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THE DEMPSEY PEAR.



It may be pardoned if, in again presenting the Dempsey Pear to our readers, we seem to be giving undue prominence to this variety, because it is a fruit of Canadian origin. Unfortunately the artist has not done the pear justice in our colored plate which does not give either the correct shape or size. Since the colored plate was purchased, we have received a basket of the Dempsey

pear from Mr. W. H. Dempsey, the son of the originator. They were beautiful specimens, and gave us a higher opinion than ever of the excellence, both of appearance and quality, of this pear. They also gave us an opportunity of taking a photograph of the variety, and an outline of a section of the pear, which our readers may take as being correct.

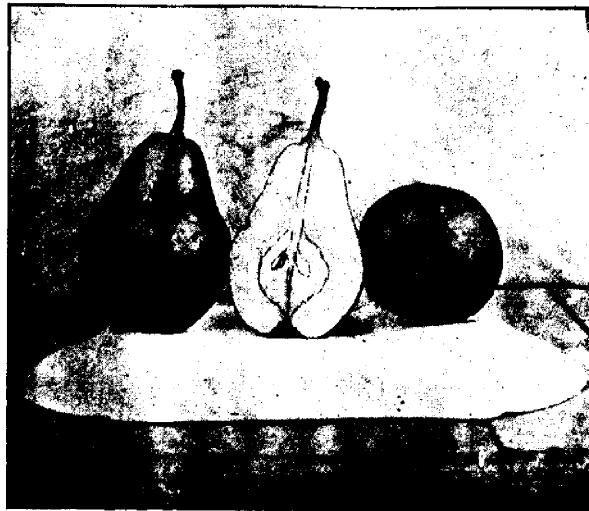


FIG. 853.—A PLATE OF DEMPSEY PEARS.

The Dempsey was originated near Trenton in Prince Edward County, by Mr. P. C. Dempsey, the late well known Director of our Association for that district. It was produced from a seed of a Bartlett, fertilized with Duchess d'Angouleme. The tree is a good grower and quite productive. The fruit is firm and consequently would ship well.

Description : Fruit large, oblong, obovate, pyriform ; skin smooth, yellowish-green, with brownish-red cheek in sun ; stem about one inch long, set in a fleshy base, and with almost no cavity ; calyx nearly closed in a moderately deep uneven basin, core small. Flesh white, fine grained, tender, almost melting, with sweet delicious flavor. Season, last of October, November.

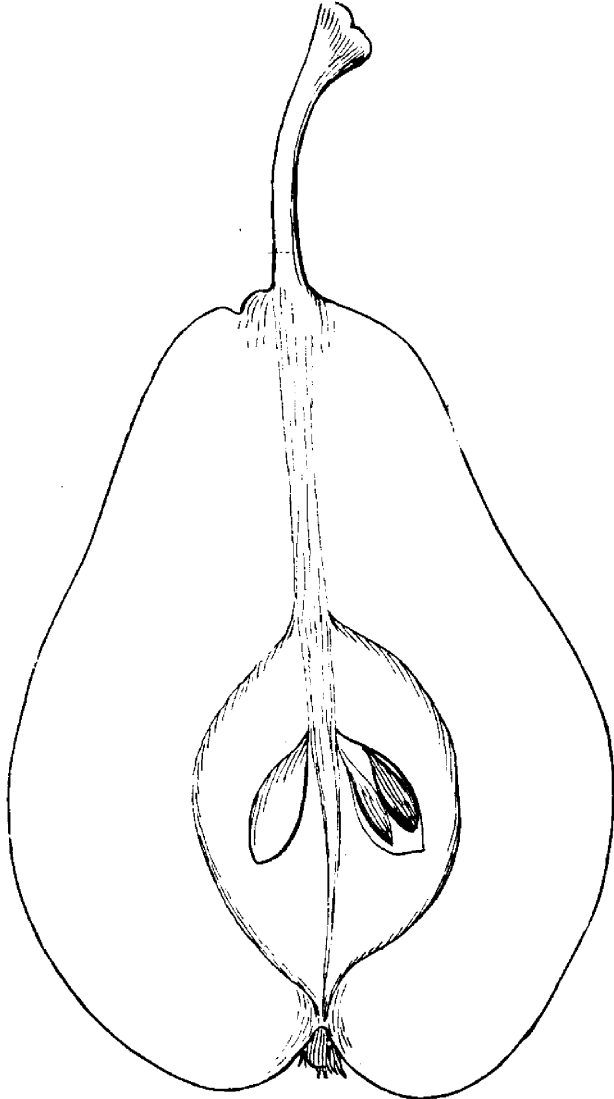


FIG. 854.—SECTION OF DEMPSEY PEAR.

A CHOICE COLLECTION OF HARDY ORNAMENTAL SHRUBS.

By WILLIAM SAUNDERS, F.R.S.C., *Director Experimental Farms of Canada.*



THE inquiry is frequently made both by visitors and correspondents, who have but a limited garden space, what are the best and most attractive shrubs for such limited areas. As a partial reply to this question, a selection of 12 varieties will be briefly described, each one of which, by its grace of form, its attractive foliage, or beauty of flower, or all combined, will afford much gratification to its possessor. The list is so small that many choice things are unavoidably omitted and no attempt will be made to include in this small

number any of the very beautiful evergreens so desirable in every collection. These may be dealt with on a future occasion. Several of the most desirable of the shrubs in this select list have already been mentioned under ornamental hedges, but they are well deserving of special commendation also for the garden



FIG. 855.—LILAC CHAS. X.

or lawn. The illustrations used have been engraved from photographs of specimens growing on the Central Experimental Farm.

1. LILAC CHAS. X. *Syringa vulgaris* Chas. X.—Lilacs are among the best known and most beautiful of the spring flowering shrubs and are universally admired. They are easily grown and flower freely. Some varieties, however, produce flowers in much greater abundance than others. There are about ten species in all of this genus, and of some of these there are many varieties, but none have produced, under cultivation, forms giving so great a variety of character of bush and color of flower as the common lilac, *Syringa vulgaris*, and it is one of the most beautiful of these forms known as Chas. X., which will first claim our attention Fig. 855 is from a photograph taken in June, 1894,

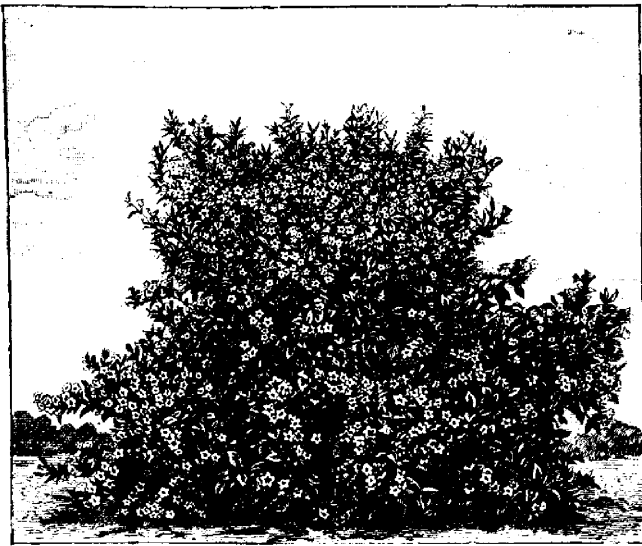


FIG. 856.—VARIEGATED WEIGELIA.

of a specimen about 4 feet high on one of the lawns. This variety is rather dwarf in habit and slow in growth, probably because there is a great tax annually on its powers in the profuse production of bloom with which it is covered. No other lilac in the large collection now brought together on the experimental farms blooms so profusely as Chas. X., and the bush is perfectly hardy. The flowers are of a deep purplish lilac, fragrant and borne on large trusses.

2. WOODY CARAGANA. *Caragana frutescens*.—This is one of a family of most useful and desirable shrubs, the most familiar member of which is the Siberian pea tree, *Caragana arborescens*, which is referred to under ornamental hedges. *Caragana frutescens* is also a native of Siberia, but is a less rapid grower and rarely grows higher than 3 to 4 feet, while the Siberian pea

tree attains, under favorable conditions, in a few years a height of 10 to 12 feet or more. *C. frutescens* also produces flowers more abundantly and the individual flowers are larger. It is a most attractive object when in bloom, as the whole bush is thickly covered with bright yellow pea-shaped flowers. The flowers open early in the season and are succeeded by small green seed-pods which, when approaching ripeness, change to a dull reddish color, and, when fully ripe, they burst and the seeds are scattered. This desirable shrub is easily raised from seed, which may be sown in the autumn as soon as fully ripe, or early in the spring.

