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Queen Breeders Journal

PUBLISHED MONTHLY BY E. L. PRATT AT MARLBORO, MASS., U. S. A.

Vol. I.

APRIL, 1889.

No. 4.

Our Queen Breeders Journal.

DEAR READER:—We present you with a copy of our new Journal. We trust you will read it carefully and notice the valuable information furnished for so small a sum.

The Queen Breeders Journal is only 50 cents per year. It is as you see unique, brainy, original and advanced. Our correspondents are from the superior minds of the apicultural world. You will find it all bright and profitable reading.

An apiary with inferior queens is worse than no bees at all. So you see how necessary to your welfare as successful apiculturists is a journal giving the vital points of our pursuit.

The newest and the best points will always be found in our Journal.

A large number of advanced bee-keepers have gathered valuable points from our Journal worth many times the trifling cost of a year's subscription.

We have a most interesting advertising specialty department as you will see by examination. These pages are well worth your study.

We reach a large and very valuable constituency, bee specialists all over the country. These are the most brany of men, who are accustomed to using the mail freely to order goods and supplies.

We wish to call attention once more to our superior strain of Carniolan bees. Our queens are reared with great care and we pride ourselves on the excellence and purity of our stock. They have no equal. They generally manage to gather honey when other bees are starving. This last poor season we had a large quantity of the finest honey ever produced about here, which sold readily for 30 and

35 cents per pound alongside of ordinary honey at inferior price.

In another column you will see advertised a list of 5000 bee-keepers who have recently prtrionized the different dealers and manufacturers of apiarian supplies. This is the most valuable list ever offered to bee-keepers. This list is worth many times the price asked. It contains names of leading buyers of bee supplies in all sections. From these addresses you are sure of immediate returns for circulars mailed. The price is only \$3.00 per thousand names.

The call for our Carniolan queens has grown so large that we are compelled to immediately dispose of our Italian stock and keep our Carniolan so that we have for sale some extra fine Golden Italian breeding queens and a few Imported ones. If you want a bargain in fine Italian stock write us. We shall not breed Italians this season; Carniolans only.

We have published a neat little book of 8 pages, fly leaves and cover, by G. M. Doolittle on "Early Queen Rearing", telling in a plain practical manner just how to go to work for early queens. Price of book, post-paid, only 5 cents.

The coming season will undoubtedly be a good one for bee-keepers. This is the time to invest in bees for pleasure or profit.

To insure success subscribe for the Queen Breeders Journal. Stamps taken. Only 50 cents per year.

E. L. PRATT, Pub.

Marlboro, Mass.

READ THE ADVERTISING pages carefully. You will find where you can get the best bargain in just what you will need this season.

Purity of Drones From Mismatched Queens.

MR. DOOLITTLE UPSETS THE DZEIRZON THEORY.

"Are drones from a mismatched queen just as good for use in an apiary where owner thereof is breeding for purity of stock, as are drones from a queen which has mated a drone of her own kind?" is a question which is often asked of me. So far I have answered this question where asked by a honey producer, practically yes; but when asked by a queen breeder, I have said that in scientific queen rearing they are not as good where absolutely pure stock is the aim of the breeder. I know that the theory as set forth by Dzeirzon, the baron of Berlepsch, Leuckart and others, does not agree with this, for Dzeirzon says in his Parthenogenesis, "If the male egg does not need impregnation, then pure Italian queens must invariably produce pure Italian drones, and pure common queens must invariably produce pure common drones, though each kind were fecundated by drones of the other race." Then again I see in a work lately written by one of our best bee keepers, these words: "After what I have said you will perhaps see how clear it is that the drones are in no way affected by the fertilization of the queen; or, in other words, that all daughters of a purely fertilized Italian queen produce drones absolutely pure, whether they have been fertilized by black drones or not." Now I will admit that the above looks perfectly plain, and as if it were all right, but some facts with which I am cognizant go to disprove it; and facts are stubborn things to do away with when they stand in the way of theory. Now I wish to take the reader over some ground not generally traveled by the writers in the bee literature of today. Fifteen or twenty years ago it was

