

Out-Door Wintering With Least Labor.

(Written for C. B. J., by Will Ellis.)

As the winter approaches and the long evenings are here, the apiarist has more time for thinking and studying his plans for the future, and putting them into practical shape. Just now I am trying to solve the problem as to the best, cheapest and lightest arrangement for out-door wintering with the least labor.

I have always wintered in summer stands, packed in separate boxes, but I am getting tired of packing every fall and unpacking from fifty to 100 colonies. Chaff hives I do not consider practical, and I believe they are not popular. The cases I now use cost me about 50 cents each, finished and painted, giving four inches of packing. I notice the chaff hives are being made out of $\frac{3}{4}$ inch lumber, 2 inch packing with paper between walls, this may answer very nicely but without the paper it would not answer as the hive must be sufficiently protected during a long spell of cold weather to allow the bees to move from comb to comb. I have had a number of people come to me telling me their bees died and the hives were full of honey, being simply starved a case of stores "so near and yet so far." I once wintered a few colonies with over a foot of packing and they came through the best of any I ever wintered. I propose to make some wintering boxes, out of cheap stuff 2 feet I do not think would be too deep the inside can be made out of any thin stuff but I think the outside would be better made out of any old lumber, papered and shingled over. In the fall the bees can simply be lifted out of the single walled hives and set into these winter cases and vice versa in the spring; usually here about 15th of May. This simply does away with packing and unpacking in spring and fall. Bees cannot be kept too warm on their summer stands in winter, many bee-keepers winter in clamps but there is the same work spring and fall as with the separate cases or shells, and persons who want to work can always find plenty to do without performing any unnecessary labor. Now readers if you have any objections to offer let us have them, let us know what you have done, what you wish you had done and propose to do. I propose making mine so that when I am through with them that they can be made into kindling wood and I be nothing much out of pocket I am wintering 73 colonies. ST DAVIDS.

[Please let us have suggestions along the above practical line, do not think some one else is sure to take up the subject, take it up yourself.—Ed.]

Something New.

DRONES FROM FERTILE WORKERS.

(W. C. Wells.)

I see in the American Bee Journal of Dec. 6th, page 719, that Mr. John McArthur has been experimenting with drones from laying workers, and seems to think it a success. Now I know that the contrary is the case. I reasoned that if all the drones from pure Italian queens are all pure Italian drones, even if she was mated with a black drone (the drone eggs not being unpregnated) why are not the drones from a virgin queen just as good as any. Well, I raised two nice Italian queens late in the fall, and as soon as hatched I clipped their wings so they could not possibly get mated. Well before I put them in winter quarters they commenced to lay. I put plenty of drone comb in the hives, thinking I would have lots of pure Italian drones in the spring. Spring came and I certainly had lots of drones from the egg to full-sized drones. As soon as I set the hives on their summer stands the bees commenced to kill off the drones, so I killed the queens and the bees stopped killing the drones. I soon had as fine a lot of Italian drones as need be. Next I raised a lot of queens from my best Italian mother. They, the drones, flew out with my nice virgin queens for nearly three weeks, and the queens did not get fertilized until the natural drones commenced to fly. The queens mated with black drones and the progeny was all hybrid. I had at that time over one hundred hives of black bees, and only a few Italian queens, so I concluded that the impregnation of the queen had no effect on the drone eggs was not correct. I never thought of trying drones from laying workers and I do not think I ever will.

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[Unless to take it with a grain of salt, it would perhaps be well to take the majority of what McArthur says as a joke.—Ed.]

Experiments in Wintering.

Written for the C. B. J. by C. W. Post.

During the winter of 1893-4 I wintered my bees consisting of nearly 400 colonies in two different ways. I was led to experiment as described below by reading the friendly discussions of Dr. Miller and Mr. S. T. Pettit in the CANADIAN BEE JOURNAL. I have been led to believe for the last fifteen years that bees would winter better by having an air chamber below the brood nest. So last winter I decided to try the experi-