3. LARGE FLOWERED VARIEGATED WEIGELIA. *Diervilla grandiflora variegata*.—The cultivated weigelias which are now referred by botanists to the

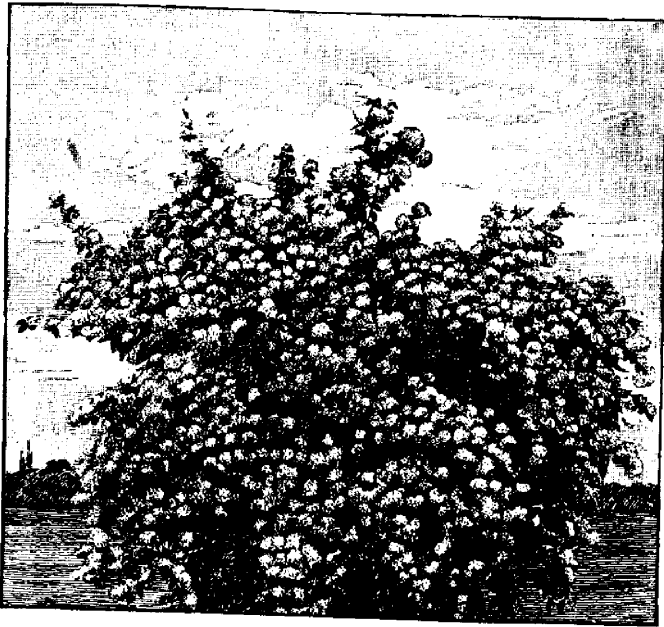


FIG. 857.—VAN HOUTTE'S SPIRÆA.

genus *Diervilla*, are among the most beautiful flowering shrubs in cultivation. The large flowered weigelia is a native of Japan—a country which has given us in recent times many beautiful shrubs and flowers. The foliage on the ordinary form of this shrub is green, but in the variegated form, to which reference is here specially made, the leaves are beautifully margined with white, which makes it a most attractive object on the lawn at all seasons of the year. When in bloom the flowers are so profuse that much of the foliage is hidden. The flowers are white shaded with rose and are funnel shaped at the base, they are produced in axillary and terminal clusters. Fig. 856 shows one of these shrubs in bloom, a specimen in the arboretum of the Experimental Farm. Most of

the weigeliae are tender in this climate, and the branches are killed back every winter, half way or more to the ground. This winter-killing may be partially prevented by protecting these shrubs during the winter with a wrapping of straw or evergreen branches. The variegated form has been hardier with us than any of the others, and has never been protected. From the figure it will be seen that this bush flowered well in 1894, nearly to the tips. It is easily propagated from cuttings.

4. VAN HOUTTE'S SPIRÆA. *Spiræa Houttei*.—This charming spiræa is a fitting companion to the weigelia just referred to, on account of the abundance of bloom which it produces. The spiræas form a very large group of interesting and attractive shrubs, representatives of which are found native in almost every part of the world. None, however, are more beautiful when in flower than Van Houtte, which is then literally a sheet of pure white bloom. This bush has already been referred to under ornamental hedges, but it is more useful when grown as an individual shrub. Fig. 857 represents a specimen in full bloom on one of the lawns on the Experimental Farm. This bush is about 4 feet high and a little more than 4 feet across. It has a graceful and partly pendulous



FIG. 858.—RED TARTARIAN HONEYSUCKLE.

habit; as a rule it is hardy here, but in severe winters the branches are sometimes injured at the tips. It is quite hardy in Western Ontario; the usual method of propagation is from cuttings.

5. THUNBERG'S BARBERRY. *Berberis Thunbergii*.—This beautiful barberry, which has already been referred to in the chapter on hedges as one of the most charming shrubs for that purpose, is even more attractive when grown as a single specimen. Then it has an opportunity of displaying its beauty of form, which is neat and graceful. The flowers are produced early in the season, but they are not conspicuous and are partly hidden under the branches. Later, the scarlet berries are quite ornamental and the brilliant scarlet color assumed by the leaves of this bush towards the close of the season makes it then a most conspicuous and attractive object.

6. RED TARTARIAN HONEYSUCKLE. *Lonicera tartarica*.—This is a very hardy and useful shrub, a native of Tartary, which has long been a favorite among lovers of shrubs and trees. The flowers open early in the spring. They are rose-colored and so abundant as to partly hide the foliage. Fig. 858 shows



FIG. 859.—GUELDER ROSE OR SNOWBALL.

one of these shrubs in bloom, a specimen in one of the flower borders on the farm. They remain in flower for two or three weeks, and after the flowers are gone they are succeeded by dark colored berries which are quite ornamental. In growth the bush has a rounded form and graceful habit. There are a number of species in this group, brought from different parts of the world, some of which have yellow flowers, others white, red or variegated. A group of the different species and varieties planted together, such as may be seen in the arboretum at the Experimental Farm, is most charming in the pleasing contrasts of flower and foliage which they display.

7. GOLDEN LEAVED SPIRÆA.—*Spiræa opulifolia aurea*.—This attractive spiræa has also been referred to under hedges as one of the most desirable shrubs for this purpose. It is equally useful on the lawn and in the



FIG. 860.—WHITE JAPAN ROSE.

shrubbery ; although not specially attractive in flower its clusters of seed vessels are pretty, and its golden foliage contrasts so beautifully with the deep green of a well-kept lawn or the varying tints of green and purple in the shrubbery that it has become quite a favorite. The golden leaved spiræa is a strong grower, soon attaining a height of 5 or 6 feet, is more or less rounded in form and rather stiff in habit ; the foliage also is larger than that of most of the spiræas. It is very hardy and may be easily grown from cuttings.

8. GUELDER ROSE OR SNOWBALL. *Viburnum opulus sterilis*.—This is an old favorite in gardens, too well known to need much description. It forms a very handsome shrub with large foliage, and is a sterile form of the high bush cranberry, *Viburnum opulus*, in which all the flowers are sterile and fully devel-

oped, forming large nearly globular clusters, of a pure white color, which remain on the bush a considerable time before fading. Fig. 859 represents a bush in one of the groups on the Experimental Farm. This specimen may be propagated by layering or by cuttings of the half ripened shoots made during the summer and inserted in sandy soil in a somewhat shady position.

9. THE PLIANT VIBURNUM. *Viburnum lantana*.—There are several handsome species among the Viburnums besides the snowball, and one especially, the pliant viburnum, which commends itself for several reasons. This bush has already been spoken of favorably under hedges. Grown as an individual specimen it makes a fine shapely bush, erect in habit with beautiful foliage,



FIG. 861.—LARGE FLOWERED HYDRANGEA.

and produces large flat cymes of white flowers early in the season, which are succeeded by clusters of berries which at first are bright red, and when ripe nearly black. It is very hardy, and may be propagated by layers or cuttings as directed for the snowball, or it may be grown from seed.

10. WHITE JAPAN ROSE. *Rosa rugosa alba*.—The red flowering form of *Rosa rugosa* has already been referred to when treating of hedges. This is the same species with white flowers. It is a vigorous grower and makes a shapely rounded bush about 4 feet high, as seen in Fig. 860, which represents a specimen in the arboretum at the Experimental Farm. Both the red and white varieties bloom freely, and remain in flower for a considerable period, and both may be propagated by suckers which are freely produced when the bushes are well established.

11. LARGE FLOWERED MOCK ORANGE (*Philadelphus grandiflora*.) Our collection would be very incomplete without an example of the Mock Orange or syringa. There are several species belonging to this genus, which are very beautiful and interesting, especially when in bloom. *Grandiflora* is one of the best of them. The flowers are large, pure white, and sweet scented, and are produced in great abundance during the month of June. The bush is a vigorous grower; and if not interfered with will, under favorable conditions, eventually reach a height of 8 or 10 feet. Since the flowers are produced only on the wood of the previous year, this may be cut away when the flowering period is over, which will give more room to the new shoots, and they will become better ripened. In this way these shrubs may be kept smaller and made to produce flowers in greater profusion. The syringas will, however, do very well without any pruning beyond the occasional removal of dead wood, and flower freely. The large flowered species is fairly hardy and usually comes through the winter without much injury, especially where partially protected by other trees and shrubs, but in seasons of unusual severity the shoots are often partly winter killed.