claimed that three yellow bands on all the worker progeny produced by any queen gave her the title to being an absolutely pure queen and many still adhere to this, although of late I see some are saying that this is no test of purity at all. Some sixteen years ago an Italian queen was purchased by H. A. King, who was then breeding bees of that race at Nevada, Ohio. This queen produced bees which nearly all showed the fourth yellow band, as plainly as most Italian bees do the third, which, when seeing, led me to disbelieve the three band purity theory. The first season there was reared some thirty or more queens from this one, but no drones, as she was not received till into August, so of course these young queens met only drones of the German race, as that was the only kind of bee that was within twenty miles of here at that time. Now, we are told that the worker progeny of such mismatched queens will be part black bees and a part Italian, with a general mongrel lot between the two, which show the distinct markings of their parentage. Well, this was what was expected, but imagine the surprise of the writer when it was found by a close examination that not one of these queens produced a bee but what showed the three bands to the full extent required by the purity test. Since that time I have had many queens which would breed queens that would produce all three banded workers, no matter what drones they mated with. But now comes the point which tested their purity; for upon rearing queens from those mismatched queens, their queen progeny would be all the way from black to apparently pure Italian, while the mother of these would very nearly duplicate herself as to color and the sisters which mated with a pure drone did as well as to duplicating themselves as did their mother. Thus we see that the test

along this line comes in the queen progeny rather than in the workers or drones. Now let a pure Italian queen mate with a drone from a mismated Italian queen and the workers and drones will not show the effect of said impurity in the least, so that by this test Dzeirzon and the others quoted above could easily say that their theory proved itself true in practice; but when we come to rear queens from this queen which mated with a drone from a mismated queen, then we find that for some reason we cannot get so yellow a queen progeny as we can from sisters which mated with drones from a purely fertilized queen.

Again, if the writers above quoted are correct, and these drones were as pure as any, one of these last reared queens mated to a drone from a mismated queen should produce as pure queens as those which had followed along the line of the royal blood of their parentage. Now we have had two mismatings, or matings with these drones which are as pure as any, and what do we find? Queens which are almost as bad when reared from such a mother, as were those which were reared from the queen which had mated with a black drone; still so far the workers are all three-banded and the drones do not show the contamination. Now, go one step farther along the same line, and the workers will have a dingy appearance as to bands, while some will show "splotches" of black on some of the yellow bands, with a queen progeny that is no better than that of the ordinary hybrid. One step more along the line of these so-called pure drones, and we have both workers and drone, which no man can tell from the ordinary hybrids. To make it a little more plain: Take a pure black queen, and after her having mated with a fine yellow drone, let her rear all of the drones produced in an apiary containing only black bees.

Of course the drones from this queen will all be black, to look at, the same as they would have been had she mated with a drone of the same blood as herself. Now rear queens in this apiary from any of the pure black mothers in it and these young queens will mate with the drones from this mismated queen. These young queens will give all black workers and drones, the same as they would have done had these drones come from a pure black queen mated with a pure black drone; but when we come to rear queens from this young mother, now and then one will show a little yellow on them, which would not have been seen had not the drones from this mismated queen been the least bit contaminated. The queen is the typical bee of the hive, hence will show an impurity where the workers and drones would not. Now take one of these young virgin queens having a little yellow on her, and have her mated to a pure yellow Italian drone, the same as was done with the first queen. From this one rear all your drones again, while you rear queens from her mother, which young queens would be sisters to the one now producing drones. Having one of these last young queens fertilized by the desired drone, next rear queens from her and you will find that some of these queens will show quite a little yellow on them, yet so far the drones and workers show little if any difference. Take one of the yellowest queens from this last lot of queens and have her mated with a yellow drone again, going over the same process of mating again as before, and you will get queens in this third generation which will many of them be quite yellow, while the workers and drones will show yellow blood about them by occasional "splotches" of that color. Now follow out the same line of breeding once more and you will get both

