

sufficient profit to pay the expenses, as a business man would have to be engaged to carry on the business, and the amount of salary necessary to secure the services of a *really honest and efficient* manager would absorb all the profit. Besides, the establishment of such stores would tend to draw away the attention of the farmers concerned, or beget a craving for trade profits which is already too general. I know instances in this part of the country where farmers, who had good farms, and were making money, slowly perhaps, but surely, in their haste to get rich without hard work, have sold or leased their farms, and entered into business pursuits for which, by their previous habits and modes of thought, they were altogether unfit; and, having failed, have found themselves obliged to take sewing machine or insurance agencies, and travel about the country; and when these occupations fail, as fail they probably will sooner or later, they will find themselves unfitted to return to their former occupation of farming, and will probably either leave the country, or seek some subordinate situations where they will be dependent on others for their daily bread; whereas, had they been content to follow steadily their previous occupation, they would in all probability continue all their lives in the enviable position of being able to pay their way, and owe no man anything at the year's end. For these reasons I am inclined to consider the establishment of co-operative farmer's stores as not likely to be of any real benefit to the farmers themselves. I admit that such stores have proved successful in many places in England, in large manufacturing centres, where they had a fair chance of being well supported, and although many have failed, yet this has generally, if not always, been owing to either the incompetence or dishonesty of those who were intrusted with their management. A man to be successful in life should choose one business only and stick to that. Rothschild, the eminent London banker, was once asked his opinion on some promising speculation by a young brewer. He answered, "Be a brewer only, and you may become the brewer of London; be a brewer, a merchant, and a banker and you will soon find yourself in the *Gazette*." Is not the advice as applicable to a farmer as to a brewer?

CHARLES JULYAN.

Edgewater Farm, Sarawak.

The Apiary.

A. C. ATWOOD - - EDITOR.

Introducing Ligurian Queens.

An apiarian friend, in daily expectation of receiving a large consignment of Ligurian queens, requests a description of some method to be followed in putting these much-esteemed foreigners at the head of his black colonies, which are all located in Woodbury hives. We cheerfully comply with his wishes, and shall give an account of a plan that we tried lately, and found eminently successful. It differs slightly in detail from other modes that have been recommended, but it is more easy of execution, and it has advantages that are not to be despised. We must premise, however, that a queen cage is necessary.

This is an adjunct that cannot well be dispensed with in setting queens over strange colonies. When a valuable life is at stake, every precaution should be used. The most skillful apiarian cannot predicate with certainty what reception will be given by his bees to a foreign element. We have known stocks that were long queenless seize and destroy the sovereigns offered them, which we thought they would have gladly accepted without any formalities. It is only an adept, who has had long experience, and is well acquainted with the instincts and habits of bees, that should venture giving them an unprotected queen.

The cage, then, as most people know, is made of fine wire netting, or of perforated zinc, but when it is of zinc it should be kept perfectly clean, and have no rust adhering. For our purpose any form answers, and a speedy way of extemporizing one is to roll a piece of the zinc three inches square into a cylinder, sew the sides together with copper wire, and close its ends by corks. Or a box cage may be made from the same piece of zinc, by cutting 5 inch squares from its corners, and bending the parts left from their horizontal to a perpendicular position. A lid to cover and fit over box thus constructed may be made in the same way.

We dislike to read of the exorbitant prices which some makers ask for their bee furniture, and, therefore, we wish it to be understood that most of the appliances needed under "the new and ap-

proved system of bee keeping" can be home-made at very little expense. We pointed out a short time ago how a honey extractor could be made very cheaply, and we have just had the satisfaction of seeing a brandy cask fitted up with a revolving apparatus, the spindle of which is turned by two lathe wheels (a large and a small of wood grooved for a strap) fitted on the top cross bar. The same kind of wheels are employed in the Walter and Cowan machines, which are exhibited at the Crystal Palace Bee Show.

Our barrel extractor is, perhaps, inferior in appearance, but it is equal in action to any, it allows the whole internal work to be lifted out at pleasure, which is an advantage, and its entire cost was 10 s 5d. being paid for the cask.

This, however, is a digression, and we must return to the subject in hand.

A sufficient number of cages being prepared, and the small boxes having arrived, which contain Ligurians queens, an examination must be made of the contents, to ascertain how many are living, and give food to such as require it.

The queens are next to be removed from as many hives in the apiary as there are substitutes provided. This is done by prying up and screwing round the crown boards, which are apt to be fastened down by propolis, and looking over the frames, which are taken out in succession, until the queens are found, and these, each having a few attendants, should be carried off to some safe place and kept alive as a provision against casualty or accident. After the frames are restored to their places, the hives are to be covered again, not with the crown board, but with folds of warm cloth, such as carpet or any material convenient. In this condition they must remain six or twelve hours, that the bees may make the unwelcome discovery of having sustained such a loss, and show their distress by hurried movements to and fro at the entrances.

The foreign queens are next to be put into cages each accompanied by four or five subjects, and carried to their intended domiciles. The cloth or carpet being raised, not roughly, the cages are to be rested on the top bars, their centres being between two of the frames, on which the bees were found to congregate most numerous. All is then covered over as before with cloth, care being taken to prevent any escape of heat from the hives.

