

these ventilators, above the roof, was described in the last number of the CANADA FARMER.]

We have found it very convenient to place a crib, or granary, for corn in ear in one corner of the barn, over the basement, by making the floor of slats, and open to the free circulation of the air, or draught of wind, which blows up freely among the ears, and keeps them dry, if not piled up more than five or six feet thick. The small quantity of shelled grain which drops through the slats is picked up by hens below. We have not shown this crib in the plan given, because rats are commonly so abundant that they would destroy much of the grain, which was prevented in the case we have mentioned by a free range of cats. It will therefore be best generally to construct a separate corn-house like that shown in fig. 8, from

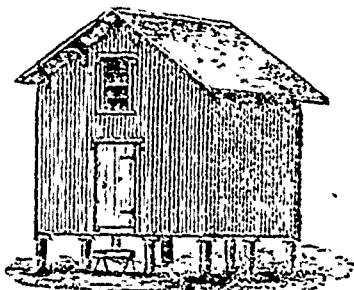


Fig. 8.—Corn House.

which rats are excluded by placing the building on short, round, and heavy durable posts, cased with tin, and with an inverted tin pan on the top of each with the wire rim cut off. A passage runs through the building, with the cribs on each side, these cribs being filled from above.

There are a few details in erecting this barn, which we may mention briefly. By extending the barn floor without any obstruction under the large bay, by using trussed beams, waggons may be run there when the barn is empty, and in filling this bay, the first loads may be driven from the barn floor to the bay, and the load pitched off—a little backing of the waggon being required before driving out.

The basement walls should be about nine feet high, and at least two feet thick—2½ feet would be better. The bank thrown up to make a roadway to drive in, should never in any possible case rest against the wall, or it will ultimately throw it over. There should be either a dry wall outside for the earth to rest against, or a vertical stratum of gravel, or broken stone, two or three feet thick; or a separate wall with a space between, bridged with plank. We should prefer the broken stone. The walls should go below frost, and rest on a trench of broken stone for drainage.

The posts should be 20 feet high, as hay is easily thrown up by the horse-fork to any height. The horse-fork, and hay-carrier working together, readily fill the large bay, which is 25 feet wide.

The view represents the siding placed vertically, and battened. In common places, a good plank floor is most easily kept clean.—*Ill. An. Rural Agrs.*

**DUCK-HOUSE.**—A shelter for ducks should be built separately from the chicken-house. It should not be higher than five feet at the front, sloping to three in the rear. It should be surrounded with a fence of small pickets, about 18 inches in length. The nest should be very low; a basin scooped out of the ground makes a very good nest, which is only to be used for laying, as it is best to let hens hatch the eggs. A duck will lay a much larger number of eggs, if each one is removed from the nest as soon as deposited. That the eggs may be readily taken away, the nests should be made at the front of the house, and one of the boards hung upon hinges, so that it may be swung to one side, and the eggs picked up. There are no better ducks than the Rouen, which grow rapidly to a large size. Ducks should not be admitted into that part of the garden where young cabbages, or lettuce is planted; anywhere else they not only do no mischief, but destroy numerous insects, and disturb many more by their constant active movements.—*Tribune.*

## The Apiary.

### The Outlook for Bee-keeping.

Bee-keeping has come to take a high rank among the productive industries of the world. For want of statistics, which have never yet been faithfully collected, and which it is very difficult to get with any accuracy, only general terms can be employed when speaking of its condition and progress. A national census throws but little light on this subject, for census commissioners do not usually enquire about live-stock so insignificant as bees, and what information they get is drawn out of the people by questions. They have a printed catechism, which does not embrace the enquiries, "Any hives of bees?" "How many?" and hence the most profitable kind of live-stock in proportion to cost and value, finds no place in the record. Very much the same is true of the honey product of this and other countries. It is very imperfectly represented by figures, and it is only partially found in commercial reports that are devoted to market prices. We are consequently quite in the dark as to the important items of consumption and demand.