workers and drones that any queen breeder in the land will call hybrids, calling them rightly so, too. These hybrids could not be possibly gotten by this way of breeding only as drones from a mismated queen are contaminated; for so far we have used no drones except those which were pure black, according to the parthenogenesis theory, yet we have a hybrid bee as a result. Worker bees and drones do not show a little variation as to purity as does the queen, hence if we would know of the stock which we have we must raise queens from them. The above are facts which men supporting the Dzierzon theory cannot get away from, and show that the breeder of strictly pure queens does not want drones from a mismated queen in his yard. I cannot tell how it comes that the drone progeny of a mismated queen is tainted by her mating, but the fact that they are so tainted certainly upsets the theory that these drones are as pure as any.

G. M. DOOLITTLE,
Borodino, N. Y.

What Bees to Breed.

The article of Brother Heddon on pages 34 and 35 on this subject brings up again the "old fight" in which he and myself have been engaged for years; in which I take opposite views to him and for the reasons hereinafter given, viz.:

The Italian bee has been domesticated in this country for over 30 years and has fought its way to prominence as the best strain or race extant. This is not a matter of conjecture, but has been proven time and time again. Now what are we asked to do? Simply this: to throw aside the best bee the world has ever seen for the purpose of adopting a hybrid. Will our bee keepers do this? I trow not just yet, and why? In the first place we have but a small amount of evidence to sustain the claims of Broth-

er H.; and this brings us to another point, viz.: What is the cross that he advises? If Brother H. or any one else can give us a fixed strain of superior bees by crossing it can be safely adopted. Can he do it? I for one do not believe he or any one else can, hence my opposition to his views. Today we have a guide by which we can determine the purity of the Italians; but, when we come to cross with the blacks, what is the result? Every bee keeper knows that cross-mated queens produce, and must to all eternity produce, mixed bees, hence we can have no guide whatever in the matter. Admit, if you please, that Bro. H. can give us a superior strain by his method of crossing; now when he sells a queen of this strain in what way or manner can it be kept where it began? Any one can raise hybrids, and the instant we attempt to displace the Italian with its well known markings by which its purity can always be known, with a hybrid bee, we are at the mercy of anybody who may pretend to rear queens, and even in our own yards we can do no breeding with positiveness or certainty.

I for one don't propose as yet to give up a known for an unknown quality. The best yields ever shown whether in single colonies or large apiaries, come from the Italians, and whenever the Italians have been fairly tested with other races or strains they have in every instance proved the victors.

I say, then, to my brother bee keepers, don't give up a known good thing for something unknown, no matter who says to the contrary. Brother H. mentions Prof. Cook and says he "agrees with him." Well, in what? Not that the hybrid is better than the pure Italian by any means, but that it is possible, in time, by crossing the best strains of the best races to eventually produce

something superior. Well, I agree also; but when I know that many years must elapse before this can be accomplished, and further that no fixed markings can even then be guaranteed, I think I am warranted in advising all to stick to the Italians.

J. E. POND.

North Attleboro, April, 1889.

Cells with Queens Present.

Having seen the March number of the Q. B. J. and perused it with pleasure, I cannot pass several points in some of the articles without a notice of them.

There are two points touched upon by Mr. Demaree on the first page. The first is that "the swarming season does not last, as a rule, longer than four weeks," and to obtain swarm cells for about twelve weeks seems impossible. The impossibility is actually plain enough, but if to get cells built in the hive with the old queen makes them better than any other, or than cells raised by other means, then the cell getting is not an impossibility. It is held by some breeders that queens reared from cells that the queen laid the egg in, does furnish us a better queen and to have that embryo queen in the larvæ stage cared for by the bees in the hive where the queen laid the egg has a more natural effect on the future queen, is an argument forcibly used by many besides professional queen breeders. And that those cells are not and cannot be obtained is also claimed by quite a good many.