12. LARGE FLOWERED HYDRANGEA. *Hydrangea paniculata grandiflora*. Although placed last, because it is later in flowering, the merits of this hydrangea would fairly entitle it to be put among the first and best of flowering shrubs. It was introduced from Japan in 1874, and during the twenty years which have elapsed, it has become one of the most widely diffused and favorite shrubs in cultivation. It succeeds well under many different climatic conditions, and will grow in almost any soil which is fairly rich, provided it be well supplied with water. Fig. 86 represents a specimen in one of the flower borders at the farm, and shows the profuse flowering habits of this shrub. The clusters of bloom are very large, sometimes nearly a foot long and 8 to 10 inches wide, and are borne at the ends of the branches. After fully expanding, the flowers, which are white, remain in good condition for about a fortnight, after which they begin to assume a pinkish hue and gradually become soiled with dust and by insects, and eventually wither. During the early autumn when this bush is in the height of its glory, there are few other shrubs in bloom. This gives the greater prominence to this showy and valuable shrub, which would however hold its place well in any company. This hydrangea is quite hardy in the Ottawa district, and may be propagated by cuttings made from the partly ripened wood during the summer months.—Report Experimental Farms of Canada.

Bulbs expected to do service a second time must be kept growing as long as possible. The blossoms may be cut, but the foliage must not be injured; when it turns yellow, withhold water. The bulbs may remain in the soil until wanted. If plump and promising, they may do some service indoors, but if shrivelled or small, throw them away or plant in the open ground.

IDENTIFICATION OF VARIETIES OF HARDY ORCHARD FRUITS.



THE PEAR. *Form.*—May be described as for the apple, except that many kinds are pyriform, instead of “conical,” and turbinate or top-shaped is very common. Some, like Kieffer, which taper towards both ends, may be called biconical. The definitions of the stem end may be simply pointed like Tyson, depressed as the Angouleme, or with the stem deeply sunken, when it resembles the “cavity” of the apple. Most of the Asiatic pears are thus formed.

The core differs from that of the apple in being sometimes hard and gritty.

Color.—As to this, there is an almost entire absence of striping with plain colors, exceptions being found in some kinds, especially when grown well to the North.

The stem has a tendency to be set at an angle to the axis of the fruit, being then termed inclined. The flesh is apt to be buttery, melting, and often granular.

THE QUINCE varies but slightly in form. Some have a plainly defined neck. Some are more angular than others, but all are slightly so. In size they vary quite decidedly. The season of ripening gives little clue to the name.

THE PEACH is a fruit of plainly separated strains or races. We all know the distinctive type called Indian, with its peculiarly brownish and striped fruit and dark colored twigs. The Spanish and Chinese strains, now coming into successful culture in the South, where our common varieties of the Persian stock fail, have their own peculiarities of tree and fruit. All kinds easily divided into cling, semi-clings, and freestones.

In form they are either round, oblong, pointed, like Heath Cling, or unequal. A crease or suture running parallel to the edge of the stone is found in greater or less degree in all specimens, and is worthy so far as it differs in varieties.

In color the peach is much more constant than the apple. It is greenish, cream-colored white, yellow, red, or blushed, mottled, specked and striped with carmine, in all possible tints and shades. The color of the flesh corresponds quite well with the ground color of the skin. In texture it is firm and inclined to be tough, or like Louise. Some kinds are very dry and mealy, and others dripping with juices.

Another reliable mark is the color of the flesh at the stone. The variety called Snow has no tint of red even there. But a great many kinds are red or pink, with either white or yellow flesh.

The stone itself is plump and short (in Peento about the shape and size of a very round hazelnut), or long and pointed, and very coarsely corrugated and

apt to be split. The seed of Morris White appears as if it had been mashed at the base between the thumb and finger while soft. All of the Indian class have the point turned to one side or hooked.

The downy covering of the skin differs in length and quantity and when entirely wanting the varieties are called Nectarines. In my experience I have grown Nectarines from peach seeds.

THE PLUM is represented in our orchards by at least five distinct species. The form in all is the best key to identity. Nearly all have a suture, and in some cases it is very marked.

All are characterized by a smooth surface, covered with a bloom, which varies in thickness, except *Prunus Simoni*, of probable Asiatic origin, and *P. Glandulosa*, which two species are somewhat pubescent, like the Apricot.

The flesh of all kinds is yellow or green of different shades, except a few Japanese varieties that are red to the stone.

The character of being cling or freestone is as dependable as in the peach. The length of the stem is with the plum quite constant. Some have very long and others very short stems. The character of its attachment to the fruit is variable.

The color of the skin is from pale whitish-yellow to yellow, green, pink, red, purple, blue and black. Our native species have all of the red and yellow colors, but none of the green, blue, or black so far as I have seen.

The varieties of *P. chicensis* seem to have a habit of being earlier in their season of ripening than *P. Americana*. Wild Goose is a good example of the former, and Miner of the latter. Kelsey's Japan is remarkable in size and shape of the fruit, being as tender as the fig, and its leaves and branches differ from other cultivated kinds.

THE CHERRY.—Downing divides them into two classes, the first of Hearts and Bigarreaus, and the second, the Dukes and Morellos. The former is characterized by a heart shape, a mild or sweet flavor, and rather firm flesh. The color of the Bigarreaus is usually quite fair. The latter class has an oblate form, is never pointed, and the flavor is from a pleasant tart to a sharp sour.

The cherry usually has a suture, but sometimes a welt in place of it.

The color of the skin is from white to black or nearly so. Nothing short of extended experience will enable one to determine the exact color which belongs to a variety. Even then, no one can distinguish all. The flesh in point of color is very nearly like that of the skin. The shape of the seed corresponds with the shape of the fruit in a great measure. The length of the stem does not vary greatly. The depression at the base of the stem is not plainly contrasted.

THE APRICOT reproduces from seed with comparatively little variation. Their general contour is round, with an occasional elongated or compressed form. A well marked suture is peculiar to some kinds, and other have none. The pubescence is universal and never thick.

The shape of the stone is a very good point of recognition, as some are nearly round and others broad and flat. The taste of the kernel is a reliable index, as some are bitter, and some as sweet as an almond.

The color is yellow, orange, or a rich cream, with an over-color of red, which sometimes darkens into brown. Many varieties are delicately marked with crimson and purple dots, and small specks.

The flesh is usually melting, and colored a little deeper orange or yellow than the skin. It is almost free from any inclination to cling, and not red at the stone like the peach.

The bearing quality of the tree is, through a series of years, a help in making out its varieties, and so is the style of the tree and twigs, and the color of the bark. What is known as the quality of a fruit is gauged largely by the taste of the eater; but it ought, however, to give some idea of the variety. The peculiar flavor of Westfield, or an Esopus, is apt to be remembered.—MR. VAN DEMAN, in Popular Gardening.

THE JAPANESE CHESTNUT.

The Japanese Sweet Chestnut is a decided acquisition to our nuts. The nuts are as large or larger than the Spanish and the tree far more hardy. Spanish chestnuts are barely hardy in Pennsylvania. Seedlings are often partly winter-killed for several winters in succession, but not after they gain a height of 5 or 6 feet and become sturdy. The Japanese chestnut is perfectly hardy and seldom injured. The tree, instead of being a large spreading one as are ordinary chestnuts, is a small tree. Add to this that it bears fruit when but 5 or 6 years old and but 5 to 7 feet high, and there can be no doubt of its great value. While its very large nuts will insure it a ready sale in market, it resembles the Spanish in this, that in quality it is not the equal of our own native species. The nuts are large, of light mahogany color, and, when fresh, with distinct, narrow dark brown stripes passing from base to point. Nut culture in the United States offers much encouragement, as the demand calls for enormous importations, the population is rapidly increasing, while but few plantings of nut trees are believed to be made; their culture is of the easiest kind and returns certain when a nut grove is once well established.—Farm and Home.

