

(Continued from Page 155.)

little as a $\frac{3}{8}$ -inch board protection. We should protect them more.

Next, in order to keep down swarming I am going to try to show you the importance of ventilators in the supers. You have a colony of bees there and all the fresh air they can get has to come through that brood-chamber and up into the super; by the time it reaches the super that air is foul, and your bees on that account become discontented and want to swarm, and therefore I use the system of ventilation with supers. A great many of the entrances to hives are too small. In our country we have hives in which the entrance does not go all the way across the front of the hive. I learned a lesson from Mr. S. T. Pettit, to enlarge the entrance of the hive during the warm season by means of wedges $\frac{3}{8}$ of an inch at the front, and going to a point at the back, and as soon as the swarming time comes on, slide one between the bottom board and the brood-chamber, and in that way increase the entrances $\frac{3}{8}$ of an inch. By those methods we can keep down swarming to a great extent. In using the greater amount of super-room, you want to get the condition where you have sufficient super-room in your hive that the worker force in that hive is contented, and in such numbers that the bees that are dying off from day to day are about equal to the number of bees that are coming on. You can't do that unless you have the extra amount of super-room.

The reason why I have said I consider this perhaps the most important subject that will come before this convention is this: I am thoroughly satisfied that the secret of large yields of honey is to keep the bees together. No matter whether your honey flow is short or long, it makes no difference, as far as I can see it as to that point. Your bees, then, are always ready;

your bees come with large forces, and they can take advantage of everything that may turn up, no matter whether it is clover, basswood, or buckwheat—whatever gives you the largest amount of yield.

As far as fall flows are concerned, I know by observation that a great many do not get the amount of honey they could in the fall of the year, because by that time their colonies are so broken up they really have few, if any, strong colonies left.

Dr. Miller—When you speak of ventilating supers, do you mean extracting supers, or sections, or both?

Mr. Holtermann—I have particular reference to extracting supers. The only method I can see of ventilating the comb-honey supers is by having a ventilator at the top of the brood-chamber. I don't think it is practicable to use them in comb-honey supers at the time when the bees are capping the honey.

Mr. Nau—I work the super in the same way Mr. Holtermann does, and I have no swarms. I have a 13-frame Langstroth hive, and whenever one super is half full I put another hive under it. I get as high as six supers full of honey off one hive.

Dr. Miller—I would like to emphasize the point that is made by Mr. Holtermann, and that is as to the importance of ventilation. I have had from year to year what I call "piles," that is, piling them up three or four stories high and allowing each colony to have an abundance of ventilation in other words the full entrance to each story. I never had one of these piles swarm. I wouldn't like to say that will always be a certain preventive of swarming, from the fact that these piles were generally formed from what were rather weak colonies in the first place, and built up gradually, very strong ones. The ventilation of the colony can always be made a

cess with
Holtermann
ed many a
extracted
rent of air
the whole th
that, by ha
through the
through the
tion honey.
before any s
known, I wa
Grimm of W
at that time
little boxes o
telescope c
here, he wa
and blocking
he air could
chamber, and
very emphatic
ings, he tu
consider that
at time on
and that sam
want to tel
at in the up
the sections
wer in com
d that is th
aming some
way of ve
as right up
ne such wa
advantage
hold on to
tter of venti
tracted honey
of the wh
e you need
re at all.
r. Holterm
is, Dr. Mi
r. Miller—N
r. Holterm
at one time
ing at the
d go in at
the top, but
u will find