

and are therefore much less susceptible to spring frosts. I have seen Roses cut at the beginning of April, and every warm morning for a time after, they may be seen with drops of sap on the ends of the shoots as large as Peas, and dropping on the ground, instead of remaining in the plant. If injured Roses are not cut down they will break very irregularly and weakly, and about midsummer many of the plants will die, or only exist. The Roses most injured here are Comtesse d'Oxford, Horace Vernet, Mdlle. Eugénie Verdier, Cheshunt Hybrid, Alfred Colomb, Marie Baumann, Boule de Neige, and many others. It is very curious to see plants of the same variety, and in the same row, some killed and others safe. Roses have escaped best that are on the seedling Brier, and the Rosa multiflora Russelliana stock (some recently planted on the latter stock), are almost safe, the only exception being Comtesse d'Oxford, which is slightly discoloured. Many shrubs are much injured here—Portugal Laurels, common Laurels and Aucubas, Laurustinus, Deodars and Yews in some cases, also Chinese Privet. *J. Brown, Great Doods, Reigate.*

Plant Labels.—Mr. Wolley Dod's letter, p. 237, shows well what hardy plant labels ought to be. Since the prize was offered several useful labels have come to my knowledge which I had not before heard of. I think we ought to have a good exhibition, and in this view would ask any of your renders who are making use of labels at all out of the common way, and all label makers, to send specimens to the Society of Arts, John Street, Adelphi. I should hope that the Society would exhibit all that they receive, old and new, and then hand them over to the Royal Horticultural Society. Perhaps I should explain why the prize was not offered through the latter Society, in whose province the object may seem more properly to be. Having been in years past a member of the Council of the Society of Arts for a considerable time, I was at home in the Society, and knew that there were among its members many with ingenious heads, whose attention had not been called to plant labels, while in the Royal Horticultural Society many of the Fellows knew by experience what labels ought to be, and had already exercised their ingenuity upon them. *George F. Wilson, Heatherbank, Weybridge.*

Ilex decidua.—In one of your previous numbers (p. 689, vol. xvi.) you give a figure of *Ilex decidua*. This is here a common shrub in the rich alluvion of the Mississippi. Its leaves are much smaller than in your figure, which represents a luxurious cultivated specimen, I suppose; but its principal ornaments are the abundant coral-red berries which cover the female bushes throughout the winter (apparently not touched by birds), and which are most charmingly set off and contrasted by the snow covering of the ground. *G. E.*

The Compass Plant.—In the paper received lately of January 15 I notice an account of the Compass Plant (p. 74). When common here, years ago (it is now driven out by cultivation in this neighbourhood), I have often examined it with compass in hand. The leaves at their base are arranged, as may be expected, in the ordinary spiral position, but during their development the petiole is twisted so that the blade faces east and west, and its edges point north and south. The stem-leaves, being sessile, show at their base their original position, but their midrib is turned about the middle, or in the small upper leaves, towards the tip, so that the upper part of the leaf assumes the meridional direction, while the lower part remains fixed in its original position. The large flower-heads, on short and very thick peduncles, are almost invariably turned eastward. Sir Joseph Hooker's remark about the appearance of a plain covered with this *Silphium* from a railroad train is quite correct, and any change in the direction of the road becomes visible at once through the altered appearance of the leaves of the Compass Plant. The equal distribution of the stomata on both faces of the leaf is a matter long known to me, and this species of *Silphium* may be readily distinguished from all the others by this character. Only *S. compositum* comes near to it; all the others have a vastly greater number of stomata on the under than on the upper side. But why is that so? In connection with this it is interesting to notice that other Compositæ with vertical leaf-blades have a similar anatomical structure. This is especially the case with *Lactuca Scariola*—a plant unknown here before, but extremely abundant now of late years on waste places. Its leaves not only assume a vertical position, but also a meridional one, similar to those of the *Silphium*, though perhaps less pronounced. *G. E., St. Louis.*

