

It is also a mistake to put a hen on valuable eggs at her first sign of broodiness. The best plan is to try her first on some dummy eggs. It is inadvisable to put too many eggs under a hen; as a general rule twelve to fourteen is a sufficient number to obtain best results. After five days of incubation the eggs should be examined by means of a tester, and any which are infertile or containing dead germs should be removed. A good plan is to set several hens the same day, and should a number of the eggs be subsequently found to be infertile fewer hens will be able to take the fertile eggs. Do not interfere with the hen when hatching; she can manage best by herself. The only food sitting-hens require is whole grain, grit, and clean water.

THE APIARY.

By E. A. EARP, Apiary Instructor.

PREPARATIONS FOR THE NEW SEASON.

DURING the dormant season every spare moment should be spent in making preparations for next season's work. All defective supers, roofs, and bottom-boards should be overhauled, and where necessary given a good coat of paint. This work, if delayed, is apt to interfere with the main work in the apiary when the bees are calling for special attention, and should not be postponed. If it is desired to increase the apiary, push on with hive and frame making, and make ample provision for increase before the actual time arrives for putting preconceived plans into operation. Where the beekeeper does not make his own hives he should now order in sufficient stocks to see him through the season. In the majority of cases it does not pay the beekeeper to make his appliances. Hive-manufacturing in the Dominion has been brought to a high standard, and unless the apiarist has ample capital to purchase machinery to turn out good hives he will find the home-made article too costly in the long-run. Whether the beekeeper is working on a small or large scale he should aim at uniformity, and in building up an apiary decide at the beginning on the style of hive and frame he is going to use, and continue on those lines. Non-fitting supers and frames mean extra labour and lead to endless trouble in the long-run. In the past manufacturers have been greatly to blame for continually altering the type of hive placed on the market, and consequently beekeepers have found great difficulty in keeping appliances uniform. As yet no regular type of hive has been adopted for the Dominion, but the dovetailed hive now so popular among beekeepers is easily the best offered by the suppliers. The sizes in use are mostly ten and twelve frame, and experience of his district will enable the beekeeper to decide as to the best one to adopt. To meet those cases where cost is a consideration a durable frame-hive can be made out of a petrol-case, which will comply with the provisions of the Apiaries Act. Petrol-cases are obtainable for a few pence, and can be readily converted by any one handy with tools. A kerosene-

case may also be used, but it will be found necessary to reinforce it, so that the petrol-case is the handier. For particulars of a cheap home-made hive see Bulletin No. 55, "Bee-culture."

Overhauling the Hives.—As advised last month, all supers should be removed and the bees confined to the brood-chamber. This will keep the bees snug and promote brood-rearing, and at the same time facilitate the work of giving the hives their first spring overhaul. During the course of the winter there is usually an accumulation of pollen, dead bees, &c., on the bottom-boards, and consequently they require cleansing. All operations at this period should be carried out quickly as a safeguard against robbing. To cleanse the bottom-board bring into use a spare one. Set the hive temporarily on the spare board while scraping and cleansing the permanent one, then replace the hive on its permanent stand. See that the hives have a slight cant towards the entrance. This will prevent moisture settling on the bottom-board, which is apt to cause the death of a considerable number of bees, besides making the hive damp and unwholesome.

Containers for Export.—A mistake often made by beekeepers who prepare bulk honey for export is to leave the preparation of their containers until the honey is extracted. Supplies of tins should be obtained in the off season, when more time and care can be spent in seeing that they are fit to contain the season's crop. All these, whether intended for export or the local market, should be carefully cleansed and dried prior to giving them a coat of oil or lacquer. From experience gained at the grading-stores it is apparent that beekeepers do not pay sufficient attention to packing. The tin is looked upon as a mere container and is treated as such. Consequently points are lost for packing, when a good coating of boiled linseed-oil to prevent rust-spots, if applied when the tins are first obtained, would have altered the points allotted. Efficient methods of packing for export are required, and not the slipshod packing adopted in the past for auction-room sales.

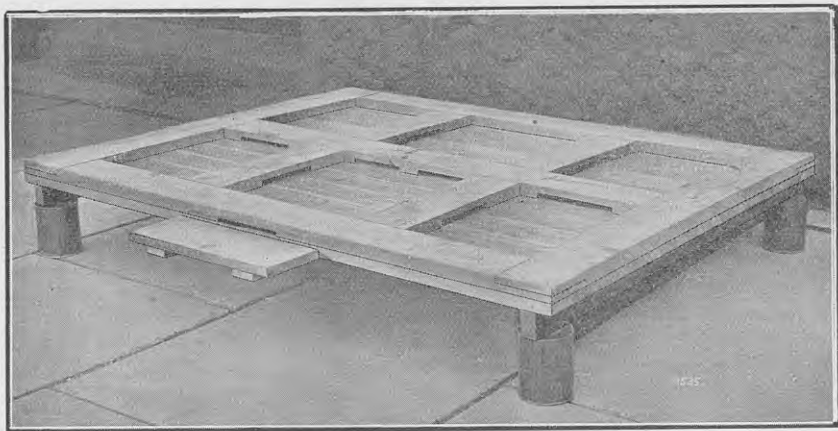
SPRING WORK.