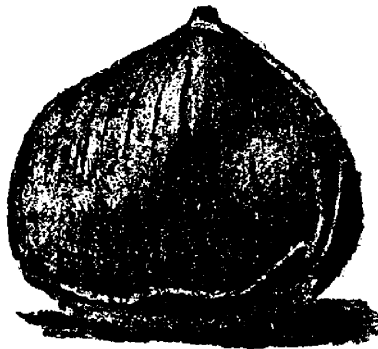


FIG. 862.—A PROMISING AND IMPROVED CHESTNUT.

SHIPPING PRODUCE IN COLD WEATHER.



SHIPMENTS of such perishable farm produce as apples, potatoes, etc., during the winter season are always fraught with danger of freezing while in transit. The cold snap during the middle of November resulted in considerable loss to shippers who were caught in just this way. Potatoes forwarded in unprotected cars were at times so badly frostbitten that receivers could get but 25c. to 35c. per bush. for stock which ought to have been worth nearly twice that much. The weather bureau of the United States Department of Agriculture has prepared some interesting figures regarding the temperature in degrees which various articles of farm produce can stand without injury when unprotected. Tabulated, the figures given in degrees above zero are as follows :

Apples, in bbls.....	20	Flowers.....	36
Apples, loose.....	28	Grapes.....	34
Apricots, in bckts.....	35	Lemons, boxed.....	36
Bananas.....	45	Mandarins.....	32
Cabbage, in Crates.....	30	Oranges, boxed.....	25
Celery.....	30	Onions, boxed.....	20
Cider.....	22	Pineapples.....	35
Cranberries.....	28	Potatoes, Irish, bbls.....	33
Eggs, in bbls. or crs.....	30	Potatoes, sweet.....	36

In the transportation of fruits and vegetables there are three primary objects to be obtained. First, the protection of shipments against frost or excessive cold. Second, the protection of the same against excessive heat, and finally the circulation of air through the car so as to carry off the gases generated by this class of fruit. In shipping goods, injury is liable to occur from long exposure to a temperature but little below 32°, or from a shorter exposure to a greater cold so that the duration as well as the intensity of the cold must be considered. The temperature of the produce when put into the car is quite a feature to be observed. If it has been exposed to a low temperature for a considerable time before, it is in a poor condition to withstand the cold, and the length of time so exposed should be taken into account.

As a rule, perishable stuff can be shipped with safety in ordinary freight cars when the outside temperature is 20° above zero. In refrigerator cars safety may be assumed when the outside temperature is 10° above zero. In the latter, the goods may be safely shipped with a temperature outside of from zero to 10° below if the car is first heated and at the end of the journey the goods are taken immediately into a warm place. In winter time refrigerator cars are used without ice in forwarding goods from the Pacific Coast. In passing through cold belts or stretches of country the hatches are closed and the car, being lined, with padded doors, affords protection against the outside temperature. In passing through warm climates the hatches are opened in order to prevent perishable goods from heating and decaying.

Ordinary freight cars when lined with tongued and grooved boards on the sides and ends, leaving an air space of about four inches, are considered the best by big shippers of potatoes, as they can be heated by an ordinary stove and will stand an outside temperature of about 20° below zero when a man is in charge to keep up the fires.—Farm and Home.

RAISING MUSK MELONS.



THE Henry Shaw banquet to nurserymen, florists and market gardeners, given in St. Louis on the 14th of September, Mr. D. I. Bushnell, in speaking of the celebrated Montreal musk melons, said :

“Great care is used in the selection of seed. The melon earliest to ripen, best shape, etc., is left to ripen thoroughly for this purpose. The hotbed is made by first spreading hot manure fifteen inches deep upon the ground, then laying the frame thereon, banking outside with manure and filling the inside of frame with five inches of dirt. The glass is then put and left for a few days in this state until the first great heat is over. The seeds are planted about April 1, in five-inch pots, five seeds in each, and pots placed in hotbed frame as close together as possible. The temperature of the hotbed is kept at about 80°.

“Early in May trenches are dug, fifteen inches deep, filled with hot manure, covered with earth eight to ten inches, and at a distance of every four feet the melons are transplanted, putting one pot containing three or four stout plants in each hill, of course turning them out of the pots. They are again covered with glass and given plenty of air during the day and covered at night.

• “When the plants make a growth of three leaves, nip off the top so they can send out shoots for fruit. This is of great importance. About July 1, when vines have grown enough to fill the frames and melons are formed the size of your fist, remove the frames gradually. Shingles are placed under the melons, which greatly add to the appearance of the fruit when ripe. The largest melon I ever saw weighed twenty-eight pounds, although thirty-five to thirty-eight pounds is not at all unusual.”—Gardening.

“I LOVE all that is beautiful in Nature and art,” she was saying to her æsthetic admirer. “I revel in the green fields, the babbling brooks and the little wayside flowers. I feast on the beauties of earth and sky and air. They are my daily life and food, and—” “Maudie,” cried out her mother from the kitchen, not knowing that her daughter’s beau was in the parlor. “Maudie, whatever made you go and eat that big dish of cabbage and pork that was left over from dinner? I told you we wanted them warmed up for supper. I declare if your appetite isn’t enough to bankrupt your pa.” And she collapsed.—New Orleans Picayune.

INEXPENSIVE GREENHOUSE.



THE accompanying illustration shows the plan for a greenhouse which is cheap and gives a different temperature in various parts of the house, yet is heated with only one fire. The front part is ten feet wide and twenty-two feet long and the rear part eight feet wide and twenty-two feet long. To build the house, dig in the ground two and a half feet, then set in oak posts eight feet long, sinking them three feet in the ground. This leaves the walls five feet high, except the south wall, which is only four feet high. This wall being low lets in plenty of sunshine. The framework is oak scantling two by three inches, and the walls are made of oak boards one inch thick. Then earth is banked up to the top of the wall and sodded. The rafters on the south side are seven feet long; all the other rafters are four and a half feet long. The letter *a* indicates the position of the stove, which is an old fashioned wood-heating stove. The legs are left off and it is set on bricks so as to place it low down, and over it is built the cutting bench, the bottom of the bench being two feet from the top of the stove. A large pot of water is kept on the oven to maintain due moisture in the air. A large piece of sheet iron is placed between the stove and the wall; another piece is arranged so as to be easily moved in and out between the top of the stove and the bottom of the cutting bench. The dotted lines show where the flue passes from the stove. The flue is made of six-inch tile, except one joint of stovepipe next the stove. This tile is supported by strong galvanized wire fastened to the wall at one end, and to the rail on the flower bench on the other end. The joints of tile are luted together with wet clay, which makes it easy to take them down for cleaning out the soot, which must be done about once a month in winter. The bench indicated by *b* and *c* is built high enough to allow two and one-half feet space under it, which gives room to get under to put wood in the stove; *b* is a bed of heliotrope which is always in bloom, and *c* is where the carnations are grown for winter blooming. The fire is allowed to burn its full force only in zero weather, when it must be looked after every four hours. In moderately cold weather it may be left all night. There is always a difference of ten to twelve degrees between the middle and the ends of the greenhouse. At *d* is the rose bench, where roses are grown for cut flowers, a Marechal Neil being in the end nearest the fire. The bench is two feet high. At *e* is the place for begonias and young palms; *f*, smilax, the bench low down; *g*, coleus, begonias, etc.; *h*, a large palm; *i*, a tall plant. All the benches *k*, *l* and *m*, are used for

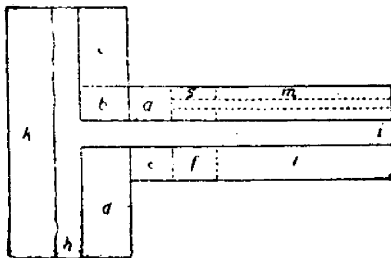


FIG. 863—GROUND PLAN OF GREENHOUSE.

plants for sale. The walks are two feet wide. The door is in the west end, and a storm door is built outside. I did all my work myself and the greenhouse cost me fifty dollars. With a few cold frames in addition it will, if well managed, turn out \$200 to \$300 worth of plants and cut flowers per year. Still, if the purse will admit, build it on the level ground and do not dig. Use two thicknesses of board and put tarred paper between them, as the building will then last much longer, will not be so damp in continued wet weather, and will allow cold frames to be placed outside the east wall. A good drain is indispensable for a house built below the level of the ground.—Ex.