On the day following, an examination may be made, but if any hive is discovered to be fighting, or if its bees around the queen cage manifest hostile intentions, by sticking to it, and "holding on like grim death," curling their abdomens, and making a kind of hissing sound, the new sovereign must abide in her shelter 24 hours longer, and on no account be released. If, however, the bees about the cage are placid, showing a friendly anxiety and desire to touch the included prisoner with their antennae—the door of the cage may be quietly opened, and liberty to walk out granted.

When making inspections, and particularly when setting the royal captive free, everything approaching or jarring should be guarded against. Bees are very irritable, and a frame roughly pulled from its place will sometimes awaken anew the regal mania which had subsided. Hence the advantage of using a carpet or cloth, rather than a crown-board, when employing a cage. It is easily removed, and its removal causes little or no disturbance. The cage on the frames—rather than between them and out of sight—shows at a glance, and without any trouble, the attitude of the bees towards the new comer, and whether it is peaceable or otherwise.

Two or three hours after liberating the queen it is satisfactory to make an examination, and obtain evidence to her safety. Should she be found encased, the cluster may be broken up by smoke, and the unfortunate one again caged; or queen and cluster may be immersed in honey to destroy their animosity. — *Agricultural Gazette*.

P. E. Island.

This summer the amount of flour consumed will be much greater than any former year, and the importations will be less. This is the result of the excellent crops of 1874,—much of the produce of the island having remained unconsumed, notwithstanding the severity of the winter. The number of barrels usually imported during summer is enormous, and the home supply of the year must add much to the prosperity of the country. It is computed that the amount of money expended on imported flour this season will be a quarter of a million less than last year.

AGRICULTURAL ITEMS.

The Township Agricultural Society of Harwich has purchased four acres of land, and is about erecting an exhibition hall sixty feet long and thirty-six feet wide.

An injection of salt and water or of linseed oil will remove the worms which inhabit the rectum. If linseed oil is used, two drams of turpentine in a pint of oil may be injected every morning for a week. A dram of copperas should be given twice a day in the feed of each horse. — *N. Y. Tribune*.

Lameness in hogs is caused sometimes by the large pores in the back part of the legs getting clogged. They are a little above the knuckles in back part of the legs. Wash the lame legs with soap and luke-warm water, using a stiff brush and rubbing hard till the pores open, and when the pores are washed open the lameness will leave.

FERTILIZERS.—Liquid manure can be applied to all growing plants with great advantage. Manure from the hen roost or barnyard can be utilized in this way. Guano, when obtainable, is one of the best kinds to use to make a liquid application of. Land plaster and wood ashes are among the best and most easily obtained fertilizers, and put on the ground during moist weather will do much good.

The mixture recommended by an English authority, Mr. Fisher Hobbs, as an antidote to the turnip fly, consists of one bushel of fine coal ashes; one bushel of fresh lime, dry slacked; six pounds of sulphur, and ten pounds of soot. These are reduced to a fine powder, well mixed, and the mixture sprinkled on the turnip plants very early in the morning before the dew has dried. The above quantity is sufficient for two acres.

The *Prairie Farmer*, in interviewing a prominent miller, learned that 263 pounds of No. 1 spring wheat should yield 177 pounds of best flour, 19 pounds superfine flour, 47 pounds of bran, 8½ pounds middlings, and 3 pounds screenings, the loss in grinding being 8½ pounds. A person who is curious as to such matters might well puzzle himself to determine what virtue there may be in the magic quantity of 263 pounds.

A Western stock raiser, whose specialty is Berkshire pigs, writes from England to the *Live Stock Journal* that the prices for pigs in that country are such as "to make purchasers look blue," those pigs that he had purchased having cost him \$250 to \$700 each. This may be taken as a very broad hint to those who have a desire to buy the produce of fashionable imported stock, and to whom in general "a nod is as good as a wink."

The improvement of agriculture in the East Indies is progressing very favorably. In the Madras Presidency a model farm of 250 acres has been started with success. By means of irrigation green fodder crops are raised at all seasons. Sorghum, lucerne, and the various small grains are all raised for fodder, and furnish the Indian "ryots" with much better means of subsistence for their stock than they have hitherto possessed.

A number of men who were sent to hoe a field of potatoes reported after the work was finished that they saw "millions of potato bugs," and it was supposed the growing crop was surely destroyed. For several days after, large numbers of crows were seen to alight in the field, and a second close examination, by the men who hoed the potatoes, detected but twenty lugs, the remainder having been eaten by the crows. These birds are fond of any kind of insects, and are in many ways valuable to the farmer.

The *Boston Journal of Chemistry* regrets that the millers use all their finest, soundest wheat for fine flour, and the poorest for Graham or brown bread, a general name given to mixtures of bran and spoiled flour. "What we need is good, sweet, whole wheat flour, finely ground, and put up securely for family use, and any Western miller who will give his earnest attention to furnishing such flour will realize a fortune speedily; securing the most nutritive principles the Creator has stored for man's food."

An English professor has reported some curious statistics in regard to the proportion in the most prominent countries in the world. It appears that Great Britain has one cow to every twelve persons, a sheep for everybody, and one pig for every six. France has a like proportion of sheep, a double share, comparatively, of cows, but only one pig to every six persons. The Swedes have a cow between three and one-half of them, a sheep between two and three-quarters, and a pig to a baker's dozen.