their pots. As far as regards drainage, it argues thus: if a man takes more to eat or drink than he can well digest, it does him harm; and if the plant has more water than it can evaporate and discharge, it must become injured.—*J. Cooper, Battersea Fields.*

Wash against Mildew on Peach Trees.—In p. 517, a correspondent wishes to know of a cure for mildewed Peach-trees. I am happy to be able to send you a recipe which I have made use of for upwards of 20 years, and have never failed in making a perfect cure. Take a quart of alcohol and 2lbs. of sulphur; mix them together, and with a small paint-brush, in the spring, when the buds are swelling, paint the trees all over, on both young and old wood. The trees ought to be unnailed, so that every part may be got at with ease. I have made use of strong whiskey or rum, and found both to answer well. In 1839 I had several Peach-trees very much mildewed; so much so, that the fruit was rendered useless. In the following spring I applied the mixture effectually, as not a leaf was infected; the trees made strong healthy shoots, and this year I have an excellent crop of fruit free from mildew.—*J. Murray, Woodford.*

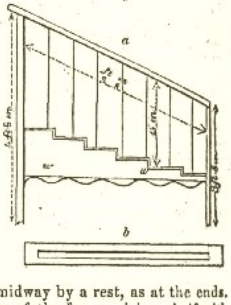
Devastation among Trees.—As I presume you are the protector of all that is interesting in horticultural matters, may I solicit your appeal in favour of a Chesnut-tree doomed to destruction on the edge of the late grounds of Sir W. de Crespigny, at Denmark-hill Road, Camberwell, nearly opposite the Chapel? Though not a particularly picturesque tree, it is rendered a favourite among the neighbours resident in Camberwell parish, from its bringing forth its flowers and leaves full three weeks in every season before any other Chesnut that is known. This morning I heard it was to be cut down, though it is in nobody's way among all the improvements (?) and sacrilege among some centenarian Cedars going on there, and I can only hope your giving publicity to the wishes of the neighbourhood may save it.—* [We wish we could succeed. Surely no one would be so ill-advised as to destroy such a tree as this without some pressing necessity. Nothing is so barbarous as the indiscriminate destruction of fine trees.]

Carnations and Picotees.—We have received several inquiries regarding the best Carnations and Picotees which have recently made their appearance, and which can be recommended as show-flowers of first-rate properties. The following list contains what we have noticed as being the best:—Bucknell's Charlemagne, crimson bizarre,—the petal is of a fine form, even on the edge, stripes narrow and clearly marked, white pure, with good crown and plenty of petals; Chambers' Kate, pink and purple biz., large and well-formed petals, fine crown, good pod, and the colour well distributed; Bucknell's Talma, cr. biz., colour well distributed in narrow stripes; Twitchet's Don John, sc. biz., a flower of extraordinary brilliancy of colour; Martin's Splendid; this is one of the finest sc. biz. we have seen; the petals are firm and slightly cupped, even on the edge, with a good distribution of the colours. Among the Flakes, Headley's Empress of the Purples, dark purple flake; Headley's Incognita, light pur. fl. Wilson's Harriet, a rose flake of fine properties, forming a rival to Brooks' Flora's Garland; Wiggs' Earl of Leicester, sc. fl.; Foster's Wellington, a bright sc. fl. Willmer's Endymion, a delicate rose-fl. Picotees—Barnard's Mrs. Barnard; the properties of this flower we noticed, p. 487. We are not certain if it will be let out this season: if not, we recommend our readers to procure Barraud's Bride as a substitute, a delicate rose, light-edged Picotee, somewhat in the same style, composed of large broad petals, a flower of first-rate properties; Barraud's Eclipse, a very heavy-edged crimson; Garrat's Lady Dacre, light-ed. delicate rose; this flower closely resembles Waines' Queen Victoria, it has the advantage of opening better, and will, we think, prove a greater favourite. Willmer's Duke of Cornwall, light-ed. del. rose. Barraud's Cornelius, very heavy-ed. red; Barraud's Portia, heavy-ed. rose; Hufton's Nehemiah, very heavy-ed. purple; Wilson's Fanny Irby, light-ed. del. rose; Headley's Sarah, light-ed. red; Giddings' Sir R. Peel, heavy-ed. red; Col. Foreman, light ed. pur., colour very distinct, and regular in its pencilling. There are, no doubt, many flowers possessing first-rate properties which have appeared this season that have not come under our notice; those, however, we have mentioned we can recommend.