Bank Forcing House.—The accompanying illustration shows a plan for securing a maximum of warmth at the least possible expenditure of internal heat. Such a house is, moreover, cheaply built wherever loose stones are abundant, whether the stones be irregularly faced, or simply rounded cobble-stones. A cut is made into the bank and the wall laid up in cement, or cement and lime. The rear and end walls should have a tile drain laid just outside of their base, coming out upon the surface at

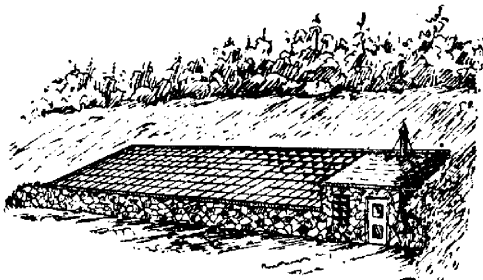


FIG. 364—BANK FORCING HOUSE.

the front. The rear wall should rise a little above the ground, which should be graded a trifle higher in the middle at the rear than at the ends, to turn aside the surface water. The tile drain will take care of all water that soaks down through the ground. The wall in front is extended a little beyond either end of the building to retain a full bank of earth against the end walls. The interior arrangement will, of course, be similar to any single roofed forcing house.

Apple Culture requires more care than any other crop. A few years ago I plowed my apple orchard three years in succession, gave it a heavy dressing of stable manure, and raised corn the first year, potatoes the second, and seeded down with barley the third season, and got the heaviest crops of apples ever grown on this farm. Some say that this method over-stimulates the trees. What if it does? A double crop of large smooth fruit for ten years ought to satisfy us as well as an average crop for 20 years. I believe if every farmer will follow this experience and spray his trees thoroughly he would agree with me that, take it one year and another, the apple is one of the most profitable crops on many farms. Painting the trunk with lime, soap and water will destroy many insects that do irreparable injury to the fruit trees.—American Agriculturist.

BLACKBERRY CULTURE.



F late years the cultivation of the blackberry has become a leading branch of fruit growing. Throughout the United States hundreds of acres of sandy soil have been devoted to its profitable culture.

Culture.—A moderately rich, sandy soil, warm and moist, is best adapted to the growth of the blackberry. The situation should be as high as possible, as on the low land there is more danger from frost. For garden culture set the plants four feet apart each way, and six feet apart for field culture. Healthy young plants from root cuttings are the best. When the young canes are three feet high they should be pinched in, to encourage the growth of side shoots. Any suckers found between the plants should be cut off as soon as they appear.

Varieties.—Wilson's Early, Kittatinny, Lawton and Snyder are among the best varieties. The Wilson is very early and large, and has a fine glossy appearance that shows to advantage in the market. The Kittatinny is a good berry for the family, and though not as firm as the Wilson, is perfectly ripe and sweet as soon as it is black, which is not the case with the other varieties. The Lawton is an old and very productive variety. Though rather late for the market, it is valuable as it remains bearing for a long time. The Snyder is a very productive and hardy variety. The berries are not large but juicy.

In order to protect blackberry canes during the winter, they should be bent over and covered with earth, first putting a little earth at the base of the canes, where they are bent over. This will prevent them from breaking. The canes should be pruned before being laid down, and uncovered in early spring.

Tiverton, Ont.

A. H. CAMERON.

Fertilizers for Grapes.—Some years ago I found that Delawares do best on clay, or heavy clay loam. Later on I found that a fertilizer containing potash induced a more rapid and vigorous growth. Now I use about 600 lbs. per acre of a fertilizer containing eight per cent. phosphoric acid and 10 per cent. potash. Every few years I apply from 15 to 20 bushels of water-slaked lime per acre. The result is, my Delawares have paid ten times over the amount expended for material. The Concord grape does well on clay loam, while the Catawba thrives best in loose, gravelly, porous soils, with exposure to air and sunshine. That is why the Catawba reaches such excellence in the Lake Keuka region, and, as the soil is thin and poor, growers there find stable manure necessary for the growth of wood. There is another point. All grapes succeed best on lands well cultivated and thoroughly drained. As every grower knows that grapes do not like "wet feet," they should be planted on lands where the heat and air could go to the roots.—L. J. V., Chautauqua Co., N. Y.

GROWING TOMATOES FOR THE ENGLISH MARKET.



IN view of the failure of the cold storage apartments, our first venture in shipping tomatoes and other fruits to England gives us no data for concluding as to the advisability of making further consignments next season. We believe that there is something in it for us yet, providing the steamship companies provide satisfactory accommodation. No doubt the Dominion will take this matter up in earnest next year in the interest of the growers.

The following item written for the Montreal Trade Bulletin, by an English correspondent, will be of general interest :—

With regard to Canada shipping tomatoes, I have not seen the fruit, and do not know of what variety the shipments have consisted ; but they will have to be of very fine quality to meet the competition. Just about from now on, some very fine fruit from the Dominion might do fairly well, if our prices agree with shippers' ideas, as supplies are falling off from all quarters. But if they are to come during the summer they would have to be bought for next to nothing on spot to pay. Our market is now higher than it has been for some time, and only yesterday Lisbon tomatoes sold in half boxes as low as 1s. 6d., while the highest range was up to 6s. 6d for exceptionally fine quality. They can be bought in the shops for from 2d. to 3d. a pound, while during the summer they have sold at from 1d. to 2d. The last tomatoes are those grown from English seed, and these are largely imported from Spain, which has taken to buying seed here and growing immense quantities vendable in the flush of the season as low as 2d. retail, and really fine fruit. The Channel Islands go in big for this business, and Jersey sends us literally thousands of tons annually, while France, Spain and Portugal are powerful competitors of the army of people who have arisen in this country to produce the fruit under glass. The supply has created the demand and the public having been educated to eat tomatoes, do so abundantly. But they have also learned to be moderate in their ideas of value. If Canadians can grow good tomatoes *à l'anglaise* to sell in our season, retail, at a slightly higher figure, all well ; if not, they must keep out of it.

Origin of the Ben Davis.—The Ben Davis apple was brought originally from North Carolina along with a lot of other seedling apples. The Davis family moved to Kentucky and set the original Davis orchard in Butler county. The Hill family moved to Illinois and took along some grafts from the Kentucky orchard. The apple proving valuable, the question naturally came up as to what the apple should be named, and the answer came, "Ben Davis, for it was Ben Davis who brought the seedling sprout from North Carolina." This apple is no doubt planted over a wider section of the country than is any other variety. A part of the original orchard is still in bearing conditions.—Free Press, Farm and Garden.

TOMATOES AS A WINTER CROP.

The winter forcing of tomatoes is one of the most interesting, satisfactory and often most profitable operations of the gardener. The most important conditions are a warm, light house—a two-thirds span, facing south, being preferable—strong bottom heat, rich soil, careful training, uniform temperature, care in watering and pollinating, constant watchfulness and good judgment. We plan for two crops each season. The first is started by July 1 to 15. Place them on the fruiting benches in September, and the crop is in its prime at the holiday season, but lasts into February. The second crop, started in October, takes the place of the other in February. On the fruiting benches, four plants are grown in a box 18 in. square and 1 ft. deep. Each plant is trained to a single stem, and occupies $1\frac{1}{2}$ sq. ft. of floor space. Strong flax cord—the size of wool twine—extends from the base of each plant to the roof. The plant is secured to it by raffia bands. From much study I am convinced that failure to fruit well is often due to insufficiency of pollen on the stigma. The only attention we have found necessary to remedy this is, on bright days, when the atmosphere is relatively dry, to give to each plant two or three sharp taps with a padded stick. The most satisfactory varieties for forcing are Lorillard, Ithaca, Chemin Market, Optimus and Golden Queen. The average crop with us has been about 17½ lbs. per sq. ft. of floor space, which at 50c. pays well.—PROF. W. W. MUNSON to Massachusetts Horticultural Society.

