

bloom, about the 10th of June. If by this date it is not crowding its brood chamber, it should then have it contracted to just those combs which contain brood, and given a small surplus case, or else be united with some other weak colony, unless it be desirable to keep such and build them up for increase. When a colony has filled its first surplus case about two thirds full it must be given another, by raising up the first and placing the empty one beneath it and on top of the brood chamber. When this second one is about similarly filled a third empty one must be added as before, by raising the two filled ones and placing it beneath them and above the brood chamber, and so on as often as required until the close of the season, always keeping the empty ones immediately next to and above the brood chamber and the fullest ones nearest the top.

We must be careful that a colony is not compelled to stop working for want of room. They are somewhat like balky horses—when once stopped, hard to get started again. If we have many colonies we will need something to enable us to keep track of the advancement of their cases, so that they will not be stopped working through becoming honeybound. The following register I find admirably suited for this purpose and it should be on every surplus case:

29	30	31	1	2	3	4		Renewed.
28								
27								
26								
25								
24								
23								
22								
21								
20	19	18	17	16	15	14	13	1-2

Drive a pin into each star and bend it down to form an index which can be turned around. Whenever a case is put on or examined set the register by moving the pins to indicate its advancement and the day of the month.

Comb honey should be removed from the hive as soon as completed. When sections are filled and capped to within one row of cells of the wood, they are as full as it is profitable to have the bees fill them, and are considered first-class, and should be removed from the hive at once or they will become soiled through the bees travelling over them, and so not have that white, clean, attractive appearance so desirable in comb honey. Extracted honey need not be left on the hive quite so long. However, a very important part in producing good extracted honey is to have it thoroughly ripened on the hive, consequently it should not be removed before it is at least two-thirds to three-quarters capped, and if wholly so it will do no harm. If removed before this it will be thin and watery, a condition known among beekeepers as unripe, instead of having that rich, heavy, thick, smooth, oily consistency so peculiar to good extracted honey, and free, when eaten, from that burning, strangling sensation in the throat, and loss of flavor, so often found in extracted honey a few weeks after being taken from the comb.

When a case of honey is ready to be taken from the hive, do not attempt to either smoke, brush or shake the bees out of it, but use a Porter bee-escape. If the case contains neither brood nor a queen, the escape will work to perfection.

To have colonies do their best we must use shallow surplus cases, not more than five or six inches deep, and have the brood in the brood chamber come to its very top. In practice this latter means about this, that the brood chamber must be full of brood and devoid of honey. For those who use Langstroth or movable frame hives, I know of no practical way of accomplishing this before the colony swarms, the nearest approach to it being to build the brood chamber shallow and not more than eight combs wide.

However, to illustrate a system by which this may be accomplished, let A B C D represent a side view of the brood chamber of a hive (the width is

