIDUOUS TREES.

Acacia
Beech
Chesnut
Hornbeam
Maple
Poplar
Sycamore
Willow
Ash
Elm
Larch
Neckar tree
Plane
Tulip tree
Dogwood tree
Alder
Birch
Hickory
Lime
Oak
Service
Walnut
Cork tree

## A LIST of DECIDUOUS TREES and SHRUBS, of a smaller growth.

Almond
Angelica tree
Bladder nut
Buck thorn
Cinquefoil shrub
Elder
Guelderose
Halesia
Laburnum
Medlar
Wild olive
Pomegranate
Robinia
Scorpion sena
Spindle tree
Syrengo
Varnish tree
Agnus castus
Altheafrutex
Azalea
Broom
Catalpa tree
Coral tree
Filbert tree
Hawthorn
Honeysuckle
Lilac
Mountain ash

Mock

Mock orange
Buckthorn
Roses
Rose acacia
Snowball tree
Spira frutex
Tamarisk
Viburnum
Elder
Andromeda
Barberry
Sweetbrier
Christ's thorn
Dogwood
Fringe tree
Hazel
Jasmine
Magnolia
Moonseed
Passion flower
Sassafras tree
Snowdrop tree
Sumach
Tulip tree
Virgin's bower

## A LIST of EVERGREEN TREES and SHRUBS.

Andromeda
Aleternus
Box
Coronella
Germander
Holly
Arborvita
Bay
Cedar
Cytisus
Groundsel tree
Horsetail
Arbutus
Bignonia
Rockrose
Fir
Hartwort
Honeysuckle
Jasmine
Knee holly
Lauristynus
Moontrefoil
Phlomis tree
Purslain tree
Rododendron
Spurge laurel
Sweetbrier
Juniper
Kalmea
Lotus tree
Oak
Pine tree
Pyracantha
Roses
Southernwood
Tutsan
Ivy
Laurel
Magnolia
Phillyrea
Privet
Ragwort tree
Savin
Stonecrop tree
Widow wail

## A LIST of TREES and SHRUBS which may be raised from SEEDS.

Acacia
Angelica tree
Arborvita
Ash
Bay
Bladdernut
Rose tree
Cistus
Cockspur thorn
Dogwood
Honeysuckle
Hypericum
Larch
Maple
Almond
Adrachne
Arborjudæ
Azalea
Beech
Bignonia
Cedar
Chesnut
Coral tree
Cypress
Fir
Hornbeam
Juniper
Lilac
Mezereon
Andromeda
Annona
Arbutus
Azarole
Bird cherry
Broom
Celestrus
Carnation cherry
Cork tree
Citisus
Hawthorn
Holly
Laburnum
Lime tree
Mulberry

## A LIST of HARDY HERBACEOUS, PERENNIAL, and BIENNIAL FLOWER PLANTS.

Aconite
Asclepias
Aster
Batchelor's button
Birthwort
Carnation
Campanula
Celandine
Chrysacoma
Day lily

Great

Great fleabean
Everlasting pea
Feverfew
French willow
Fellwort
Blue daisy
Hollyhock
Iris
Lily of the valley
Laserwort
Lotas
Meadow sweet
Monk's hood
Water lily
Orchis
Alyson
Arum
King's spear
Borage
Verbascum
Ox eye
Cardamine
Canterbury bell
Chelone
Columbine
Daisy
Sea holly
Figwort
Fraxinella
French honey suckle
Crane's bill
Hypatica
Hydrangea
Candytuft
London pride
Loostrife
Lichnis
Mallow
Mothmulein
Tree primrose
Butter vetch
Apocynum
Milk vetch
Angelica
Bee larkspur
Buglas
Cardinal flower
Catchfly
Christmas rose
Cyclamen
Dropwort
Gnaphillium
Foxglove
Seaheath
Fumatory
Cornflag
Dame's violet
Knapweed
Lady's slipper
Dead nettle
Honesty
Lychnidea
Monarda
Monky flower
Rest harrow
Ragwort
Tod flax
Pink
Lungwort
American sunflower
Side-saddle flower
Scabious
Rock catchfly
Solomon's seal
Sweet william
Speedwell
Wallflower
Piony
Polyanthus
Pasque flower
Rocket
Lizard orchis
Helmet flower
Snapdragon
Stock
Spiderwort

Heart's

Heart's ease
Winter cherry
Sea daffodil
Primrose
Crowfoot
Rosecampon
Saxifrage
Houseleek
Soapwort
Sunflower
Valerian
Virgin's bower
Adam's needle

