

driving through our country how many bleak, barren, desolate school yards do we see looking more fit for a habitation for sheep than for our children, when at a trifling expense they could be shaded and sheltered, and made an ornament to the neighborhood.

In my efforts to urge upon you the necessity of tree-planting I have not taken up the practical part of it, knowing that there are so many horticultural and agricultural journals distributed throughout the land, that any person who has the desire to plant can easily gain the required information. However, you will always find it safe to plant whatever you find growing in your own immediate neighborhood and on similar soil.

The Cultivation and Pruning of Small Fruits.

BY G. C. CASTON.

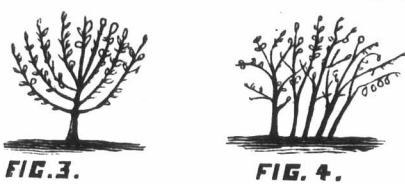
As the season has now arrived when the garden requires attention, a few hints on the above subject may prove interesting to those who have not had much experience, or who are new beginners in fruit culture. First, to begin with strawberries. I would advise any farmer who intends to grow this kind of fruits, to grow them in matted rows, for then he can work them with a horse and cultivator. I have often noticed that when strawberries are planted in a square patch in the garden they are nearly always planted too close, and in a short time they get into a hopeless tangle, so that you cannot weed them or cultivate them; and then they generally give them up and say: "It's no use trying to grow strawberries." If you only wish to put in 200 plants, plant them in rows three and a-half feet apart, and the plants about 12 inches apart in the rows. Then allow the runners to set new plants till the rows are set thick with plants to about 12 or 14 inches in width. Set your cultivator just wide enough to keep the rows the proper width. (The narrower the rows are kept the larger the berries will be; 12 inches will be found to be about right.) You need never cut any runners; the cultivator will do that. After the vines have fruited, run the cultivator between the rows once or twice a week all summer. This, with a little hand weeding to remove any clover or weeds that spring up among the plants, will be all that will be required; and it will be found that it is not such a hard task to raise fine berries, and plenty of them, as most people imagine.

Next, as to raspberries. Plant in rows five feet apart, and the plants three feet apart in the row. This will be found about right for both Reds and Black Caps. In starting a young plantation, when the canes have reached a height of 30 inches stop them (pinch off the tops). This will cause them to grow stout and send out side shoots. These must be pinched off also when they reach the top of the parent stem; none of them should be more than fifteen inches in length. Allow about eight or ten canes in each hill, and keep the ground between the rows clean and free from suckers and weeds. Remove the old wood in the fall, after the leaves have fallen, and always allow enough of new canes to grow each year to replace the old ones which are cut out, as it is the new canes that come up this summer that will bear next year's fruit. Fig. 1 shows a hill or bunch of canes, properly pruned, and Fig. 2 shows a hill that has been neglected and left to take care of itself. Black Caps and Thimble-berries will require the same treatment as the Reds, and the same width of rows will do, viz., five feet apart and three feet apart in the rows.

With respect to currants and gooseberries, there are two systems of pruning. One is called the tree system, as shown at Fig. 3. This plan is followed by many gardeners, and it certainly looks very pretty and tidy. But there is this drawback to it, that the wood of the currant and gooseberry does not last very long, and in a few years it gets old and ceases to bear, or only bears very little, and very poor fruit. Therefore it would be necessary to dig up the whole plantation and replant it every few years. The other is called the renewal system, as shown at Fig. 4, and consists in allowing several canes to come up, and have new ones coming on to take the place of the old ones, which are removed as soon as they get old and begin to fail in producing fine fruit. For beauty and neatness the tree system is to be preferred; but for crop I think