Humble-Bees.—Perhaps some of your readers may like to hear a few more particulars about the humble-bees which bore holes in flowers, and thus extract the nectar. This operation has been performed on a large scale in the Zoological Gardens:—Near the refection-house there is a fine bed of Stachys coccinea, every flower in which has one, and sometimes two, small irregular slits, or orifices, on the upper side of the corolla near its base. I observed some plants of Marvel of Peru, and of Salvia coccinea, with holes in similar positions; but in Salvia Grahami they were without exception cut through the calyx, which is in this species elongated. The tubular corolla of Pentstemon argutus is rather broader than in the above flowers, and two holes are always bored in it by the side of each other, and just above the calyx. All these orifices are so small that they might easily be overlooked; I first noticed them a week since, when, from the brown colour of their edges they appeared to have been made some time before. The beds of Stachys and Pentstemon are frequented by numerous humble-bees of many very different kinds; at one moment I saw between twenty and thirty round a bed of the latter flowers they fly very quickly from flower to flower, and always alight with their heads just over the little orifices, into which they most dexterously insert their proboscis and in the case of the Pentstemon, first into the orifice on one side and then into the other, so that they thus extract the nectar on both sides of the germen. Besides the humble-bees, I saw some hive-bees on the Pentstemon; they were, however, much less dexterous, and generally alighted across the flower, or on the calyx, and thus lost time. The orifices in all the above-mentioned flowers are made on the upper side of the corolla: I was, therefore, surprised to find, close by, a large bed of the common Antirrhinum in which all the flowers had one or two irregular slits, or holes, on the under side of the corolla at its base, close to the small protuberance which represents the spur in Linaria, and therefore directly in front of the nectary at the foot of the germen. From the position of these orifices they cannot be seen without turning up the flower; but the humble-bees seemed to understand this method of picking-pockets full as well as the other, and never hesitated where to go, but quickly flew from the under side of one flower to that of another. Now I can speak positively, as far as the experience of part of two summers goes, that country humble-bees are not so cunning, and invariably crawl into the flower by forcing open the elastic lower lip; and a very pretty spectacle it is to watch them. All the flowers of Salvia Grahami and the Antirrhinum, which I looked at in different parts of the garden, were bored; and out of the many hundreds in bloom in the two large beds of Stachys and Pentstemon, I could not find one without its little orifice, nor did I see one bee crawl in at the mouth. Nevertheless I found, and the fact appears to me very curious, two separate plants of the Stachys coccinea, and one large one of the Pentstemon argutus, with all their flowers unbored; from the scratches on the lower lip of the flowers of two former plants I have no doubt that many bees had entered in the usual way, and I actually saw one bee crawling into the flowers of the Pentstemon. One is tempted to conjecture that in these plants each humble-bee as it came, not finding a hole ready cut, thought it less trouble to extract the nectar by the mouth than to make one; but that on the beds of the same flowers, where very many bees were rivalling each other in getting honey, some few set to work boring holes, and others copied the example. From the comparative fewness of the hive-bees on the Pentstemon, their evident awkwardness in finding the orifices, and the smallness of their mandibles, I can hardly doubt they were profiting by the workmanship* and the example of the humble-bees: should this be verified, it will, I think, be a very instructive case of acquired knowledge in insects. We should be astonished did one genus of monkeys adopt from another a particular manner of opening hard-shelled fruit; how much more so ought we to be in a tribe of insects so pre-eminent for their instinctive faculties, which are generally supposed to be in inverse ratio to the intellectual! Moreover, from what I have above stated regarding the Antirrhinum, I much suspect that the practice of boring holes in its flowers is likewise a piece of acquired knowledge, whether the Humble-bees do it instinctively or not in other cases. Although I have said that country humble-bees appear to be less cunning than London ones, yet I confess I saw this June, in Staffordshire, some in the act of cutting holes at the base of the corolla of the Rhododendron azaleoides; the greater number entered the mouth of the corolla, as indeed was evident from the quantity of pollen on the stigma, brought by the bees from neighbouring Azaleas—this hybrid not having a single grain of pollen of its own. One bee was seen which entered the mouth of some of the flowers and cut holes in others; this shows that the orifices are made simply to save trouble, and not because the bee cannot extract the nectar from the long tube. In the Stachys and Pentstemon it is also evident that the bees cut the holes because they can fly much quicker from the upper surface of one flower to that of another, than clamber in on the fringed edge of the lower lip. I have no doubt by this means they are able to visit twice the number of flowers in the same time. Your correspondent (p. 485) says that the Honeysuckle is sometimes bored; I never happened to notice this, but I have seen pollen-gathering humble-bees show much skill in forcing open the yet-closed mouth of the young flowers and extracting the pollen; flowers which had been open, apparently even for a day, they at once passed over, whereas the nectar-seeking humble-bees stopped at them. If the mouth of the flower was absolutely close, without any one segment having started, the bees from the difficulty of the attempt immediately gave it up. Your correspondent attributes the failure of his Bean-crop to the apertures made by the bees; but when we remember how the petals of many flowers may be manipulated in hybridising them, without preventing their fructification, we may well doubt this view. But I conceive they may be indirectly the cause of the crop failing, not by their making the orifice, but by their not extracting the nectar in the manner nature intended them; for I have observed that when papilionaceous flowers are mature, (and actually in the case of the Bean,) bees alighting on the wing-petal, as they always do to reach the nectar at the base of the standard-petal, depress the wing-petals together with the keel, by which movement the grains of pollen together with the stigma are forced out, and both rubbed against one side of the bee's body, already generally well dusted with the pollen of other flowers of the same species. If all those flowers, even hermaphrodite ones, which are attractive to insects, almost necessarily require their intervention, as is supposed with much probability by Christian Sprengel (Entdt. Geheim.), to remove the pollen from the anthers to the stigma, what unworthy members of society are these humble-bees, thus to cheat, by boring a hole into the flower instead of brushing over the stamens and pistils, the, so imagined, final cause of their existence! Although I can believe that such wicked bees may be injurious to the seedsman, one would lament to see these industrious, happy-looking creatures punished with the severity proposed by your correspondent. Moreover, the florist, I believe, ought rather to praise them for this ingenious method of obtaining the nectar, instead of by the old-fashioned natural one; for let him look how torn and scratched the lower petals of some flowers are—for instance, those of the Mimulus roseus, and the wing-petals of some Everlasting-peas. The little orifice which the bees make, in order to avoid clambering in at the mouth, is hardly visible; whereas all the flowers in some beds of the Mimulus, at the Zoological Gardens, are sadly defaced. Let any one who doubts the use of bees in the fructification of hermaphrodite flowers, watch and admire the manner in which the flat surface of the divided stigma of this Mimulus licks the back of the entering bees, which is generally well-dusted already with pollen; and then how admirably the two divisions of the stigma, endowed with a sensitive faculty, close like a forceps on the included granules of pollen! I will only farther remark, that after the facts here noticed, one may well doubt C. K. Sprengel's view, that the streaks and spots of colour (saft-maal) on the corolla of most nectariferous flowers, serve as guides to insects, that they may readily find out where the nectar-vessel lies. I think the bees which flew so quickly from flower to flower on the under sides of the Antirrhinum, or those which bored the pair of holes on the Pentstemon, or those which bored through calyx and corolla in the Salvia, would tell Mr. Sprengel, that although he might want such aids, they did not. I know hardly any flower which bees open and insert their proboscis into, more rapidly, than the common tall Linaria, which has a little purplish well-closed flower; I have watched one humble-bee suck twenty-four flowers in one minute; yet on this flower there are no streaks of colour to guide these quick and clever workmen.—*C. Darwin.*