Ixiolirion and Tritelia, &c.—Before the very severe frost set in I had *Ixiolirion tartaricum* and *Tritelia laxa* some 2 or 3 inches above the soil. One night we had 26° of frost—this was before the snow-storm—and when the snow disappeared I quite expected to find these plants dead. I am happy to say they were only slightly scorched, and are now recover-

ing fast. *Montbretia Pottsi* is coming up strongly. None of these had the slightest protection, and as my situation is very cold, being high on the Mendip Hills, I think we may consider the whole of them perfectly hardy. *Jay Aye.*

The Proposed Boiler Trial at Manchester.—The knowledge how to select the best boiler is a consummation much to be desired, and if it were possible to arrive at it through a public trial, a better place for the purpose possibly could not be found than Manchester. There is, however, nothing new in the proposal—it has been tried there and at other places ere now, and the result is understood as having been anything but satisfactory, and the reason why will not be difficult to understand. Your correspondent "Ben," at p. 213, is very enthusiastic on the matter, and wonders that "practical (!) contests are not oftener carried out," and goes on to state that "thousands of pounds are given as prizes for good fruits and showy flowers." He cannot surely wish us to believe that there is any comparison. Good fruits and fine flowers are the result of trials carried out under the most favourable circumstances, while it is impossible to estimate the merits of a boiler in a temporary open air trial, however carefully carried out; satisfactory comparison and trial may be made with almost every other garden requisite except the boiler. Experience gained by actual practice appears to be the only reliable guide in the matter. I think the question of trial or no trial of boilers at Manchester may safely be left to the able superintendent, Mr. Findlay, who has had ample opportunities to judge of its practicability. *G. T.*

Window Flower Boxes.—Amongst other specialities in terra-cotta Mr. Matthews, of the Royal Pottery, Weston-super-Mare, has lately introduced

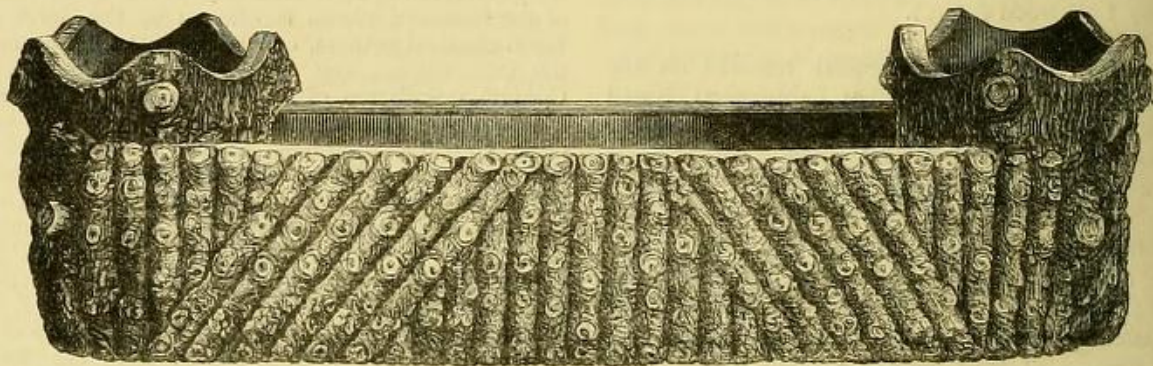


FIG. 51.—A TERRA-COTTA WINDOW-BOX.

some very ornamental terra-cotta window boxes, which must largely supersede the ordinary wooden window box on account of their more durable character. The examples that we have seen (see figs. 51, 52, pp. 276, 277) are strongly made, tasteful in designs and finished off in the moulding with the care that distinguishes Mr. Matthews' manufactures. More than this we need not say in their praise.

