

Apiary Department.

The Lessons of the past Winter.

Our average winters are sufficiently hard and trying, to make bee-keeping a matter of difficulty, demanding the most careful and judicious management. But such a winter as we have just experienced, is an ordeal which comparatively few apiarists are able to endure. It is a crucial test of the stuff they are made of.

Quite a number of bee-keepers will, after such a season, abandon the pursuit in disgust, and pronounce it a humbug. In travelling through the country the coming summer, observant persons will detect many deserted apiaries and depopulated hives, and on making enquiries, the often repeated reply will be, "O! bee-keeping is played out," or "This climate is too hard for bees."

We are in a position to form an estimate of the general state of the bee-business, and the general characteristics of bee-men. That there have been immense losses sustained from one end of the country to the other, is undeniable, and that this fact will have the effect of utterly discouraging many bee-keepers is equally undeniable. The echo of their discouragement is already making itself heard through a portion of the agricultural press, who can only find one interpretation of the winter's teachings, and that, "Let bee-keeping alone." But it is only a certain class of bee-keepers who are disheartened. It is the negligent, easy-going, partially informed, and half-hearted class, those, in fact, who are unwilling to be at the necessary cost of time, trouble, and outlay, to master their business. Perhaps it is well these should be discouraged. An element of faint-heartedness is better got rid of out of an army, whether of soldiers or bee-keepers. It is very certain that while the class of bee-keepers just referred to, read the lesson of the winter in the one little word "QUIT," another and a better class read several lessons, which combine and coalesce in the word "PERSEVERE." Some of the lessons of the winter may be briefly stated.

1. Extensive loss may usually be traced to neglect or oversight of some sort. A small leak will sink a large ship, and a small oversight will ruin a large apiary. For example, the cool fall weather sets in, Jack Frost appears on the scene, but it is early in the season, Christmas is yet far off, the bee-keeper is very busy, perhaps called from home just when some sudden cold snap comes, the bees are in the condition they were during the summer, not fit for out-door wintering, they become chilled, but though they receive after care it is too late. Or perhaps the bees are put into their winter repository in good season enough, but it is too early to close them up for the winter, they are left opened and exposed, until a sudden dash of winter makes a raid upon them. Our experience is that a chilled hive is like a frost bitten limb, peculiarly sensitive to cold all the rest of the season.

2. In order to successful bee-keeping, it is absolutely necessary to read a good bee-journal. So as to profit by the experience and views of others.

3. Stocks must be wintered according to their condition, and put into certain conditions corresponding with the manner in which they are to be wintered. It is naked folly to leave weak stocks out of doors; they may have a chance for life if early and snugly housed, but left on their summer stands they have not the ghost of a chance. Stocks left out must be strong and well protected. Those put in-doors require attention that the temperature and ventilation may be right.

4. The need of more careful experimenting in regard to the best methods of wintering bees. Cannot some plan be devised, by which every colony

shall have a warm-up, a dry-out, and a flight, some time in mid-winter? We have thought a sheet of cage of white net in a warm room would answer the purpose. It strikes us that if their imprisonment could be shortened, and an opportunity given them to discharge their forces outside the hive, the mortality among them, even during the coldest winters, would be vastly less.

Seasonable Hints to Bee-Keepers.

I again intrude upon your valuable space to urge bee-keepers at this season to carefully examine their hives, and ascertain that each has a prolific queen, as well as a good supply of stores to be used in rearing broods and strengthening the army of workers for the early flowers. Any hive found with less than ten pounds of honey should be fed regularly each evening, commencing with about two tablespoonfuls and gradually increasing to a quarter of a pound daily. Any hive found queenless, if in an old-fashioned box-hive or bee-gum, should be driven out and united with another hive; if in a movable comb hive, it can be strengthened and built up by giving a frame of brood (if sealed all the better) from another hive that is strong enough to spare it, and in about fifteen days another frame of the same kind, and again, at the end of ten or fifteen days, another frame in which there are eggs or larvae just hatched. It may be asked why not give brood to rear a queen from at once. If they have been queenless only a short time they will rear a queen from the first young brood given them, but if for a long time queenless, they will not rear a queen until after the first brood given hatches; the young bees from which will rear a queen as soon as they hatch in sufficient numbers to construct queen cells, manufacture the necessary jelly, and engender sufficient heat needed to rear queens, and can obtain eggs or larvae of the right age to rear from. Should there be a queen reared from the first brood given, the hive will need constant watching to be certain of the queen being fertilized and not becoming a drone layer. Should she prove such, as soon as drones begin to fly, kill her and give the hive a frame of young brood and eggs, from which they will rear another queen; and in about twenty days, if the weather is favorable, there will be but little doubt of the hive having a fertile queen. A queenless colony in a box-hive can be saved, but the labor is so great that it will not pay, and it is therefore more advantageous to unite with another colony. Bees should also be fed with rye meal, (ground fine and not bolted,) if obtainable, otherwise rye flour mixed with sawdust, or fine cut straw will answer the purpose; place in shallow pan, and set near the hives in a place sheltered from the wind and rain. The bees will carry the flour into the hives, and use in place of pollen to rear their brood with. Those who desire to change from box-hives to movable comb hives, should obtain their hives and have everything ready for transferring as soon as first blossoms become plenty. Transferring can be done earlier in-doors, or if weather is very warm and fine, out-doors; but the bees transferred will need feeding, as they will use much honey in repairing their combs and fastening to the frames. The earlier transferring is done, the earlier will the hive swarm, which, to the bee-keeper of careful habits, will more than repay the care and cost of feeding. The careless bee-keeper I would advise to let movable comb hives alone—they will not be as "lucky" to him as the "old gum" and in the end he will become convinced that "patent hives kill the bees," as many have been convinced that the Mowing Machine kills the grass in the meadow where it is used.—"B." in the American Farmer.