## A LIST of TUBEROUS and BULBOUS ROOTED HARDY FLOWERING PLANTS.

Amaryllis
Crocus
Fumetory
Fretillaria
Lily
Star of Bethlehem
Colchicum
Gladiolus
Muskhyacinth
Jonquil
Narciss
Snowdrop
Molly
Cyclamen
Chequer'd tulip
Hyacinth
Iris
Daffodil
Tulip
Martagon lily

## A LIST of TENDER ANNUAL FLOWERS.

Amaranthus
Trecolor
Humble plant
Ice plant
Sensitive plant
Cockscomb
Globe amaranthus
Mavelperu
Snake melon
Bicolor
Balsom
Egg plant
Convolvulus
Stramonium
Martynia
African marigold
Chrysanthemum
Perscaria
Ten week stock
Love lies bleeding
Red zenia
Tree amaranthus

Convolvulus

Convolvulas
Chinaaster
French marigold
Palmachristi
Love apple
Indian pink
Sultan flower
Indian corn
Cap marigold
China hollyhock
Indian pink
Tobacco
Capsicum
Gourd
Mignonette
Nolena
Basil

## A LIST of HARDY ANNUAL FLOWERS.

Adonis
Amethystea
Cap marigold
Lobel's catchfly
Convolvulas
Spritting cucumber
Hawkweed
Jacobea
Larkspur
Lychnis, dwarf
Oriental mallow
Nolena
White blossom pea
Poppy
Virginia stock
Sweet sultan
Venus glass
Rose larkspur
Princes feather
Moldavian baum
Candituft, red
Catterpillars
Blue bottle
Devil's bush
Hedgehogs
Scarlet bean
Lavatera
Marigold
Mignonette
Heart's ease
Winged pea
Scabious
Sunflower
Toad flax
Snap dragon
Painted lady
Alyson, sweet
Belvidere
Candituft, white
Clary, red
White bottle
Fumatory
Honey wort
Bladderketmia
Lupins
Curled mallow
Nasturtium
Crown pea
Peas, sweetscented
Stock July flower
Strawberry spinach
Tobacco
Xeranthemum
Navel wort

A LIST

## A LIST of PERENNIAL and BIENNIAL FLOWER PLANTS which may be raised from SEED.

COLUMBINE
- Double
- Canada
- Variegated

HONESTY

VERONICA
- Hungarian
- Welch
- Longspiked

SWEET WILLIAM
- Painted lady
- Red

STOCK, JULY—FLOWER
- Brompton
- Queen
- White
- Purple
- Ten week
- Scarlet

GLOBE THISTLE

CLARY
- Red topped
- Purple

SWEET ALYSON

BEAR'S BREACH

CANTERBURY BELL
- Blue
- White

HOLYHOCK
- Red
- Yellow
- Variegated

FRENCH HONEY SUCKLE
- Red
- White

TREE PRIMROSE

WALL FLOWER
- Bloody
- Double
- Single
- White

CAMPANULA
- Pyramidal
- Common

AURICULA

TREE MALLOW

HORNED POPPY

DRAGON'S HEAD

PASQUE FLOWER

AGREMONE

BEE LARKSPUR
- Blue
- Purple

VALERIAN
- Green
- White
- Red

SCARLET LYCHNIS

ROSE CAMPION

PINK
- Varieties

MONK'S HOOD
- Blue
- Yellow
- White

POLYANTHUS

PIONY
- Double
- Single

GENTIAN

SWEET SCABIOUS

BALM OF GILEAD

SOWBREAD

FOXGLOVE

INDEX

# INDEX.


Air, page 20, 52, 112, 177, 292, 410, 550
Anemonies, 173, 198, 235, 276, 309, 357, 467, 507, 543, 570
Annuals, 198, 199, 207, 235, 244, 275, 309, 357, 369, 435
Apple, 137, 170, 200, 272, 433, 497, 569
Apricot, 131, 183, 193, 228, 303, 390, 432, 496
April, 243
Asparagus, 165, 188, 215, 225, 227, 262, 427, 487, 492, 493, 527, 561
August, 404
Auricula, 166, 189, 198, 234, 277, 307, 350, 396, 434, 466, 502, 543, 570
Artichoke, 192, 219, 224, 262, 427, 460, 495, 535, 567

Barrenness, 12, 17, 18, 117, 118
Barberry, 146
Beans, 168, 189, 296, 334, 381, 494, 537
Beet, 296, 340, 492, 536
Blossom, 183, 231, 128, 183, 231, 232, 270, 589, 590
Border, 114, 118, 125, 126, 181, 185, 304, 464, 499, 580, 588
Borecole, page 221, 297, 337, 388, 428, 459, 491
Brocoli, 220, 261, 297, 338, 383, 425, 432, 455, 491, 538
Budding, 23, 173, 302, 315, 360, 392, 414
Brussel's sprouts, 221, 261, 297, 337, 388, 428, 459, 491
Bulbous roots, 173, 199, 211, 314, 356, 397, 400, 436, 467, 485, 507, 508, 543

