

arranged in pairs I number the first pair 1, the second 2, third pair 3, etc. The colony on the right of pair No. 1 is 1½, that of 2 is 2½, of 3 is 3½ and so on. As I said before only one hive of each pair is occupied by bees just previous to swarming time. A record of these is on the top of each page of your book, corresponding with the number of your hive the other hive of each pair being empty to accommodate the swarm, should one issue. When it does I simply exchange hives and the bees return, so that the queen occupies the same stand as before. Supposing No. 1 swarms the old hive which in the future will have the young queen, is on stand 1½ of pair 1. You turn to your book page 1 and half way down the page you make a record of hives. If you have allowed a cell to hatch you write, "Cell from above clip July '89," or whatever month it may be. If from any reason you did not clip her wing, then leave that out, or if you have taken a queen or cell from some other hive you make your record accordingly. The advantage of having a record of the two colonies forming the pair in one page is there is less looking over to find her pedigree as when once your entire stock is first class you naturally allow one cell from each to hatch. Some favor having a record of each year and other particulars in a tablet on the hive, but with Dr. C. C. Miller I much prefer having a book for this purpose. In mentioning the many advantages of the book plan he says: "Suppose I have only one apiary and a rainy day occurs, so that nearly all the work for that day must be postponed no matter how hard the rain pours down I can sit or lie in the house and look at the condition of every hive in the apiary and decide what demands attention the most, and what can be postponed." When you only keep a record of the queens, their age and pedigree, and any particulars as regards her progeny, a book with a page six inches long should last as many years.

G. A. DEADMAN.

Brussels.

We use the Queen register card on the hive. If a book as you suggest were kept in addition to this, it would be an improvement on even your excellent plan. Reference could be made either at hive or home and assistants would have the same record open to them all the time. The book is a great help in noting results of experiments.

We have had hives set close together yet lost few queens by not marking location, and though the board or brush at the entrance is an assistance, yet we have found it unnecessary.

For the CANADIAN BEE JOURNAL.

Stored Wax, Queen Mating in Hive.

YOUR explanation of my letter on the mating of queens and wax in combs appears to me to be totally unsatisfactory. You say take a new comb without any pollen in it, and I will find no wax melt and come out of it—quite true. Just because there is nothing stored in it. It must have pollen of different kinds stored in the comb and wax will be found. If it comes from a lining or coating left after brood has been hatched as you say how is it that some cells are full of wax, sometimes several in a cluster, some half full and some less, and the greatest number with nothing in on the same side of a comb? I have had as much as an ounce of wax run into a pool out of about three inches square in one corner of a comb, the bottom corner.

I wish other bee men would set out a few combs that have pollen stored in them to the sun, stand them facing the sun but leaning back so the sun's rays will strike straight into the cells—not necessary to let the comb melt, it will get soft only. Now I hope others will prove it for themselves, if they don't know all about it already. It was out of comb kept over I got the wax not fresh gathered.

Now for the queens, I have read in some bee book of an experiment of putting a virgin queen and some drones in a glass jar and watched, and actually saw mating, take place and that the drone fell dead instantly. If that be true why then conclude that the mating always takes place in the air? What accounts for the dead drones at entrance of hives? They evidently had mated and it appears the bees had carried them out. Is it not quite likely that after mating takes place, the queen goes out for a fly, she would show signs of it on return as I have read. So the party that observed that might be mistaken as to mating taking place outside. If they met in that manner on the wing, it seems to me they would fall to the ground and be in danger of being devoured.

As to the fertilisation once for all time, I think is not proven. A turkey hen with once mating will lay one setting of fertile eggs, but will not do for the next. The queen has a period in the swarming season she has no eggs. I know it is a serious matter to meddle with creeds and fixed theories—for instance, the "deceased wife's sister's Bill, the Scripture says you can't have the sister while the other sister is living because they might quarrel." That would be a very uncomfortable condition. There appears to be nothing prohibiting such a