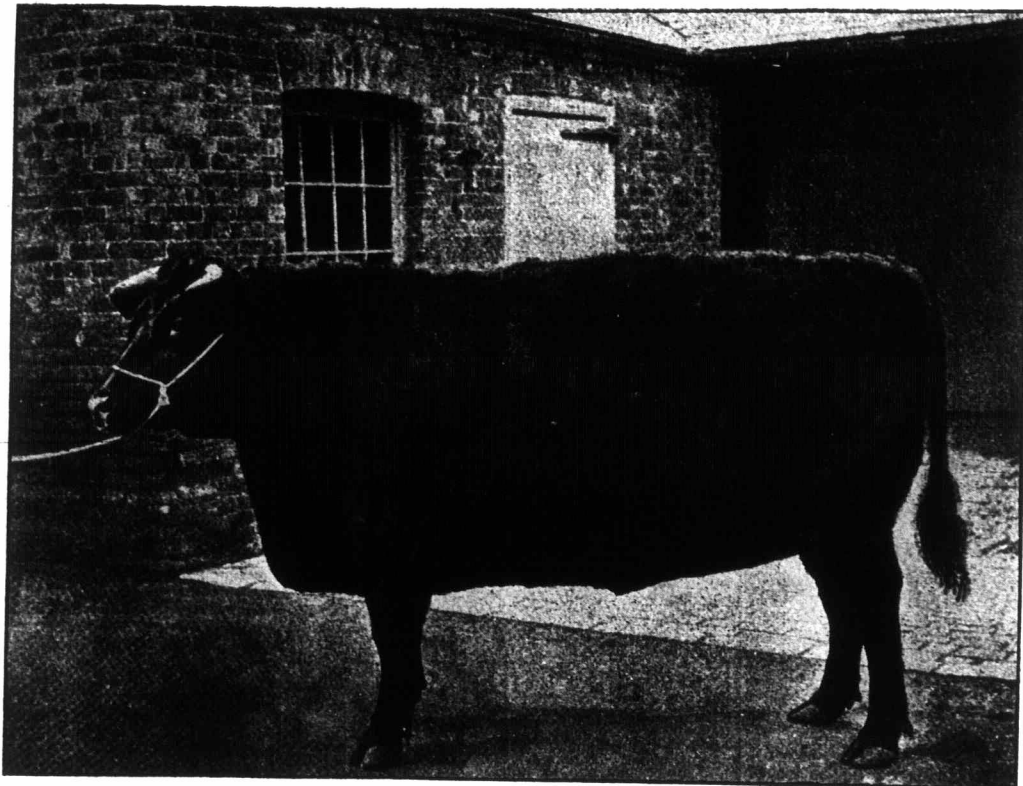


not shown) which is say 11 inches deep, 20 inches long, and 8 combs wide. This brood chamber is built in two equal parts, so that it can be separated horizontally at its center, E F. Each of these parts contains a complete set of eight

frames nearly 5½ inches deep. Thus it will be seen that this brood chamber is composed of two cases, an upper one (A B F E), and a lower one (E F C D), and that each has a complete set of eight shallow frames. Suppose now that this divisible brood chamber is being crowded by the colony and requires a surplus case. Now interchange these two brood cases; that is, place the upper one (A B F E) below and the lower one (E F C D) above, and immediately add a shallow surplus case. This is exactly what we do when using the Heddon case system and hive, and you will note the conditions we now have in our hive:

(1) The brood extends to the very top of the brood chamber. (2) There is brood beneath the whole bottom surface of the surplus case. (3) The honey in the center of the brood chamber will be removed and its place filled with brood, giving us a brood chamber filled with brood and devoid of honey. (4) The division between the brood and surplus apartments of our hive comes right where the brood and honey meet. (5) When adding another shallow surplus case we can place it exactly between the brood and the honey. These conditions are in exact conformity with the instinct of our bees [see article in March 1st ADVOCATE], and should be maintained both before and after swarming, while the honey flow from clover and basswood is on.

If these conditions are maintained, and our hives are well shaded, painted white, have large entrances, and the bees sufficient room to store their honey, it is all it is advisable to do to prevent swarming, and if skillfully done will delay it much, if not prevent it altogether. Removal of queens, destroying queen cells, etc., should never be resorted to. Colonies worked for comb honey are much more liable to swarm than those worked for extracted with empty combs. In either case they should not be allowed to cast more than one swarm.



FREDERICA, THE TWO-YEAR OLD SHORTHORN HEIFER BRED BY THE QUEEN, WINNER OF FIRST AT THE DARLINGTON ROYAL AND AT THE BIRMINGHAM AND LONDON FAT STOCK SHOWS.

The first time young bees fly they mark the location of their house; if any time after this we move their hive to a new location without taking precautions to have them note the change, they will, upon leaving their hive, return to its old location in quest of their home. You will now notice how we take advantage of this to keep our working force of bees united after swarming, and also prevent more than one swarm being cast by a colony. We will suppose that a hive marked A, and which faces east, has just swarmed. Remove this hive twelve or eighteen inches to the north and turn its entrance northward. On its exact location and with its entrance to the east, set up a hive for the swarm as follows: Take a bottom board and on it place a brood chamber contracted to about five or six regular Langstroth frame comb capacity, its frames containing either starters or else filled with foundation, but never with comb; this we will call hive B. Now lift all the surplus cases from hive A and place them upon B, at the same time first adding an empty surplus case to B, should such be required. Into this hive run the swarm. All the bees in hive A that have ever had a fly previous to this, upon again leaving it will return to its old location in quest of their home, and so unite with the swarm in B. This again unites our whole working force, instead of having it divided through the swarming. In from eight to ten days the queen cells in hive A will hatch, and the young queens lead off other swarms. To prevent this, on the third or fourth day after swarming give A an eighth of a turn to the right, and on the day following another similar turn to the right, bringing its entrance right alongside that of hive B. Allow it to remain so until the

seventh day, when it must be taken away and given a place in the yard where it is intended to permanently remain. This it will be noticed again throws its working force into B, and consequently so reduces the quantity of bees in A just when the queen cells are about to hatch that all attempts at further swarming are given up when the young queens emerge the day or so following.

