We believe it is good economy to plant trees, and we agree with George B. Emerson when he says that it is very important to cover all the hills with trees. By doing it you will improve the climate. The loss of trees in Massachusetts has injured the climate very much. It has been growing worse and worse for over a hundred years. An old gentleman in Worcester said forty years ago: "There are a great many plants we cannot cultivate in our gardens now—nice, delicate things—which, when I was a boy (he was fifty or sixty years old then), grew perfectly well; but, since then, all these hills have been denuded, the forests on them have been cut down, and the winds from every quarter come in without being impeded at all, and that makes our climate so bad here in the centre of Worcester that many of the delicate plants which flourished perfectly well thirty or forty years ago cannot be raised now."

We can all do something towards remedying this evil. Take care that the tops and sides of all the hills shall be covered with forests. By so doing we are not only protecting our own gardens, so that we may cultivate delicate plants in them, but are rendering our homes more comfortable and more healthy.

The Window Garden.

IVY.—Ivy will succeed better, says the Ohio *Farmer*, in warm, dry rooms than any other plant, and all that is needed to made it attractive is the exercise of a little ingenuity in the appliances for its home. A vase, not necessarily costly by any means, will answer a good purpose, and this reminds us of an excellent idea that we lately noticed in a foreign periodical for growing this very plant. Long shoots of the ivy were procured, with the young and tender aerial roots very abundant. The lower ends were wrapped in moss, and then some five or six of these were lightly tied together at the bottom and placed in the vase. Fill the vase within a few inches of the top, and suspend the ball of moss within. The roots will soon commence to grow, and afterwards the moss should not quite reach the water, as the roots will extend down into it, and prove all-sufficient.

So many different varieties of ivy are now in cultivation, that by selecting kinds that will form a decided contrast in shape and color, the effect will be sensibly heightened. The center of the vase may be filled with cut flowers or grasses, or nothing will look better than ferns. The ivy may be allowed to hang down over the side of the vase in graceful festoons, or else trained and placed over and around the window, thus making a room appear cheerful and pleasant all winter long. It will not grow quite as well in strong light as when partially shaded, as the ivy loves shade and an even, cool atmosphere. It can be planted in tubs and trained up a stairway, thus forming a mass of green foliage from the hall below to the floor above.

Used in any way as fancy directs, it is excellent as a house plant. A convenient way of growing a small ivy is to fill a small fish globe with clean rain water, putting in the bottom some tiny shells and gay colored stones for ornament; place in this a slip of parlor ivy, and suspend the globe by three small brass chains, which may be bought at any hardware store. This may hang from the window cornice or from the center of the chandelier, or in any other place where the light is not too strong. By filling up with fresh water as fast as it evaporates, you may sustain the life of an ivy through the whole winter. In replenishing the water add three drops of ammonia to it.

Heating Small Greenhouses by a Coal Stove.

BY G. A. H.

We will suppose the greenhouse in question to be about 12x24, and built against the west side of the kitchen. A bench runs along the whole front except at the end where the stove stands, the rest of the house being given up mainly to large plants standing on the floor or ground.

Not wishing to be at the expense of a boiler, and having a stove and plenty of pipe, I set the stove (a small base-burner), in the northwest corner, at the end of the bench, digging down about eighteen inches to bring the flue at a proper height. The stove has four doors, with mica panels just above the fire pot. I took off the rear door and had one of sheet iron put in its place, with a hole and collar for smoke pipe. The stove then had two flue holes, with a piece of pipe about ten inches long projecting from each, the upper one having a damper. I then carried the smoke pipe from the lower flue hole along under the bench, and returned it to the stove, connecting it with the upper flue hole, and thence carrying it straight outside to the galvanized iron chimney pipe. The damper in the upper flue is left open till the fire is well kindled, when it is closed, so that the draught is then through the whole length of pipe. I have had no smoke or gas but once, when the outside pipe became choked by soot. This could have been prevented had I supposed it ever likely to occur. Last year (1875-6) the greenhouse was about half its present size, and I used the same stove, with a single line of pipe running the length of the bench, and out at the other end. In either case it is satisfactory, though of course the heat is not so steady as with a boiler.

This greenhouse faces west, and has no protection on the north (about as bad a position as can be, except due north), and a part of the main house projects on the south, keeping off the sun in the shortest days till after 1 o'clock, With no care between 10 P. M. and 6 A. M., the temperature at night has ranged from 42° to 48° at the coldest end. On two or three occasions it fell to 38°. The greenhouse was built mainly for ferns and palms used out of doors in Summer, and requiring cool treatment. Of these one can make an admirable selection, and I have been very successful in growing them. Of course the selection of blooming plants is quite restricted, but the lack of bloom may in some measure be made up by Dracænas and other ornamental-leaved plants. I have as fine Primroses and Cinerarias as any one, while Carnations, Chorozema, Begonia incarnata and Yellow Oxalis are unfailing; and among the less common plants are Cypripedium insigne and the Fall blooming Epiphyllums, The list might be extended, but these, with Winter blooming bulbs, are the chief dependence till April brings the Cactus and Azaleas.—*Gardener's Monthly.*

The Elder Tree or Shrub.

The common Elder is too little regarded among our ornamental, second-class trees, or first class in growth of shrubs. The botanical name, Sambucus, is said to be derived from a musical instrument once made from it, called Sambuca. In Scotland it is called the Bower tree, pronounced "Boortree." From its flowers as well as its fruit a wine is made, and from the fruit pies and puddings are made. I can not say much for the flavor of the wines or the cooked dishes, but as an ornamental plant it should be more grown.

