

"with a run" by a sling from the yard-arm, the glass boxes and their fragile waxen contents were again and again broken and spoilt. In November last, however, Mr. W. M. Hoge, the manager of this firm, succeeded in landing a consignment of 80 tons in Liverpool, and, encouraged by the result of the venture, he on Thursday landed, at the London Wharf in Wapping, a lot of about 100 tons brought over in the *California*, one of the Anchor Line of steamships. There are 2,500 cases in this shipment, containing over 200,000 lbs. of honey, and few boxes have sustained any injury in transit. Taught by past experience, Mr. Hoge had his cases securely hoarded up between bulkheads on the steamer, and in unloading employed gangs of men to pass the cases hand over hand down the ship's side into the lighter, and from the lighter on to the wharf. Visitors to the Paris Exposition, where Messrs. Thurber & Co. obtained a medal for their honey, as well as one from the French Agricultural Society for the best honey in the most marketable form, may remember the exceedingly neat appearance of the honey-comb in these patent hive boxes.

The importance which bee-keeping has assumed as a regular branch of industry in the United States may be conceived when it is stated that over 35,000,000 lbs. of honey are there produced and sold annually. The tendency in this as in other occupations, has been for the trade to be carried on by persons having large capital. The bee-keepers have frequently from 2,300 to 5,000 swarms of bees, and some far larger numbers. Messrs. Thurber & Co., for instance, have about 12,000 swarms of bees. Of course it is only by a thorough organization that such large numbers of these little workers who toil without pay can be looked after and cared for. The system in the United States is to farm out the swarms. Arrangements are made with farmers and those who own orchards in suitable localities to allow an apiary of perhaps a hundred swarms to be placed in their grounds. At a distance of three or four miles another apiary will be placed with some other farmer. For this accommodation either a fixed rent or a share of the honey produced is paid, and the bee owner sends expert workmen to clean the hives, to take out the boxes of surplus honey as they are filled, and to destroy the moths, grubs, and other creatures that take advantage of the bees' frugality. As showing the lucrative character of this business, it is said that a firm of shippers paid to one beekeeper for his season's crop of honey, a sum larger than the salary of the President of the United States. It is estimated that on an average one acre will support 25 swarms of bees, and, as the yield of a swarm is generally about 50 lb. of honey, it is evident

that this trade may yet be greatly developed. Already the firm above mentioned, in addition to a corps of experienced bee men to tend the hives, find occupation for nine men and two steam saws during five weeks of the year, in cutting up the timber for the 72,000 boxes used to hold the comb honey. The glassmakers also find some custom from the honey dealers, 144,000 panes of glass being required to make the slides and ends of these boxes. Much attention has been paid in the United States to the improvement of the breed of bees, and queen bees have been imported from Italy, Cyprus, and elsewhere, for the purpose of improving the stock. Some years ago fine Italian queen bees were sold for as much as £10 each in New York, but by forming nurseries and rearing queens carefully selected from fine broods, queens of good blood, if a term may be borrowed from the turf, may now be bought at prices ranging from \$1 to \$5 each. Side by side with improvements in the culture of the bee, too, there have been many ingenious contrivances introduced in order to save the time and labour of the bees and of the honey dealers. About ten years ago a German suggested that thin corrugated sheets of wax, which he called "artificial tablets," should be provided for the bees to make their comb from. These, however, did not come into general use, but a few years ago Mr. W. H. Hoge effected an improvement by starting the side walls of the cells. When these "foundations," as they are called, were presented to the bees, the intelligent little creatures at once took advantage of them, and extended the side walls so as to form the regular hexagonal cell. The machine by which the impression is made on both sides of the wax is very simple, and somewhat resembles a clothes-wringing machine, only the iron rollers are studded with little hexagonal-headed pins just the size of the section of a cell, so that, when the thin sheet of wax is passed through, the wax is pressed up between the pins to the height of about one-sixteenth of an inch, thus indicating the position and offering the substance for the construction of the cell walls. Another remarkable adaption of machinery is afforded by the use of a rotating frame, which causes the cells of the comb placed in it to be emptied by a centrifugal force. The empty, uninjured comb is afterwards replaced in the hive, and again used by the bees. As about three-fourths of the time of the bees, it has been computed, is taken up in the construction of the comb, it will be seen that by these contrivances a great saving of bee labour is effected. With the rapidly increasing supply obtained by this well-organized system of bee-keeping, the dealers in honey in the United States are already trying to open new channels for trade, and to create fresh

uses for the product of the hives. With this object in view a prize has been offered by the American Bee-keepers' Association for the discovery of a method of converting honey into the form of crystalline sugar. Looking forward to a time, not, probably, far distant, when honey will be produced as cheaply as raw sugar—honey may now be bought wholesale for 7 cents per lb. in California—the dealers hope to be able to provide a substitute for glucose which will equally well serve the purpose of the cook, the confectioner, and the brewer.

BREEDING CATTLE FOR EXPORT.

Now that it has become an established fact that cattle can be exported to the British markets at such rates and at so moderate a risk as to give shippers a fair margin of profit, many of our farmers will find it to their interest to commence grading up their cattle to the highest standard of excellence in regard to size, early maturity and feeding quality. Already the demand for first-class beeves exceeds the supply. For many years to come the grading and feeding of cattle for exportation is certain to prove a grand source of revenue to those farmers who will begin in the right way and persevere through to the end. Three things are necessary to success—good stock, good feeding, and comfortable quarters in the winter.

To commence with, large framed thrifty cows and heifers should be procured. Cross them with a Short-horn Durham bull of good quality and unexceptionable pedigree. A grade bull, no matter how good he may appear to be, has not that concentration of blood in him to ensure his being depended upon to bring good progeny. No Short-horn can be considered thoroughbred unless the pedigree shows a direct descent on both sire and dam's side from animals that trace back to direct importations recorded in history or the herd books. Our Canadian Herd Book Record is faulty in this respect, that it admits animals to record that can show four crosses. In many of these they end only in a common cow, not a Short-horn, nor one entitled to any record. Once the crossing of Short-horn blood is begun it must be persevered in, and the further up it can be carried the better will be results. The produce of a first cross of a Short-horn bull upon a common cow will be half Short-horn; the next cross upon this produce, if a female, will be three-fourths pure blood; the next seven-eighths, and so on. Let the calves be kept in a thrifty growing state while young, and the males steered when very young. Good pasturage and water in summer, with plenty of feed and warm quarters in