Snowdrops under the Snow.—Permit me to thank Mr. A. D. for his interesting remarks on early Snowdrops (see p. 214). I trust the northern cultivators will speedily furnish sufficient facts to set the matter of the earlier flowering or otherwise of the Snowdrop north of the Tweed at rest. "A. D.'s" idea that cold fosters growth in the Snowdrop is an ingenious one, and is so far supported by the fact that Snowdrops refuse to be forced, and resent any great amount of heat by declining to flower at all. It would be most interesting and useful if those who will favour us with their experience of the time of flowering of their Snowdrops in the open air would also relate their success or otherwise in their attempts to force it. With us no Snowdrops flower till April 1, and the general crop is never expanded till Valentine's Day, or from that till the end of the month. This season the Crimean Snowdrop has hardly yet (Feb. 15) broken ground. This here is more of a March than a February bloomer. In regard, however, to Snowdrops under the snow, they are fostered by heat, not cold. Snow conserves the heat of the earth to a most unsuspected extent. For example, Snowdrops under the snow during the late severe weather grew away fast in a temperature of 32° or more, while those that were not so protected were exposed to zero. Hardy as the Snowdrop is, it no doubt grows faster in the former than the latter temperature: hence, taking for granted for the present the earlier flowering of the Snowdrop in northern latitudes, the thicker covering of snow may doubtless be the cause of it. Not, however, because the snow

is cold, but it conserves so much heat as virtually to keep the Snowdrop warmer in cold climes, where the snow is abundant, than in warmer ones where there is less snow. Neither is the beneficent quality of the snow confined to the Snowdrop. On the contrary, the safety of all the more dreary vegetating northern climates is owing to the warm mantle of the snow. In severe winters the safety of our flocks and herds is ensured by the same means. Were proof of this needed we have only to look at the parched appearance of our grassland and meadows at the present time. Wherever the sweeping wind of January 18 cleared all the snow off the grass there it is bare and brown; but where the snow wreaths laid the thickest there all is green, and already there has sprung forth a fair bite for the flocks and herds. This rapid growth of vegetation under the snow has led some to think that there is not only warmth under it, but manure in it. This, too, is probable. The air is full of smoke, that is, soot particles, and dust and dirt of all kinds, and no sieve could be contrived more admirably adapted for sifting them all out and bringing them down to earth than the closely meshed snowflakes. *D. T. Fish.*

Linum arboreum.—"F. W. B.," who speaks, unless I mistake the initials, *ex cathedra*, confirms my opinion that *Linum arboreum* has become a scarce plant in cultivation. The reasons probably are, first, that it is not quite hardy in England, being killed in most parts of the island in severe winters; though I believe that in Cornwall and Devonshire, as well as in Ireland, it would reach a good old age. Secondly, it has generally been confused with *Linum flavum*, and treated as a very hardy plant, which that is. Thirdly, it has not been generally considered worthy of a place in a limited greenhouse collection, for though it flowers all winter the flowers, like those of other *Linums*, open only in the sun. Besides, it

strikes and grows slowly, as Curtis remarks. The best use I ever saw made of it, as I said before, was for a spring bed; and when plunged in pots in the open border in April and May, I never saw either the flowers or the leaves injured by frost. "F. W. B." asks, whether my plant is the same as his. I enclose a piece of it, and should be glad to know, as I formerly knew it under the name of *Linum flavum*. *C. Wolley Dod, Edge Hall, Malpas, February 19.* [It is the same. *EDS.*]

Justicias.—Years ago these were great favourites, and used to be grown in almost every stove, but why such valuable decorative plants, as several of the species are, should have dropped out of cultivation I am at a loss to conceive, especially when we consider that they bloom in the winter. Yellow flowers are not very plentiful at any season, and they are much less so all through the dull period referred to; but with a few plants of *Justicia flavicoma*, a stove or warm greenhouse may be quite enlivened with that very desirable colour, which contrasts so well with brilliant *Poinsettias*, *Sericographis*, *Euphorbias*, &c. Cuttings put in now will make nice stuff by next autumn; but if large plants are required it is necessary to cut back any old ones in stock, and when they break again to shake them out and repot in smaller pots, after which they should have a brisk moist heat to get them to start freely. The best cuttings are those formed from the young growths, although the tips of the old shoots root freely if placed in sandy soil under a bell-glass and stood on a shady shelf in the stove. *Justicia speciosa* is another useful kind, having good foliage and a nice compact habit, but the next best to the *J. flavicoma* is *J. carnea*, that produces very large elongated bunches or spikes of flesh-coloured blooms from the points of all the strong branches. The treatment required for this and others of the species is the same as for those mentioned, and the soil they do best in is a mixture of fibry peat and loam in about equal proportions, to which a free