That such natural cells are obtained for a space of more than four or five weeks is a well known fact to some of the bee keepers of the country and it is also quite extensively practiced by them. I commenced to practice the method in 1878. My first capped cells were taken out on May 20, after being capped six days, and I continued to take cells every week until

the middle of September, numbering nearly 125 cells, and yet the colony did not cast a swarm but kept right along at work in the boxes and were very strong. Three combs were used for this purpose and were well provided with holes in suitable places and the cups or premature queen cells were always furnished in abundance. Just as soon as some of these cells were found being capped over the comb was placed behind a division board and another prepared comb put in the place of it in the brood nest. One of these combs was usually taken out every fifth day. From 1878 until this season I have practiced this method of getting most of my cells. In 1885 one queen gave me 240 cells, every one capped over, between May 15 and Sept. 10, and in one week at two cuttings gave me 35 capped cells, from one to four days capped over. Not a poor queen came from those cells during the whole season, nor was there any attempt to swarm made by the bees.

Here is where Mr. D. touches it again: "The best colonies do not always swarm." With those colonies prone to swarming the queen cell building cannot be carried on to any extent as a rule.

During last season (1888) one of the best colonies for surplus honey that I knew of and containing an extra good breeder, tried to swarm but once and from the middle of May to the last of September there was not a week but that some cells could be taken from the hive. When they did swarm it was because there was a young queen allowed to hatch in the hive. This queen was reared early in 1887 and was tested for her queen progeny. She was extra prolific, her workers were very even, quite gentle and she was the daughter and granddaughter of two as fine breeders as I ever saw. And this spring she is in good shape and doing good business

and has got to furnish cells for queen rearing again.

But let me say right here that I do not believe that queens that are reared and hatched in large or strong colonies of bees are as good as those that are reared in a decently populated two or three frame nucleus and kept there for three or four weeks after they begin to lay, it is true that queens having a little age before being called upon to lay to their fullest capacity, are stronger and hold out longer than those that are required to lay to their fullest extent when first beginning to lay. Close observation has forced me to select for my own use, queens reared the last of August or early September and I have had the majority of those late queens hold good until four years old, besides showing considerable less inclination to swarm and their bees go into the sections just as good as any swarming-season-cell-reared queen that I ever saw or had.

But I want to caution the beginner not to try any of these old veteran tricks, or you may be badly left by not knowing just what to do and when to do it.

H. L. JEFFREY.

New Milford, Conn.

The Carniolans Defended.

MR. HEDDON TAKEN TO TASK.

We noticed in the March number of the Q. B. J., page 34, an article by James Heddon, entitled "What bees to breed."

We would say to Mr. H., please do not be quite so hasty in condemning a race of bees that you comparatively know very little about. For instance, you say in your article, "I remember well when a pure stock of German bees was exhibited for Carniolans (I being in the secret of course) and several claiming to be well posted spent some time pointing out the physical markings and peculiarities of

the Carniolans." Let us say right here it is a very poor judge indeed that cannot tell a pure race of Carniolans from a pure race of blacks or Germans. The judges as well as the parties who claimed to be well posted we would not hesitate to say never saw a pure stock of Carniolans in their life (at that time). We have seen such parties who claimed to have pure Carniolans, but when they were placed along side of pure Carniolans any one could tell the difference just as quick as they put their eyes on to them. Some claim to have pure Carniolans but many times they prove to be nothing but hybrids or a cross between the Germans and Carniolans. There is just as much difference both in actions and color in a cross between Carniolans and Germans as there is between Italians and Germans. We had great trouble in getting purely mated queens until we got control of all blacks and Italians in our locality. Mr. H. might as well have stated in his article that the Carniolans are only a pure race of Germans or blacks. We should think Mr. H. had never seen or had a pure race or strain of Carniolans, for, if he had, he would not be so prejudiced against them.