Fertilizers for Various Fruits.—Professor Fields, of the Pennsylvania Experiment Station, is reported to give the amount of various ingredients removed from the soil by certain fruit crops as follows: "An acre of apples producing 360 bushels removes from the soil 24 pounds of nitrogen, 2 pounds of phosphoric acid and 34 pounds of potash, all valued at \$5.74. An acre of pears yielding 335 bushels removes 16 pounds nitrogen, 5 pounds phosphoric acid and 14 pounds of potash, total value \$3.60. Grapes harvesting 8,160 pounds per acre contain 13 pounds nitrogen, 4 pounds of phosphoric acid, 22 pounds potash, worth \$3.61. Peaches yielding 335 bushels per acre remove 3 pounds of phosphoric acid and 10 pounds of potash.

The amount of nitrogen required by the above yield of peaches was not given.

Flowering Shrubs in Winter.—One of the most charming flower displays in winter is secured by boxing a few of our prettier but common shrubs, such as lilacs, deutzias, syringas and spireas. Small lilacs should be grown stocky in our gardens for this special service. Dig them in the fall and place in the cellar for a few weeks. Remove to a warm room about two weeks before flowers are needed. In this way you may have a succession of lilacs all winter. The fragrance fills the house. A very easy shrub to force is the yellow flowering current. This is also very fragrant. No special care is needed in forcing shrubs except to keep them watered.—Amer. Agriculturist.



STANDS FOR PLANTS.



DURING the cold winter months, when many housewives are compelled to stay indoors so much of the time, they find their greatest happiness in caring for plants, and many have wished for years for a plant stand. Cannot the husband or son use two or three hours some stormy day in making one? There are a variety of models to choose from. An old pattern, and probably the best

because it will hold the most, is the half circular one with three shelves (Fig. 865). It is made with three legs and two short braces between them under the lowest broadest shelf. The rear view is shown in the illustration, as its construction can be seen there at a glance, and this is the view exposed to the living room also, the shelves being turned to the window. The shelves should be made broad enough to extend beyond the frame at least two inches.

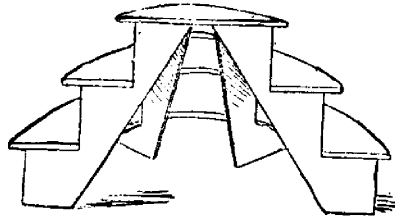


FIG. 865.

A small, strong bench to hold a large window box (Fig. 866) is quickly made as follows: Measure the depth of the box it is to hold and make the legs long enough to raise it to a level with the window sill.

They are composed of boards notched at the bottom. A top board is nailed or screwed in place and a shelf firmly nailed to cleats half way between top and floor. This shelf is useful for a variety of purposes as well as a brace to strengthen the bench. Another pretty stand is a rack added to the top of a bench (Fig. 867). It is faced to the window and rests upon the sill. It will hold a large number of pots on its two shelves and on the bench.

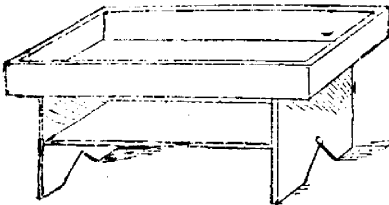


FIG. 866.

An arrangement which seems to be the most perfect in every respect, because of its allowing the plants all the sunshine,

and being kept out of the way when the room is swept, is a plant rack made of hanging shelves (Fig. 868). The top shelf is eighteen inches to two feet from the glass, while the bottom shelf is on a level with the window sill. The weight of the rack and plants is supported entirely by the window frame, to which it is screwed at the bottom, and held by a strong wire at the top. It is easily taken down and put aside in the spring. A

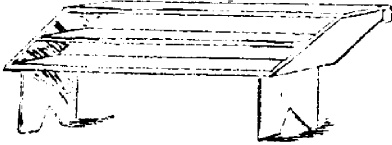


FIG. 867.

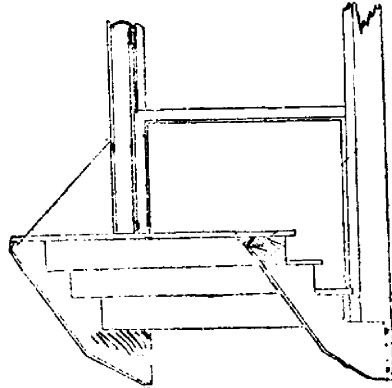


FIG. 868.

neat finish to all of these plant racks is dark green paint. Nothing is so pretty and appropriate for the green foliage and bright flowers.—Orange Judd Farmer.

A HANDY PLANT STAND.

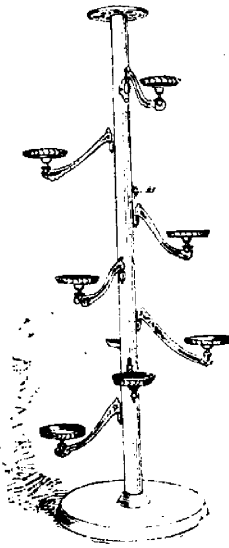


FIG. 869.—STAND FOR PLANTS IN POTS.

The accompanying sketch represents a stand of my own designing and make which has been found to be most useful, either indoors or outside. You will see that it is well adapted to give the plants all the room and sunlight needed; it occupies little floor space and makes it convenient to get at any particular plant. The form fits it for use in any part of the house for special decoration, and when it is filled with healthy plants is a very ornamental piece. The upright pole is 6 feet in height, is of 3-inch cherrywood, with a base about 20 inches in diameter; which may be mounted on castors—I use eight, but six would do; the brackets are ordinary ones, such as are kept at the hardware stores; the top piece being the shelf from a large one, and I use it for a large shallow jar of trailing vines or a palm. I have thought the stand a very good thing and found it for the last two winters almost indispensable in our small dining room.—C. F. BARBER, St. Paul, Minn., in *American Garden*.

HARDY PLANTS IN THE WINDOW.



R. JOSIAH HOOPES gives some excellent points in a recent article in the Weekly Tribune on hardy growths for window culture: Thrifty young shrubs, two or three years old, chosen from among early-bloomers, form as attractive window ornaments as any kind of plants we can select. They are cheap, and adapted to the atmosphere of our living rooms, growing and blooming in pots with the freedom of shrubs in the open ground. Early-blooming hardy herbaceous plants are equally desirable for the purpose, and require even less care. The multitude of enfeebled roses, geraniums, etc., in the winter windows of so many flower-loving people should be replaced by more easily-grown plants, and we would then hear far less complaint of "poor luck with flowers." In selecting shrubs for this purpose, earliness is of greatest importance; next comes freedom of bloom; then adaptability to pot-culture; and lastly, dwarf compact habit. No plant should be rejected for not conforming to the last requisition, as any shrub can be made denser by systematic pruning, once or twice a year. Young and thrifty shrubs are preferable to those with old, hardened wood, and will produce more bloom as well as prove more sightly in pots. Although most early-blooming shrubs will answer the purpose, the following seem to fill the bill with entire satisfaction, provided the plants have been previously pruned into proper shape; *Deutzia gracilis*, the perfection of a house plant, and fine for cut-flowers, as are all the family. The weigelas in variety, especially "Candida," with pure white flowers, and any of the deep-red colored varieties. *Forsythia fortunei*, with golden yellow bloom, and an improved habit, with very dark green foliage. *Philadelphus coronarius*, or the "Mock-orange," is beautiful, and possesses a delightful fragrance. The double rose, and double white almonds, are among the best plants for the purpose, blooming both early and profusely. The Missouri currant, with its rich, spicy fragrance and bright yellow flowers, is excellent. *Spiræa prunifolia*, *S. Reevesi* (both single and double), *S. Thunbergi* *S. Trilobata*, etc., are all valuable. And lastly, the syringas or lilacs are all beautiful, although not so readily grown by amateurs as some of the foregoing. Among herbaceous plants, such easily forced species as *Astilbe japonica*, *Dicentra spectabilis*, lily of the valley, violets, etc., may be depended upon for a supply of flowers during winter. To obtain best results, the plants should be lifted as soon as matured in autumn, say in November, potted in good light soil, and set away in a cool shaded location, until needed for forcing. Never use pots of a larger size than is absolutely necessary, and plunging in coal ashes encourages root formation. One may readily enjoy a succession of flowers all winter long by forcing a few at a time, and replenishing as the bloom fades away. Hardy

plants of every description dislike strong heat, preferring a cool, moist atmosphere, with plenty of air in mild weather, and free access to the sun's rays. They do not require to be constantly deluged with water, but should receive a liberal supply whenever the soil becomes dry. Drainage in the pots must always be attended to, as stagnant water at the roots will result in diseased plants and impoverished flowers. For window-culture, the plants should be started either in a cool greenhouse, or sunny window in the domestic apartments, whence they may be removed to the living room as the bloom begins to appear.—Popular Gardening.