the renewal system the best and most profitable. The annual pruning should consist in thinning the bushes so as to keep them open to sun and air, and at the same time preserve the symmetry of the bush. Currants and gooseberries should be planted in rows five feet apart and the plants four feet apart in the rows. Then they can be worked with a horse. In fact, all small fruits should be in rows, and thus save labor in cultivating. As to soil, strawberries and raspberries do best on a good sandy loam which has been well enriched with manure; while currants and gooseberries generally do best on a clay or strong clay loam. It is a very good plan to sow salt—about 200 lbs. to an acre—on small fruits in the spring before the plants show any signs of blossom. I have found it very good for strawberries. It gives the fruit firmness and color, and attracts moisture to the roots during dry, hot weather. But for any kind of fruit no manure will compare with hardwood ashes. If the soil is sand



or sandy loam, ashes may be used sufficient to cover the ground an inch deep and worked in with the cultivator. The good effects of such a dressing will be seen for years after.

And now, in closing, I would repeat the advice given above as to planting in rows. Arrange your garden so that you can have all small fruits in rows, and cultivate with a horse. It saves so much time and labor, and they will be more likely to be kept clean and thrifty than if planted in square patches or in nooks and corners of the garden. They have then to be weeded by hand, and, in the busy summer months, are almost sure to be neglected, just at the very time when they most require cultivation and frequent stirring of the soil. I would like to impress upon every farmer the importance of having a good supply of all kinds of fruit, and especially the small fruits. Have fruit on your table every day in the year, and banish pork and pastry. You will then have little need for doctors or patent medicines. And your days will be longer in the land which the Lord your God has given you.

The Apiary.

Old Combs.

Many find it difficult to throw away or melt down combs once in use, and yet it is not desirable to use combs which have had so many generations of bees hatch in them that the cells are noticeably smaller from cocoons. The cell has a distinctly thick wall when in this condition; the comb is very dark in color, and inside the cells it is glossy. Such combs should be melted down, and the wax rendered and made up into foundation to take the place of the old comb. The quality of honey is injured by storing in such cells.

Brood Rearing.

The month of May is one very important to bee-keepers, and every preparation should be made for swarming and for honey. Strong colonies require but little attention; all, however, should have plenty of stores to enable them to rear brood to their utmost capacity. A colony will often curtail the rearing of young bees through insufficient stores, and when the honey harvest comes there will be no bees to gather the surplus. It must be remembered that it takes 21 days for a bee to develop into the perfect insect, and probably two weeks more before she takes a part in gathering honey; therefore the bee-keeper must study the time his honey crop generally requires harvesting, and its source. For instance, if there is nothing to get before linden or basswood bloom, there is no use in making a very great effort to build up the bees for clover harvest, whilst if no linden harvest nor anything but clover is obtainable, it is imperative to have colonies strong by June 1st.

Surplus.

The surplus compartment, whether for comb or extracted honey, should be ready early. If sections, they should be put together, and foundation put in. If extracted honey is taken, full combs or frames with foundation should be ready, for when swarming time comes there are too many matters which require attention, and which cannot be done earlier. The question will be asked, Shall I put full sheets in sections and brood frames, or starters only? The question is a disputed one. A few, a very few, of our best bee-keepers, claim that with great care they can do with starters only, but the vast majority say, for frames the only way to get good, straight-worked comb is to use full sheets. The way to give bees the least labor is to give them full sheets of foundation, and the gain in time and honey more than compensate for the extra expense. With sections, the foundation should be bright and light. Here, again, some argue that heavy foundations will be drawn out and thinned by the bees, with a very moderate flow of honey. The bees may do this, but in a heavy flow, such as we desire this year, the base will be left heavy, and the bees supply the wax for the walls of the cell. The result is a heavy ball of wax—pure wax, it is true, but not desirable; it does not pay, either. Heavy, 6 sq. feet to the lb., at 50c. per lb., and light, 10 to 12 sq. feet to the lb., at 60c. per lb., shows vastly in favor of the light. Here, again, full sheets will pay best, the bees filling the sections more rapidly. On the other hand, section foundation will not do for brood frames or extracting frames. The bees cluster on it in large numbers, and with the high temperature it is very apt to tear away from the frame, or sag.