But amid all this vagueness of knowledge about apiculture and honey, there are some things that stand out distinctly enough. One is the universality and abundance of honey. Everywhere in the innermost hearts of myriad flowers the Creator has garnered up stores of liquid sweet, which wait for collection and appropriation. Another thing we are perfectly sure of, viz., that this teeming and superabundant sweetness can only be made available to man's use through the good offices of the bee. Whether the floral sweet is really honey as it lies treasured in the flower, or whether it undergoes a chemical change in the body of the bee, whereby common saccharine matter is transformed into honey, we need not now stop to inquire; but it is absolutely certain that if man is to have honey, the bee must collect and store it for him. Every school-boy knows how to get at the drop of sweetness that lies hid in a head of red clover, but there is no way of doing it on a large scale except by pressing "the little, busy bee" into our service. We know, moreover, that the proportion of honey actually gathered, and made available for human use, is very small compared with what might be got, if there were gatherers enough to do it.—Further, it is quite certain, that there is no danger of the market being glutted with honey. It has never been abundant enough to cause a decline in the price, except as there has been doubt in regard to genuineness of quality. The best box honey never goes begging for purchasers, and the same would be true of extracted honey, but for a prejudice growing out of doubt as to its purity. Finally we know, that bee-keeping, though subject to fluctuations, is no more so than most subliminary things. Even the wheat crop sometimes fails, or when it does not fail, the demand slackens, and the price is low. In every line of business there is more or less of uncertainty, risk, and liability to sustain loss. This is no more true of bee-keeping than of other pursuits, and therefore it may fairly take rank among the safe and regular occupations of mankind.

So much being settled in regard to the present condition of bee-keeping, let us glance at its future. It is now reduced to a science, which, though in its infancy, has its main principles ascertained and fixed. It is also an art whose essential manipulations have been reduced to a system. Only those will succeed in it, who master the principles of the science, and learn the *modus operandi* of the art. It is passing out of the hands of unscientific and unskilled people, who are convinced that it is an unprofitable business, and better hands are taking hold of it. Our best bee-keepers make apiculture pay, and some of them are

quietly amassing snug little fortunes out of the industry of the bee. As a higher class of bee-keepers get possession of the field, and apiculture acquires its true status among the industries of the world, many will be attracted to the pursuit, who, instead of rushing into it with ignorance and ardour as their only qualifications, will first lay the foundation of success by thoroughly learning their business. We look for the springing up of a new generation of advanced bee-keepers,—bee-keepers who will be free from prejudice against book-learning about rural matters, and who will believe in movable-frame hives, Italian bees, and honey-extractors. The disasters of the past two years, which have fallen most heavily upon the ignorant class of bee-keepers, have had the effect of discouraging these, and leaving only those in the field of apiculture, who have science enough to account for failure, and faith enough to try again, and keep trying, until they achieve success.

We believe, too, that the age of empiricism in bee-keeping is passing away. Impostures feed and live on ignorance. Worthless patents and clap-trap appendages are thrown away so soon as the novitiate of bee-keeping is past. What aparian of any experience has not plenty of old lumber in the shape of abandoned hives, and rejected "fixings?" We know now that with the movable-frame, air-space, and the requisite room, bees will store honey in any sort of receptacle, and that the bee-keeper may suit his own taste and convenience in the matter of hives. Moth-traps, non-swarmers, and the endless little variations about frames and hives, which have been made excuses for getting patents, are fast coming to be estimated at their real worthlessness, so that the trade in them is growing unprofitable.

An eager demand for trustworthy information and teaching on this subject, begins to manifest itself on every hand, and we shall soon have a race of studious, painstaking, successful bee-keepers, whose influence will allure multitudes to this fascinating pursuit, and these in their turn will draw others into the apicultural ranks. So important and growing an interest must have due representation in the press, and will find it in such periodicals as make it their aim to advance apiculture, irrespective of all merely selfish interests.

It is neither to be expected nor desired that everybody should undertake to keep bees. Many have neither the taste nor facilities for so doing. While some little profit may be obtained from bee-keeping in almost any locality, there are places where it would hardly pay to go largely into apiculture. There are others where this business can be made to pay well. It is like any other rural pursuit. There are localities particularly suited to wheat-growing, to stock raising, to the dairy business, or to fruit-culture. Something may be done with any or all these industries anywhere, but the greatest success can only be expected where the facilities abound. As the best honey districts come to be ascertained, bee-keeping will naturally establish itself in them, and become an "institution" there. It will have its times of prosperity and depression, like every thing else, but so long as the earth teems with honey, and it is the instinct of the bee to gather it, and the nature of man to eat it, we may be sure that bee-keeping will be an industry of great and growing importance.

Bees will make more wax when fed on sugar-syrup, than when fed on honey, and will winter better on it.

Some experienced bee-keepers are wintering their stocks in dark closets and other above-ground apartments, finding that they thus escape damp. If this course is adopted, the honey boards must be removed and a blanket or other porous covering substituted, so that there may be circulation of air and escape of moisture.