Bee-culture vs. Bee-keeping.

"Bee culture" is to be widely distinguished from "Bee keeping." The latter if it imply merely the careless and neglectful possession of one or more hives of unfortunate bees, will invariably be found both uninteresting and unprofitable; for in this, as in all agricultural pursuits, want of care and of that degree of skill which is sure to result from care, will lead to disappointment and failure. But on the other hand it is claimed that bees with good management and timely attention—and they need but little of either, but what they do need they need imperatively, and at the right season—can be made a source both of pleasure and profit.—Rev. O. Lawson.

On Extracted Honey and the Proper Manner to put it up for Sale.

One of the most movable comb hives and honey extractors, and the consequent increased supply of honey, has brought into existence new industries, such as the manufacture of glass honey-jars, corks, labels, tinfoil caps, etc. for putting the honey in saleable shape, or packing it for transportation.

The best shaped honey jars, in my estimation, both for use and for packing with the least waste space, are square jars, containing one or two pounds of honey.

After the jar is corked, press a tinfoil cap over the cork and neck of the bottle with your hand first, and then finish with a leather strap about five-eighths of an inch wide and four feet long, one end of it fastened to the wall. The strap should be wrapped once around the neck of the bottle, and while one end is held tight by one hand the bottle should be passed forward and backward until the tinfoil is properly smoothed down. For my own use, I have made a "horse," so I can sit down to the work of capping my jars, keeping the strap tight with one foot, and using both hands on the jar.

For shipping, jars should be packed tight with sawdust, and one dozen in a box specially made for the purpose. A bee keeper should sell by the gross his one or two pound jars of honey to merchants in the country or city, or have it sold on commission until his brand is known. With his label on jars and his brand on boxes, he will soon find a market if he bottles a choice article only. Good honey put up neatly and in small quantities will always bring the best price, and it is my experience that machine extracted honey is the preferred article if the consumer is once convinced of its purity.

A manufactured article of Cuba honey finds a ready market in our cities, because it is put up in merchantable shape, i. e. in jars, nicely labelled and styled "White Clover Honey." Now, I claim that the sale of a manufactured article would not be possible if our bee-keepers would only take the necessary pains to bring into market, in proper shape and under their own names, their machine extracted honey, which is the only pure honey possible, and if once known to consumers will be the only honey in demand.—Cor. American Bee Journal.

The Christian Union of Jan. 8, 1873, says: "A man in New Hampshire bought four swarms of bees ten years ago, and now has an income of \$1,200 a year from honey. Go and buy four swarms of bees young man." To which good advice, we add, learn how to take care of them first. Not every man who begins by buying four swarms of bees, ends by getting \$1,200 a year out of honey. Every beginner in apiculture, should buy a good bee book, and subscribe for a good bee journal if he desires to succeed.

REQUISITES OF A GOOD SWARM.—But few in purchasing bees seem to understand the requisites of a good stock of bees or the kind to buy, and many seem to know but little how to select. The first thing, get a hive of medium size, about two hundred cubic inches. If selected in the fall it should contain forty pounds of honey at least with a good swarm of bees, and above all the rest choose a hive so that the queen can deposit a large number of eggs which will be workers. Here is one of the great secrets of bees, one swarm rearing more brood and sending out larger swarms from the same sized hive than another. There is not so much difference in the queen as many have supposed.

Making up Lost Ground.

MR. EDITOR,—You will remember my writing to you last June, saying I had lost all my bees the past winter except two swarms. Well, I bought two and went to work trying to improve them, both in numbers and quality; how well I have succeeded you may judge for yourself. I made me an extractor that I think will beat a Peabody, or Gray & Winder's, and cost me much less, and gently informed my stock that I should expect a good report from them.

I now have on hand twenty stocks of bees, and have taken 227 pounds of fine extracted honey, besides selling a few Italian queens. I did not extract any honey until June 10th. Most of the honey was gathered from smart-weed, and the quality is very good. I have sold most of it for fifteen and twenty-cents per pound.

What think you of my progress? If I have been successful, the A. B. J. can claim much of the credit. "Long may it wave."

FRANK W. CHAPMAN.
Morrison, Whiteside Co., Ill.