Cabbage, 169, 190, 261, 296, 337, 382, 424, 455, 459, 488, 537
Carrot, 166, 188, 190, 217, 361, 297, 338, 482, 423, 492
Cardoon, 221, 262, 339, 385, 427, 457, 491, 535, 566
Cauliflower, 166, 188, 192, 216, 220, 263, 298, 338, 384, 426, 456, 489, 537, 562
Carnation, 166, 233, 274, 311, 352, 381, 393, 434, 436, 466, 502, 543, 570
Celery, 168, 188, 123, 262, 297, 339, 386, 422, 457, 491, 536, 565
Cherry, 133, 161, 170, 182, 183, 200, 211, 253, 305,


Cherry,

Cherry, page 329, 349, 390, 418, 433, 450, 525, 569
Chives, 222
Currant, 138, 171, 183, 195, 232, 272, 349, 432, 456, 497, 569
Coverings, 231, 232, 270, 310, 524, 545
Cuttings, 171, 229, 240, 312, 325, 338, 352, 355, 395, 414, 448, 469, 471, 472, 573

December, 548
Disease, 12, 15, 17, 26, 110, 129, 164, 186, 194, 266, 271, 346, 379, 484, 531, 587, 594, 597
Dung, 38, 44, 126, 187, 258, 294, 421, 429, 453, 562
Dew, 420

Earth, 20, 29, 38, 105, 113, 124, 132, 133, 137, 247, 307, 409, 411, 487, 500, 578, 588
Edgings, 236, 259, 273, 359, 397, 468, 509, 572
Exotics, 159, 248, 249, 285, 324, 412, 451, 518, 544, 578
Endive, 335, 387, 423, 456, 535, 566

February, 175
Fig, 135, 161, 183, 184, 213, 254, 272, 290, 305, 329, 376, 391, 418, 450, 501, 525, 559, 568
Filbert, 145, 541
Flower garden, 171, 197, 233, 273, 307, 350, 393, Flower garden, page 434, 465, 502, 543, 570
Flowers, 162, 185, 198, 199, 235, 236, 237, 274, 277, 309, 351, 357, 395, 435, 437, 467, 502, 544, 570
Forcing-frames, 164, 187, 215, 257, 291, 331, 377, 419, 452, 486, 527, 561
Forcing-houses, 161, 180, 210, 251, 288, 327, 374, 415, 449, 483, 521, 555, 583
Frost, 53, 152, 198, 492, 524, 542, 574, 597
French bean, 159, 198, 207, 248, 262, 285, 295, 322, 335, 383, 406, 446. 478, 516, 551
Fruit-garden, 165, 193, 228, 269, 301, 345, 389, 429, 461, 496, 538, 568, 578

Gardener, 575, 598
Garlic, 191, 218, 428
Gooseberry, 138, 169, 171, 182, 195, 232, 272, 497, 569
Gourd, 263, 294
Grafting, 173, 230, 240, 241, 271, 302, 315
Grape vine, 25, 29, 33, 17, 120, 161, 181, 194, 210, 229, 251, 270, 288, 302, 327, 345, 374, 412, 413, 416, 429, 446, 449, 482, 521, 555
Green-house plants, 160, 180, 208, 249, 286, 322, 371, 413, 449, 480, 519, 553

Heat, page 35, 36, 37, 38, 39, 54, 57, 161, 184, 212, 249, 252, 356, 410, 443, 477, 482, 521, 550
Hedges, 172, 314, 359, 571, 574
Herbs, 188, 192, 219, 223, 263, 298, 299, 339, 341, 387, 423, 428, 494
Horse radish, 191, 218, 263
Hot-houses, 60, 84, 155, 175, 208, 243, 281, 318, 364, 404, 441, 475, 515, 548
Hyacinth, 172, 198, 276, 309, 357, 467, 505, 543

Jerusalem kail, 261, 297, 337, 388, 428, 459
January, 155
Inarching, 279, 287, 317
Indian cress, 222, 264
Indian corn, 227
Insects, 48, 118, 128, 131, 185, 256, 259, 289, 292, 303, 391, 425, 431
July, 364
June, 318

