

plant so wax differs in color.

In the covers or lids of brood cells there will be noticed the fact that they are always the color of the cells they cover, the cells of dark comb will have dark lids, and white comb white lids.

The learned Prof. also makes another assertion that is incorrect. He says "combs are never built in a hive unless the bees have the presence or prospect of a queen."

I have frequently put large swarms of bees into empty hives and set the swarm where the old hive stood, catching and killing the queen at the time of hiving, and have had by this method some of the finest drone combs built I ever saw or possessed. "Wax-making and comb building is a very interesting and important question in the workings of the bee hive, and but little is with certainty known about it," so says an able writer on the subject.

Wax is a very inflammable substance, containing over 80 per cent. of carbon. I have found that a pound of virgin worker comb contains over 50,000 cells, which fact shows what wonderful frugality is displayed by these model architects in comb-building. Quite a book could be written on wax and its uses. Did it ever occur to you reader, that all the beautiful flowers ornamenting so many of our parlor tables, making home cheerful, was from the product of these little busy bees? Immense quantities are used for this purpose, and also in doll-making. As many of your readers, Mr. Editor, may be acquainted with the immense traffic carried on in wax, perhaps a few facts from the census reports of the past may be interesting.

The census of 1840 gives the value of the product of the United State at \$628,000, or about 2,000,000 pounds. That for 1850, "wax and honey" nearly 15,000,000 pounds, worth nearly \$3,000,000. That for 1860, for wax alone at 1,357,000 pounds. The exports in 1850 and '60 were 362,000 pounds, worth \$135,000. In 1861, 238,300 pounds were exported from New York alone. In 1860 nearly five-sixths of the exports were to Brazil, England and France. Foreign countries also send large quantities upon the market. The Portuguese province probably taking the lead, by annually sending to Europe nearly 50,000,000 pounds. Beeswax is produced in every country

in the temperate and torrid zones.

A writer in Scribner's Monthly gives a very interesting account of comb-building, "When a swarm of bees is about to leave its old home and seek another one, each bee fills itself with honey. After entering their home the gorged bees suspend themselves in festoons hanging from the top of the hive. They hang motionless for about twenty-four hours. During this time the honey has been digested and converted into a peculiar animal oil, which collects itself in scales or laminae beneath the abdominal rings. This is the wax. One of the workers called the founder, then draws from its own body, by means of its clawed foot the scales of wax and crumbles and works with its mouth and mandibles, till it becomes pliable, and it issues from the mouth in a long narrow ribbon, made white and soft by an admixture of saliva from the tongue. Meanwhile the other bees are making ready their material in the same way. On the ceiling of the hive an inverted solid arch of wax is built, and from this the first foundation cells are excavated, all the subsequent ones being built up and around these which are usually three in number. The size and shape of the cell is determined by its future use, but all comb is formed of two sheets of cells placed back to back, the partition walls of the two sheets always alternating with one another. If the cells are intended for brood, 25 cells of worker and 16 of drone go to the square inch." Von Berlepsch, a celebrated German apiarian, declares "that he has known cases in which a swarm have built 300 square inches of comb in a single night."

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From St. Nicholas for October.

#### BEE HUNTING IN AUSTRALIA.

IN Australia the native adapts a very peculiar plan for discovering wild honey. He knows that bees never wander very far from home, seldom more than two miles; and he also knows that when a bee is laden with honey, it makes, as nearly as possible, a straight line for home. All that is necessary, then, is to find a bee that is well laden and follow it. But that is more easily said than done. Any boy who has tried to follow the big and gay-colored bumble-bee to its nest knows how great a task it is. But that is a mere trifle to following the sober