HOYA CARNOSA.



HERE space is limited, I prefer to grow flowering plants instead of vines, ivies, etc. But a blooming vine has a combination of qualities which should be respected. Such a vine is the hoyo, or "wax plant." It delights in a warm, shady situation, and a rich sandy loam. Five years ago I was given only a leaf of that coveted plant. An eight-inch pot was filled with rich sandy loam, the leaf was inserted, and about half covered with the soil; it was watered, then placed in a south window to wait developments. Yes, indeed, I waited; but, long as it seemed, it amply paid me for waiting. The first year it grew about six or eight inches, but the next two years it grew very fast, and formed buds that gave me the most beautiful flower of my collection. It bears its flowers in umbels of a pinkish white with a dark centre. They look like the purest wax, with a drop of honey in the centre of each flower; and they are also delightfully fragrant. Contrary to the advice usually given, the flowers of the hoyo should not be taken off, for they bloom each year on the old flower stem; it also sends out buds each year that bloom the following season. The long trailing ends should not be cut off, for in time they put forth leaves and branches. The hoyo should not be shifted or the roots disturbed if flowers are wanted; they will then bloom when three years old. I give plenty of water during the growing season, and a weak fertilizer while in bloom, but in winter water is withheld, and the plant allowed a rest. The leaves are dark green, thick and wax-like, thus both leaves and flowers suggest its common name. Kept free from dust it is a very desirable foliage plant. My hoyo stands in a west window; sun-loving plants are placed between it and the window to shield it from the direct rays of the sun. It is an ornament to any plant collection, and improves with age.—Vick's Magazine.

"DON'T talk to me," said the lettuce to the turnip. "I have a heart and you haven't." "I don't see how that can be," replied the turnip. "You never get mashed, and I do."—Life.

WINTER PROTECTION OF ROSES.

Our object in covering roses during winter is principally to prevent a too rapid thawing of the frozen buds and wood; 16° to 20° of frost will not injure the H. P. roses during their winter resting period. It is the action of the sun's heat upon the frozen wood and buds which does the injury, so that whatever method we adopt for covering our roses in winter, it should be such as will prevent severe freezing of the wood and buds, and, if frozen, to prevent rapid thawing.

During the winter, while going through the garden of a neighbor who has a few hundred roses, I noticed he had carefully wrapped or thatched each rose bush with straw. The method has a neat appearance, and certainly answers the purpose well, for his roses now (May 10) are in excellent condition. This method of winter protection, however, occupies more time than rose growers on a more extensive scale would care to give to the work, nor is it at all necessary, for equally good, or better, results are obtained by more simple methods, the work at the same time being done much more rapidly.

The method we adopt here at Widenethe is the same as practiced by Mr. Henry W. Sargent nearly half a century ago, and satisfactory results are always obtained,

PROTECTIVE METHODS.—About November 20, or before the ground is frozen, the rose growths are shortened, leaving about 18 inches of the current season's growth. Soil is then thrown up around each plant, the mound being made sufficiently high to cover at least six to eight inches of the current season's wood. Our roses being planted from $3\frac{1}{2}$ to 4 feet apart, there is no difficulty in obtaining sufficient soil for this purpose.

The close pruning, too, which is practised here, facilitates this method of winter protection. After the roses are earthed up, the rose beds are given a good mulching of half rotted cow manure; this serves the double purpose of protecting the roots, which, after the removal of so much soil, will be near the surface, and also by being dissolved by the thawed snow, supplies the necessary food in an available form for the plants to take up when they commence to grow in the early spring.

This method of wintering roses should recommend itself to all gardeners in private gardens, there being no straw or leaves to litter the lawn. It is easily and quickly done, and there is nothing to displease the eye or make the garden unsightly.

The same cannot be said for the heaps of leaves and brush one can so often see used for covering rose beds.

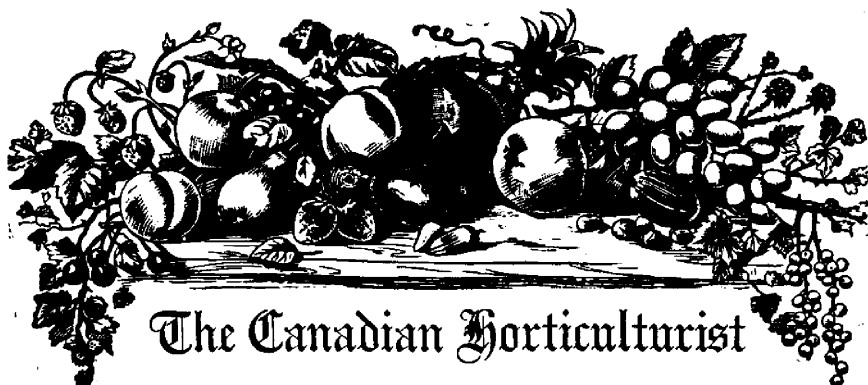
HYBRID PERPETUALS.—In wintering the Hybrid Perpetual roses, it is quite unnecessary to go to the trouble of pegging down the shoots and then covering with a foot of leaves. The earthing up method will be found equally satisfactory

and far more pleasant to do, for it requires a great deal of time and patience, and is anything but pleasant labor to get the leaves out of the rose bushes in the spring. Tea roses should be laid down and covered with soil in the same way that we treat raspberries. Mulch with half rotted cow manure and when the ground is frozen cover the beds with salt hay or fern, if obtainable, or leaves, covering the whole with spruce boughs or wire netting.—American Gardening.

Irrigation Has Come to Stay, because it is a success. It has already gladdened the heart and brightened the pathway of many a western farmer. It means a sure living, and a competence in the future. With the introduction of fish culture on your farm in connection with your irrigation plant, those desirable results will come quicker. It will not only add to the beautified home, surrounded by groves, orchards, vineyards and gardens, which the transcendent power and influence of water will make possible, but it will enable you to raise fish, and bring a new food to your table—a change of diet which in all ages and climes has proved beneficial to the human family. Do not delay, for delays are dangerous. Build your ponds and reservoirs, dam the draws, corral the springs and creeks. Keep the live stock away from the reservoir and keep the water fresh, and you will have a wonderful start towards bettering your condition as a progressive farmer.—JOHN H. CHURCHILL, Kansas.

“HEAR how the trees in the orchard moan,” exclaimed the romantic miss. “I guess you would moan too, if you were as full of green apples,” replied the matter-of fact youth. And the air grew a-chill.—Philadelphia Record.





The Canadian Horticulturist

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✦ Notes and Comments. ✦

THE FLORAL EXHIBIT of the Grimsby Horticultural Society was a grand success this season. It was held in the Town Hall on the evening of September 17th, and, though a little late in the month for the best spikes of gladioli, the show of other flowers, both cut and in pots, filled every spare foot of space. The Society had distributed to each member a dozen gladioli and two tuberous begonias. The gladioli were planted about the first of June, and had the show taken place the first week of September, these would have been at the height of perfection. Even as it was, there was a fine lot of blooms of this flower. The thanks of the Society are due to Miss Little of Granton for a basket of beautiful spikes of gladioli contributed by her. With the floral exhibit was combined an art exhibit, and teachers and pupils united in the display of their work, which contributed very much to the interest of the occasion. The people of Grimsby were well represented, and the first part of the evening was a veritable conversatione, after which the president, Mr. J. H. Grout, called for a programme of music and recitations. There was an admission fee of ten cents, which left a nice little sum in the hands of the treasurer after expenses were paid.

EXPORT TRADE IN CIDER.—We are in receipt of the following letter from Mr. H. B. Small, Secretary Department of Agriculture, Ottawa, on this subject :

“ Sir :—I am directed to enclose to you herewith copy of a publication transmitted by the High Commissioner, entitled ‘Cider,’ and to call your attention to the desirability of opening an export trade in that commodity between Canada and the United Kingdom.

“ The High Commissioner calls attention to the fact that very large quan-

tities of cider are exported to Great Britain from the United States, and he sees no reason why Canada should not participate in the same trade."