Few trees grow so rapidly, keep as clear of insects or show as fully of flowers and berries. It is a coarse feeder, and grows best where there is more or less moisture. In its early stages it has unpleasant odors from its foliage, and would be taken as a coarse weed, but, belonging as it does to the natural order, Caprifoliaceæ, like the upright honeysuckle, it soon becomes beautiful in foliage and flowers. The variety commonly found is known as *nigra*, which has varieties, one with cut-leaved delicate foliage, and another with a foliage mottled with yellow; one of the handsomest of all our shrub trees. It has a hollow stem and many a pop-gun and whistle have been made from it, and where it grows a native wildling the bark has been used around the bodies of young fruit trees to prevent rabbits and mice from eating the bark of the tree. Fine ornamental hedges are made from it cheaply, for it grows readily from cuttings of its own year-old wood; and while forming a pen upon a farm in which to keep calves, its fruit when ripe is readily eaten by poultry, It may be used as a sort of nurse or shelter for young plants that need protection from wind and sun, a little time, and then it can be removed.

Raspberries and Their Management.

At planting, the tops of raspberries should be cut away, so that the entire energies of the root may be expended in producing new canes. Early in July the leading canes should be shortened in, and this may be repeated once or twice during the growing season, and once in autumn after the leaves have fallen.

The result will be short, stout, bushy plants, which will occupy but little space. These will bear about one-fourth of a crop the next year, when they should be cut away as previously directed. The new canes of each succeeding year should be shortened in as before stated, which will give the rows a beautiful hedge-like appearance. Black cap raspberries make a spreading growth the first year. Their training branches often extend to a distance of several feet. These may be shortened-in during the growing season or not, as may be convenient. In autumn, however, the plant should be reduced to a compact "hill," with branches averaging eight or ten inches in length. This will give room for all the good berries that the plant is capable of producing to advantage. The young canes of the second and succeeding years are much stronger and grow more upright.

Early in July their upward growth should be checked by cutting off their tops, and their laterals should be cut back several times, as recommended in the case of red raspberries.

If new plants are required, the laterals, if cut at all, should only be cut early in the growing season. Eventually, they should be shortened-in, but commonly this is not done until the new plants are dug. Whenever practicable, it is better to have all surplus wood removed in autumn. The ice and snow of winter cannot then so easily crush or mutilate the plant. If previously neglected the final pruning may be done in winter or spring. For this purpose, pruning or grape shears are excellent implements.

In summer, while the wood is soft, a light, sharp corn cutter answers very well, and can be operated with great speed. A pair of leather mittens or gloves is often needed in handling berry bushes. Cats with gloves may have some trouble in catching mice, but most men similarly engaged would prefer to have gloves. In this particular case no mice are wanted, hence the fallacy of applying any proverb in connection with them.

If raspberries are pruned as above directed, stakes may usually be dispensed with. The short, compact bushes will, as a rule, sustain the load of fruit without allowing it to come in contact with the soil.

A NEW FRUIT IN ENGLAND—PYRUS MALEI.—This desirable new fruit has been introduced into England from Japan. It is allied to the Japan Quince. The fruit is the size of a moderate quince, of a bright apricot color, and makes a rich conserve. The flowers, which are produced in great profusion, are of a most brilliant orange-scarlet color. It is one of the most beautiful flowering trees of recent introduction, as well as a valuable fruit.

THE CANKER WORM.—C. W. Palmer, in a communication to the Germantown *Telegraph*, says: We have utterly destroyed the Canker Worm, that were so destructive to our apple trees, by the application of tar. One barrel we find will cure two hundred trees. We now soften the tar with rain-water by warming it, and applying it to the naked tree. At first we feared damage to the trees, but we find it does not harm the most young and tender. Some tried kerosene oil to soften the tar, but it damaged the trees when applied to the bark. Water is better, and keeps the tar soft longer, and is much more effectual. Nothing but diligence will overcome them; it takes about thirty days to effect a cure. One man will tar about two hundred trees in about two hours, and it must be done every day.

William Penn foresaw, nearly two hundred years ago, the possibility of early destruction to our timber trees, and insisted on five acres out of every hundred being allowed to stand, and he especially desired that the oak and mulberry should be preserved. Prof. Rothrock says that France requires that thirty-two per cent. of her area should be in timber, but that in the United States our proportion of timber land to area has been already reduced to twenty-five per cent. More than ten thousand square miles of timber are destroyed each year. The law of Sweden requires that for every tree cut down two shall be planted by the tree destroyer.

"Gardener's Year-Book" says that the most simple, least expensive, and most certain method of exterminating the gooseberry (and currant) caterpillar, is to cover the surface of the ground, early in Spring, all round the bushes, and two or three inches deep, with fresh tan from the tanyard. This course can be recommended the more, because of its being so easy and excellent a means of suppressing the weeds, which are so apt to grow up among the low Spring branches, and are protected by them from the fingers that keep weeds away from other plants. The season for its application, too, is the time in May when young shoots spring up from the collar of the plants, and help to rob and smother them. All of these that have not ample room are easily rubbed out while the tan is being applied. The tan mulching preserves moisture to the roots, and gives off some to the leaves, and this is especially necessary for the gooseberry, which loves humidity, and mildews badly in very dry air.