Strawberries.—What is here called the Elton, or Elton Pine, is reckoned superior to the Downton; it resembles the Downton in the foliage, but is much larger, and a profuse bearer, fine for preserves. Myatt's Pine-apple we have seen to grow profusely on light, rich, sandy alluvial soils, near the sea. In such situations, other Strawberries are apt to throw out too many runners, and for such Myatt's Pine is well adapted.—*R. Lymburn.*

Auricula Frame.—At p. 296, Dr. Horner gave some account of an Auricula frame, which we have no doubt is one of the best contrivances yet invented for many other plants besides Auriculas, and especially for Alpines. One of our correspondents having expressed his doubts as to the exact manner in which it is constructed, Dr. Horner has been so obliging as to favour us with the following plan and additional explanation:—"If you send the annexed to Mr. W., any workman will at once understand it. It is an end view of the frame, which, by measurement, is 4ft. 8in. at the back, 3ft. 8in. in front, 3ft. 8in. in depth, from front to back, and 15in. from the shelves to the glass top-light; the rise between the shelves is two inches, and the whole length of the frame (two lights) is 7ft. 2in. The shelves are made 5in. in breadth, with about one inch sawn out of the middle the whole length, simply that the pots may not stand in wet or damp; the air thus also permeates the crocks inside the pot; this is, I am convinced, important, for I always found large, succulent, healthy roots, lying among and protruding into the crocks, as if in the enjoyment of air, very different from the discoloured, matted, half-rotting mass, when my plan of potting, &c., is not followed; *w w* is simply a skirting-board of strong deal, partly for ornament round the frame, and in part for strength, and for breaking the wind from blowing, may-be too roughly, in eddies, among the pots; the top-lights slide, or may be pulled down in front, as the lights of a green-house, &c. I may just add that as the shelves could not carry so large a weight of pots throughout, they are supported midway by a rest, as at the ends. Fig *a* is a vertical section of the frame; *b* is a shelf with an inch sawn out of the middle.—*F. R. Horner.*"



Strawberries.—The method of preparing Strawberry plants for forcing, described in p. 536, is a good one where time and trouble are of no consequence; but I have for the last 15 years adopted a plan which answers well, and by which good strong plants are procured in one month from the present year's runners. The compost I use is good strong loam well mixed with rotten dung from the hotbed linings; 24-sized pots are the best for Keen's seedlings, and 32's for Grove-end Scarlets. The latter variety answers for early forcing better than any other sort when Strawberries are wanted by the end of March. Having filled the pots with the compost, they are removed at once to the Strawberry quarters, and arranged on each side of the rows amongst the runners. The middle of July, when the plants are emitting roots, is the proper time to begin the operation of laying; having previously prepared a quantity of pegs, the runners that are rooted into the ground are carefully removed, and their roots inserted in the pots and pegged down. I put three plants into the 24 pots, and one in the 32's; they immediately begin growing, being supported by the mother-plant, and will only require occasional watering in dry weather. When the plants are well rooted, which is in about one month, I detach them from the old plants, and they are removed to their winter-quarters. Beds are prepared for them with a bottom of coal-ashes, and they are plunged in old tan; each bed is surrounded with a stratum of coal-