The journal is published by L. Lumley & Co., 1 America Square, London, E.C. There is certainly an immense quantity of waste apples in our orchards which might well be utilized more generally in making cider, providing once it was proved that an export trade in it could be made profitable.

THE DOMINION GOVERNMENT has kindly undertaken to pay the freight charges on the shipment of tender fruits to Liverpool in cold storage. It is stated by Mr. Craig, in a letter just received, that at the solicitation of the Fruit Growers' Association, and his recommendation, the Acting Minister of Agriculture has agreed to ask Parliament for a vote to be applied to experimental work along the same line in 1896. No doubt this undertaking, if carefully persevered in, will result in materially advancing the interests of Canadian fruit growers.

GROUT'S SEEDLING.—Mr. John H. Grout, President of the Grimsby Horticultural Society, handed in a sample of a fine dessert apple very much resembling the Woolverton (a Princess Louise) in appearance and in flavor. It is a chance seedling, probably of Fameuse, growing along the north side of the mountain at Grimsby. For a choice dessert apple for the month of October, it

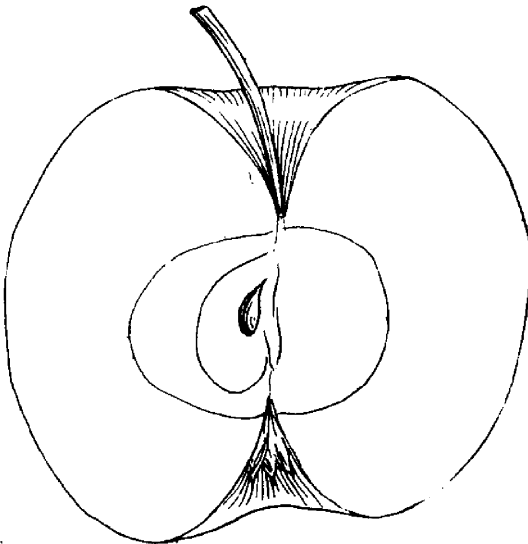


FIG. 870.—GROUT'S SEEDLING.

might be desirable. The drawing of the section will give a correct idea of its size. The color is yellowish, almost straw color, with dark pink blush in the sun. The flesh is white, tender, juicy, with mild sub-acid very agreeable, perfumed flavor.

BITTER ROT OF THE APPLE.—A large quantity of Baldwins, grown in one of our orchards at Maplehurst, were spoiled by being almost covered with small spots, which, on cutting the apple, were seen to be a dry rot, extending through almost the whole core. This has now troubled us for two or three seasons, and is becoming yearly more troublesome. On sending a sample to Professor Craig, Ottawa, he replied as follows :—

“Replying to yours of the 22nd of October, submitting sample of Baldwin apple affected with rot, I may say that I have examined the specimen in question and believe it to be affected with a form of bitter rot, *Gleosporium*. This is a disease which is quite common in some places in the South, particularly Virginia, Kentucky and Missouri. We have not been troubled with it in the North, so far as I am aware, to any extent till the present season, when I have received a number of samples from various quarters, exhibiting the presence of this disease.

“With regard to remedies, spraying with Bordeaux mixture and other fungicides has, so far as I have been able to learn, been ineffectual. Special care should be taken to collect and destroy all the diseased fruit which may remain upon the tree or rest upon the ground.”

THE KENSINGTON GRAPE.—Two vines of this variety have just come to hand for testing, from Mr. John Craig, Horticulturist Central Experimental Farm, Ottawa. The following is the description which appeared in the Report of the Experimental Farms of Canada :

KENSINGTON (*Riparia hybrid*).—Produced at London, Ont., some years ago, by Mr. Wm. Saunders, who pollenized Clinton with Buckland's Sweet-water. This variety, in a remarkable way, combines in fruit and vine the characteristics of both parents. Vine fairly vigorous ; wood short-jointed ; leaves deeply cut ; bunch medium. Berry medium size, oval ; white skin, thin ; pulp rich and juicy ; a grape of first quality, ripening with or a little before Concord ; home use. Thus far it has not been propagated to any extent, but its probable value for southern localities, should lead to giving it a more thorough trial by grape-growers.

OMISSION.—The excellent report on Early Varieties of Strawberries on page 394 was sent in by Mr. E. B. Stevenson, Freeman, Ont., our special experimenter in strawberries. The next report of fruit experimental work will contain much valuable matter from his pen.



❖ Question Drawer. ❖

Best Varieties.

765. SIR,—Would you please give me a list of six each of the most profitable varieties of apples, pears, peaches and plums, in order of merit.

W. COATSWORTH, *Chatham.*

Your question is one which cannot be safely answered because of the varying conditions of soil and climate, and the demands of the market to which you would ship. We would refer you to the articles in this Journal concerning varieties, and also to the reports both of our Association and of the Fruit Experimental Stations.

Potash for Trees.

766. SIR,—What is the proper way of applying sulphate of iron and potash to the roots of trees?

G. R., *Toronto.*

Sulphate of iron is sprayed on the body of the trees before foliage appears, 1 pound dissolved in 15 gallons of water.

Potash is not applied in contact with the roots of trees. It should be sown upon the surface, and gradually cultivated into the ground. Ashes is a convenient form of applying potash to an orchard, using, say, 50 bushels to an acre.

Melons Mixing.

767. SIR,—Will different varieties of melons mix if planted near together?

SUBSCRIBER AT IROQUOIS.

Reply by H. L. Hutt, Horticulturist, Ontario Agricultural College, Guelph, Ont.

Yes. This will make no difference, however, unless you wish to save the seed, as the cross is not apparent the first year.

Crops Mixing.

768. SIR,—What kind of garden and field crops are in danger of mixing if sown together?

IROQUOIS.

Reply by Prof. Hutt.

The different varieties of melons, cucumbers, squashes and corn mix most readily when grown near together.

Cannas.

769. SIR,—Should Cannas be taken in every fall ?

IROQUOIS.

Reply by Prof. Hutt.

Yes.

Tulip Tree.

770. SIR,—Do you consider Tulip trees, White Fringe and Red Althæas sufficiently hardy for Dundas County ?

IROQUOIS.

Reply by Prof. Hutt.

I am inclined to think all of these would prove too tender for Dundas Co. The White Fringe (*Chionanthus Virginicus*) stands the winter fairly well at Guelph, although it is reported on as tender at Ottawa.

Hydrangea.

771. SIR,—Does the Hydrangea require to be covered here for winter protection ?

IROQUOIS.

Reply by Prof. Hutt.

The Hydrangea (*Hydrangea paniculata*) is fairly hardy here and is reported the same at Ottawa. I would advise you, however, to give it winter protection until you find by experiment that it is not needed.

↪ Our Book Table. ↩

STANDARD DICTIONARY OF THE ENGLISH LANGUAGE, upon original plans, designed to give, in complete and accurate statement, in the light of the most recent advances in knowledge, and in the readiest form for popular use, the orthography, pronunciation, meaning and etymology of all the words, and the meaning of the idiomatic phrases in the speech and literature of the English speaking peoples, prepared by more than two hundred specialists and other scholars. For sale by the Funk, Wagnall Co., 11 Richmond St. W., Toronto.

The fact that Prof. A. A. Crozier; so long the Secretary of the American Pomological Society, edits the pomological department of this Dictionary, is enough to commend it as of especial value to fruit men. The word APPLE alone has three columns devoted to it, giving the names and descriptions of the leading varieties.

The word COIN has nine columns, giving the names of all known coins, their national equivalent and value in dollars and cents. Our readers who wish to buy the best Dictionary, should write for circulars and carefully examine this one before purchasing.

TOMATO GROWING FOR PROFIT, being a practical treatise showing in detail how to grow tomatoes by new methods, from the saving of the seed to the marketing of the crop, so as to leave, when sold, the largest amount of profit to the producer; the whole being the result of over thirty years' extensive practical experience by the author, S. W. Mitchell, gardener, florist and seedsman, St. Marys, Ont.

Mr. Mitchell has this work neatly printed in pamphlet form, which he offers for the very low price of 15 cents a copy.

THE EDUCATIONAL JOURNAL is edited and published by Mr. J. E. Wells, M.A., 11 Richmond St. W., Toronto. This Journal is opening a new department in the way of a Teachers' Bureau, which should prove a most successful enterprise.



Merry
Christmas.
1895