During August, whenever the temperature will allow, the colonies may be given their first examination. It is highly important that this work should not be postponed until brood-rearing has started in earnest, more especially in cases where ample stores were not left to carry the bees over the early stages of this important function. Delay in making an examination may lead to spring losses, and nothing is more tantalizing than to find colonies dead through neglect to provide sufficient stores. Usually a colony's requirements are attended to in the late autumn, when the apiarist endeavours to gauge the amount of food requisite to carry the bees through the winter and spring periods. It may happen, however, that mild weather will be experienced, when the drain on the stores to feed the young bees, if not supplemented, will reduce a colony to starvation. Nothing should be left to chance during the critical months of spring, and no effort spared to see that each individual colony has sufficient food to meet current demands. Colonies which contain 15 lb. to 20 lb. of honey may be left until a later examination. If the hives contain less they should be watched closely and preparation made for feeding. See Bulletin No. 55, page 37, regarding the spring-feeding of bees.

Queen-right Colonies.—Next to the item of stores the most important factor in a colony's condition is its queen. Advantage should be taken of the first examination to see that the queen is all right. If a colony is in normal condition as regards strength and stores there should be fair-sized patches of brood in the centre frames, but this is not sufficient to determine that the colony is queen-right. The cells adjacent to the brood should be hurriedly examined for eggs, which are the only indication that the queen is present. If neither brood nor eggs are found, then shelve the question of the colony being queenless for about ten days later. At each examination make a note of each hive and its condition for future reference.

THE "DEADMAN" SUPER-CLEANER.

In response to several inquiries for particulars of making a "Deadman" super-cleaner (which system was described by Mr.



THE "DEADMAN" SUPER-CLEANER DEVICE.

Trythall in the last April *Journal*) the accompanying photo has been taken of the contrivance and will afford a good idea of how to proceed. The foundation of the super-cleaner is made in the form of a frame 4 ft. 5 in. long and 3 ft. 6½ in. wide, and is divided into six compartments. The two central ones are 14¾ in. wide, extending from the back to front, and 14¼ in. from side to side, and the four corner compartments each 14¾ in. by 10¾ in. The timber used in the construction of the frame and divisions is 4½ in. by 1 in. The entrance to the central hive carrying the colony of bees is made through the frame, and is 6 in. long and ½ in. deep, and the openings to the compartments intended to carry the supers of combs are the same width as the entrance to the hive. The openings afford the bees entrance to every super on the board. The floor carrying the frame is made of tongued-and-grooved boards, and it is essential that it be bee-proof except for the entrance. Two supports extending the width of the construction

are intended to strengthen and at the same time carry the floor-supports. In order to prevent the timber from rotting it is advisable that the super-cleaner be raised at least 6 in. from the ground. An alighting-board, 16 in. long by 6 in. wide, should be attached to the entrance to facilitate the bees entering the cleaner.

VITICULTURE.

By S. F. ANDERSON, Vine and Wine Instructor.

THE COOL VINEHOUSE.

AFTER pruning and cleaning the vine-rods the vinehouse itself should be cleansed. The condition of the vine borders should then be attended to. No cultivation or manurial treatment will avail the health of the vines if the roots are in a cold undrained soil—a condition too often met with in vinehouses attached to town gardens. A good get-away for the water is the first consideration.

It is assumed that the outside borders when made were trenched at least 2 ft. deep and of a liberal width. When the vines have reached their full bearing stage—say, five or six years from their first bearing fruit—the outside borders should be as wide as the rafters are long. They need not be so wide when first started. Adding to them a little each year up to that width, provided the soil is good, gives the roots new stimulus. Supposing the borders have reached the limit to be allowed them, then the supply of plant-food has to be added each season. It should be understood by the vine-grower that the best restorer is not entirely strong artificial or animal manures. Good compost of well-rotted weeds, old spent lime or mortar rubbish, road-sweepings, as well as top-dressing with any good soil, is very beneficial, together with a moderate supply of artificial manure. If it is bonedust, then about 2 oz. to the square yard would be a fair addition. Another very necessary condition to the growth of the vine is that the air can enter the soil. It can only do this where the composition of the soil, good drainage, and frequent cultivation permits.

It is better not to grow anything on the borders. The vines require the feeding-ground, and give big returns for the space allotted them. If the ground is required, a row of lettuce or some such small stuff is the most that should be attempted in this way.

THE VINEYARD.

As the prunings are being cleared and the vines tied to the wires the bordeaux should be applied. If left till after the ploughing, the rough state of the ground makes the work much heavier. It was mentioned in last month's notes that this spraying is one of the essentials. The ploughing of the vineyard has to be done with a single-furrow plough on account of the espalier fences, and it is necessary to have headlands of ample width for turning out of one row