

seldom suffer from the attacks of this insect on account of the shade produced about the stem of the tree."

**HOW TO PRODUCE LARGE FRUIT.**—A correspondent of the *Gardener's Gazette* says, by a very simple and easy process fruits of many kinds may be raised about one-third larger than is usually the case, and improved. The secret consists in supporting the fruits so that they shall not be allowed to hang their whole weight upon the stalk, or twist about in the wind. The *Gazette* states that when fruit is allowed to hang naturally upon the stalk, the increasing weight strains the stem or twig, and thus lessens the quantity of nutritious food flowing to the fruit, which may be supported either by tying it to a branch with a piece of string, or by enclosing it in a small net. Flowers, such as dahlias, peonies, may also be rendered much larger by adopting this system.

**MILDEW IN GOOSEBERRIES.**—Applications of powdered sulphur to the foliage and fruit of the gooseberry, when the fruit begins to form and increase in size, is said to be a complete protection from mildew. The application should be made every few days. Spent tan, placed around the bushes, preserves them from the ravages of the gooseberry worm, it is said.

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### Scientific.

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**CHARCOAL.**—Charcoal surpasses all other substances in the power which it possesses of condensing ammonia within its pores, particularly when it has been heated to redness. It absorbs ninety times its volume of ammoniacal gas, which may be again separated by moistening it with water. It is by the virtue of this power that the roots of plants are supplied in charcoal exactly as in humus, with an atmosphere of carbonic acid and air, which is renewed as quickly as it is abstracted. Charcoal has a physical as well as a chemical effect on soils, which is decidedly useful. It renders them, as far as it is present, light and friable, and gives additional warmth to them by its color, and retains readily the rays of the sun during the day. Wherever charcoal has been applied, rust never affects the growth of wheat.—*Liebig*.

**GOOD HEALTH—HOW TO PRESERVE IT.**—Dr. Frank H. Hamilton has delivered an excellent address on Hygiene, before the graduates of the Buffalo Medical College. We make a few extracts:

Within a few years our houses have been

robbed of the domestic hearth, toward which so many associations have always centred, and air-tight stoves have been substituted for the iron dogs. Not content with this, the enemies to our race have still more lately taken away the stoves which, destitute of the essence, served to remind us at least, of the ancient fire-places; and instead, they have built for us iron furnaces—Etnas—under ground, so that now what of the oxygen we are not able to consume, and convert into carbonic acid, is vitiated by impure gas escaping from its hidden chambers, by invisible particles of coal dust, and by other impurities which clog up the air-cells, and close the avenues of life, or stick along the parched fauces as if reluctant to convey their poisons to the lungs.

Stoves have, no doubt, abridged the sum of human life, but by these subterranean iron furnaces we are truncated—cut short in the middle. It is an error to suppose that hot-air furnaces can ever be so constructed or managed, at least in private houses, as not in any degree to prove detrimental to health. We wish we could persuade ourselves that this is not so, for it is certainly very agreeable, in a climate like ours, to enjoy throughout all the rooms and passages of the house, warm and uniform temperature; but it is just this even warmth which is one of the sources of mischief. The inmates are so little accustomed to the cold within doors, and become so morbidly sensitive, that they shudder at the idea of going out, and if they ever do venture into the air, the frost enters into their open pores, and they hasten back to their shelter, chilled, exhausted, and discouraged. They are no better able to endure the storms than a plant reared in a hot-house. It was the venerable Bede, I think, who said, "When men lived in houses of willow, they were of oak; but when they lived in houses of oak, they were of willow."

We need for our dwellings more ventilation and less heat; we need more out-door exercise, more sunlight, more manly, athletic, and rude sports; we need more amusements, more holidays, more frolic, and noisy, boisterous mirth. Our infants need better nourishment than colorless mothers can ever furnish, purer milk than distilleries can manufacture; our children need more romping and less study; our old men more quiet, and earlier relaxation from the labors of life. All men, both young and old, need less medicine and more good council.

Our cities need cleansing, paving and draining. The Asiatic cholera, the yellow fever, the plague, and many other fearful epidemics are called the opprobria of our