VETERINARY.

Stamping Out Hog Cholera.

Our Chicago market correspondent in this issue reports the death of 2,300,000 hogs from disease in Iowa during 1896. Little wonder then that the Iowa Homestead should propound to its readers the query, "What shall we do to stamp out hog cholera?" In a late issue replies were published from twenty-nine persons, most of whom had had experience more or less disastrous with the disease. The writers are evidently intelligent and observant men who have realized the stern realities of that deadly pest. Upon a careful perusal of their letters we are struck with the remarkable way in which they confirm the results of the investigation made recently by a member of the FARMER'S ADVOCATE staff in Essex Co., published in our last issue, pages 244 to 246. We note a few special points brought out as follows: Chas. G. Wheeler points out that there are different forms of the disease all loosely described as "hog cholera." J. H. Irwin advocates burning all carcasses as soon after death as possible, and W. S. Hanna says "never bury." B. S. Cook quarantines all newcomers (hogs) on the farm for a few days, and uses as a preventive the U. S. Government recipe [see page 131, March 15th FARMER'S ADVOCATE], also adds a half can of concentrated lye to a barrel of slop, and about once

a week puts a quart of air-slaked lime to a barrel of slop. I. Ewing found good results from feeding baking soda. A. E. Fluke fences his fields "hog tight," and changes hog pastures by rotation changes. Martin Bros. advise more roots and less corn. Geo. F. Thompson: "Breed a harder class of hogs." R. Showler: "Breed from hogs that have had it." "J.": "Feed mixed ration, and not all corn, and clean the swill barrel every day." W. H. Burk: "Breed from hogs that have been exposed and did not take the disease or from those that recovered." S. W. Allen: "All hogs showing signs of disease should at once be separated from the rest." "Reader": "Never allow wandering dogs, crows, etc., to have access to carcasses." A. C. Garner: "Rigid quarantine of infected herds, also of the farmer and his dog if he persisted in neglect as some do." Geo. T. Doyle feeds plenty of salt, charcoal, and gives a little coal oil, turpentine or carbolic acid in slops. H. S. Duncan: "Make it a crime for any man to sell hogs for market after the disease was introduced into his herd." Jas. Mains: "Use mixed feeds and a little linseed meal." C. E. Hancock: "Salt and charcoal." T. M. Stevenson: "Sprinkle the pens with air-slaked lime, and spray them with a solution of crude carbolic acid. Most of the writers favor slaughtering and burning, and all write in favor of dry, clean quarters, good ventilation, and freedom from drafts. Little faith is expressed in so-called "cures," but preventive measures are strongly endorsed. None have as yet apparently tried creoline or the new antiseptic remedy, hydro (cre) sal, suggested in our last issue, directions for which were given on page 246, June 1st FARMER'S ADVOCATE. Mr. M. Mohler, of Kansas, writing in the Breeders' Gazette, lays special emphasis upon another point to which we have called public attention, viz., the necessity for compelling railways to keep cars and yards clean and disinfected, and to furnish clean cars free from disease germs for the use of stock shipments.

The Medicinal Value of a Bag of Bran.

BY CHAS. ELLIS.

In all farm labor there is a season which annually returns and generally brings with it similar conditions. Our animals are for the most part fed all winter upon dry food, and there is nearly always associated with this feeding, before the spring, a fevered condition, and the bowels are generally the place where it makes itself felt. The faces are hard and dry and often dark colored; these are signs of warning that the passages have lost in a measure their natural secretions and the accumulations are too much retarded. In some animals there are little sacks in the bowels in which lodgments are often stubbornly located much to the injury of the health of the animal. With a little painstaking very much can be done to change