

rant trees are extremely liable to be infested with aphides, and if the leaves on which they appear are not sprinkled with tobacco water, they will entirely strip the trees of their leaves, and do great injury.

RED AND WHITE CURRANTS.

These fruits, particularly the red, contain less sugar and more malic acid than gooseberries; but, with a little sugar added, are palatable and wholesome, either cooked or uncooked.

The white Dutch, with yellowish fruit, and the white crystal, are the best. The red, though smaller, is productive and profitable.

Red and white currant trees must be pruned in a very different manner to that recommended for gooseberries, and after they have produced the required number of branches, so as to form a uniform bush, the greater part of the young shoots must be annually taken off, leaving only the leading ones, and such as are desired to make new branches, and shortening these to four or six inches according to their strength, always cutting them off just above a bud that points outwards; for if this latter particular is not attended to, the points of the shoots will decay down to the bud, and have a very unsightly appearance, or the new shoots will grow inwards, and crowd up the centre of the plant. In pruning off the superfluous lateral shoots, they should not be cut off close to the old wood, but a short spur of about a quarter or half an inch in length should be left to each, as these spurs generally produce an abundance of fruit. It is always important to cut out old mossy wood, to have all the shoots open to the light, or to thin out the spurs when old or crowded.

In managing the cuttings, proceed as directed for gooseberries, except that they must not be slipped off, planting out in the second year when the plants have eight inches of stem, and about five leading shoots. Both these and black currants are greatly injured by having the flower-buds eaten off by sparrows, bull-finches, and other small birds, which must be carefully scared away. Much harm is also done by aphides and the leaf-rolling caterpillars of small moths. The best remedy is timely picking off the infected leaves, if it has been neglected in winter to scrape off the little grey patches of eggs, which are glued to the bark of the stem and branches. Whole branches are sometimes killed by the caterpillar of a moth eating into the wood.

THE SOAP PLANT.—The soap-plant, so called, grows all over California, on high hills as well as in the valleys. The leaves make their appearance about the middle of November, or about six weeks after the rainy season has fairly set in; the plant's never grow more than one foot high, and the leaves and stalk drop entirely off in May, though the bulbs remain in the ground all the summer without decaying. It is used to wash with in all parts of the country, and by those who know its virtues it is preferred to the best of soap. The method of using it is merely to strip off the husk, dip the clothes in water, and rub the bulb on them; it makes a thick lather, and smells not unlike new brown soap. The botanical name of the plant is *Phalangium pomaridianum*. Besides this plant, the bark of a tree, *Chelaria saponaria*, is also used in

South America for the purposes of washing. Several other plants have been used in various countries as a substitute for soap. All of these contain considerable quantities of oleaginous and alkaline principles in their composition, on which their value depends.—*Hogg's Instructor*.

MISCELLANY.

THE PHILOSOPHY OF COOKERY.

FROM MRS. HALE'S NEW COOK BOOK.

Concluded from our last.

At first sight, few things seem less alike than starch and sugar, but modern discovery has proved that our saliva—the natural moisture of the mouth (which in its froth, as it is swallowed with every mouthful of food, always contains air) has power, when mixed with moistened starch at the heat of the stomach, to turn the starch into sugar; and again we find that butter and fat contain the same ingredients as starch and sugar, but with this difference, that ten ounces of fat will feed as much oxygen as twenty-four ounces of starch. Grains, vegetables, milk, and meats differ from each other, and among themselves in their quantities of flesh-producing and oxygen-feeding substances; but whether the oxygen feeders be in the form of sugar or fat, we can tell exactly how much starch they amount to, and the following list taken from Baron Leibig's familiar letters on chemistry, in this shows the relative value of the several kinds of food in flesh-producing, and oxygen-feeding, or warmth-giving ingredients.

	Flesh producing.	Warmth giving.
Human milk has for every ten flesh-producing parts.....	10	40
Cows' milk.....	10	30
Lentils.....	10	21
Horse beans.....	10	22
Peas.....	10	23
Fat mutton.....	10	27
Fat Pork.....	10	30
Beef.....	10	17
Hare.....	10	2
Veal.....	10	1
Wheat flour.....	10	46
Oatmeal.....	10	50
Rye flour.....	10	57
Barley.....	10	57
White potatoes.....	10	86
Black potatoes.....	10	115
Rice.....	10	123
Buckwheat.....	10	130

Here, then, we have proof of the value of variety in food, and come upon what may be called the Philosophy of Cookery.* In our food the proportions of human milk are the best we can aim at; it has enough of flesh-producing ingredients to restore our daily waste, and enough of warmth-

* Some determined advocates of the vegetable system maintain, that the teeth and stomach of the monkey correspond, in structure, very closely with that of man, yet it lives on fruits—therefore, if man followed nature, he would live on fruits and vegetables. But though the anatomical likeness between man and monkey is striking, yet it is not complete, the difference may be and doubtless is precisely that which makes a difference of diet necessary to nourish and develop their dissimilar natures. Those who should live as the monkeys do would most closely resemble them.