Kitchen-garden, 168, 189, 217, 260, 295, 334, 381, 422, 454, 534, 564, 578

Layers, 201, 316, 352, 355, 362, 399, 466, 513, 563, 573
Leaves, 43, 187, 533, 573
Lettuce, 166, 188, 189, 216, 220, 264, 299, 336, 387, 423, 454, 490, 536, 565
Leeks, 218, 261, 338, 385
Liquorice, 227

Manure, page 196, 198, 386, 450, 464, 495, 499, 568, 588, 590
March, 203
Medlar, 144, 513
Melon, 104 164, 187, 215, 257, 291, 331, 377, 419, 452, 486, 532
Mulberry, 142, 513, 541
Mushroom, 167, 168, 189, 216, 260, 295, 341, 458, 534, 566, 591

Nicol, Mr. 266, 343, 493, 530, 583
Nailing, 170, 228, 269, 347, 497, 538
Nursery-garden, 173, 200, 239, 278, 315, 360, 399, 439, 470, 510, 546, 573
November, 515
Nectarine, 29, 123, 125, 163, 185, 193, 212, 228, 254, 269, 289, 304, 328, 346, 389, 462, 496, 557, 587

October, 475
Onion, 166, 168, 188, 190, 218, 261, 297, 338, 382, 426, 427, 460

Parsnip, 190, 217, 261, 492, 536
Parsley, 190, 218, 222, 298, 492, 536, 567
Peach, 29, 123, 125, 163, 185, 193, 212, 228, 254, 269, 289, 304, 328, 346, 389, 417, 430, 462, 475, 484, 496, 515, 526, 557, 569, 587

Pine apple, page 34, 47, 54, 56, 155, 175, 203, 243, 281, 318, 364, 404, 410, 441, 475, 515, 548
Peas, 167, 168, 189, 216, 260, 295, 334, 381, 494, 537, 564
Pear, 133, 170, 200, 272, 305, 349, 390, 433, 497, 569
Pink, 197, 256, 274, 354, 396
Planting, 124, 172, 200, 238, 265, 270, 499, 540, 581, 583, 589
Plantations, 173, 196, 316, 474, 504, 511
Plum, 133, 170, 182, 200, 272, 305, 349, 390, 433, 497, 569
Potatoe, 167, 187, 188, 191, 218, 265, 301, 461, 492, 536
Pruning, 115, 116, 117, 127, 193, 194, 197, 201, 230, 269, 272, 306, 511, 512, 523, 538, 540, 558, 572, 589

Quince, 144, 542

Ranunculus, 173, 235, 276, 309, 357, 506, 543, 570
Radish, 166, 168, 188, 189, 220, 261, 297, 384, 423, 460, 493, 536, 563
Raspberry, 141, 171, 182, 195, 230, 232, 272, 498
Rose, 148, 159, 162, 184, 214, 255, 257, 276, 290, 330, 355, 359, 376, 418, 451, 485, 508, 526, 559

Sallad, page 159, 179, 192, 219, 297, 386, 422, 457, 460, 491, 535, 552
Salsafy and Scorzonera, 191, 264, 299, 492, 536
Sap in trees, 19, 20, 25, 587
Savoy, 220, 261, 337, 380, 459, 491
September, 441
Sea kail, 193, 220, 265
Seedlings, 173, 201, 259, 280, 291, 309, 314, 317, 325, 352, 357, 362, 399, 434, 440, 470, 547
Shallots, 191, 218, 385
Shrubs, 171, 173, 174, 185, 197, 201, 235, 236, 239, 276, 279, 351, 398, 468, 470, 503, 509, 544, 571
Skirret, 299, 536
Spinach, 168, 190, 217, 261, 297, 385, 424, 454, 490
Strawberry, 146, 161, 195, 211, 230, 271, 300, 305, 306, 349, 392, 432, 463, 568

Tan, 36, 37, 44, 156, 175, 176, 204, 245, 282, 284, 321, 368, 442, 476, 517, 549, 586
Tobacco, 278
Tomatoe, 222, 300
Training trees, 10, 12, 115, 123, 178, 255, 348, 524, 588
Trees, 172, 173, 174, 195, 201, 235, 239, 278, 345, 463, 470, 500, 511, 544, 569, 583

Transplanting,

Transplanting, page 195, 201, 239, 279, 313, 440, 510, 568, 574, 588
Tulip, 172, 198, 276, 309, 358, 505, 543
Turnip, 192, 219, 264, 298, 336, 426, 459

Vegetable life, 17, 23, 53, 594
Vegetable mould, 124, 126,
Vegetable mould, page 165, 198, 464, 533, 573
Vegetation, 19, 20, 21, 22, 507

Walnut, 143, 513, 541
Water, 51, 54, 57, 122, 158, 184, 249, 252, 292, 300, 321, 410, 446, 478, 567

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