We have never seen an instance (to our knowledge) where a pure strain or race of Carniolans when thoroughly tested ever proved a dissatisfaction. We would like to have Mr. H. prove wherein he finds his German-Italians a better all-purpose bee (all points considered) than the Carniolans are. At present the Carniolans are not as popular as the Italians, but we predict that it will not take the Carniolans as long to work their way to the front as it did the Italians. We have several editors of bee periodicals who are favorably impressed with the Carniolans and their good qualities, and we will soon have several more who are coming

out by showing that they are in favor of them. We notice in the April number of the Am. Api that our friend Henry Alley is going to breed Carniolans and their crosses this coming season. Mr. A. at one time was terribly against (and is not quite over it yet) the Carniolans. He was ready to condemn them every time anybody had a good word in their favor, but he is gradually coming to what he will be glad to advocate in the near future, that is, if he intends to continue queen breeding. Mr. A. is a man who keeps up with the times. What the people want he is going to keep. See the point? We do not want to have any hard feelings against either Mr. Heddon or Mr. Alley, but when Mr. H. unjustly compares the Carniolans with the blacks or Germans we have got something to say.

ANDREWS & LOCKHART.

Patten's Mills, N. Y.

Drones for Early Queen Rearing.

The Queen Breeders' Journal for March contained many practical and valuable suggestions on queen rearing, etc. We wish to call attention to the securing of drones for early queen rearing, of which mention is made in the Q. B. J. We can get queens reared by the 10th of May and usually by the 1st, as the last two weeks in April is very fine weather. About this time we can get queens to lay drone eggs. These do not hatch before the time is at hand for the queens to mate. To overcome this drawback we have for the past two years made arrangements with P. L. Viallon of La. to furnish us with a four framed nucleus, made up of two frames of choice drone brood nearly ready to hatch. We get them in time for use by the 1st of May. With the most favorable circumstances we could not rear drones that early in this latitude. The idea given in

the Journal is to secure drones by the pound. We think that would be a hazardous undertaking. It is much nicer to build up a nucleus than to bother with introducing drones to a strange colony, and drone brood should not cost much more than worker. This is another way to prevent in-breeding by getting choice drones from other stock.

JNO. NEBEL & SON.

High Hill, Mo.

An Interesting Talk.

HOW TO GET GOOD QUEEN CELLS.

Very much has been written about strong colonies for rearing good queen cells and I am convinced that too much stress has been laid on this particular feature of getting good cells. Condition has far more to do with good strong cells, which means good strong young queens, than does the size of the cell rearing colony. A moderate size colony that is living in high life on freshly gathered honey and pollen or is regularly fed on diluted honey till they fairly roar with joyful hum, will never fail to rear good cells that will hatch out strong, lively young queens. These conditions are generally present when bees are casting swarms in a normal way, and herein is the sole reason why queens are generally good when reared under the swarm impulse.

HOW TO PREPARE A COLONY FOR CELL BUILDING.

Having the conditions above described present, I remove the queen and on the following day about noon I remove all the unsealed brood. No mistake must be made here. This will set the bees in great excitement over their loss. I let them alone for at least two hours, when I give them some just hatched larvæ. Let the larvæ be no larger in size than a common brass pin and about 1-16 of an inch long. I choose the very

small larvæ to be on the safe side, but I am not sure that a larger larvæ not exceeding thirty-six hours old will make just as good queens. When the larvæ is given to a colony treated as above described they have had time to prepare suitable food for the royal infants, and they accept the larvæ with perfect satisfaction. It does not always work well to give the larvæ immediately after the brood is removed as the bees in their excitement may sometimes suck up the food surrounding the infant bees or neglect them to their injury. After the colony has been thus provided for nothing more is done to them except to see that the bees are handling honey all the while till all the cells are sealed. The queen rearing colony is left undisturbed except to open the hive once on the fifth day to see how many cells have been started. The cells are cut out on the tenth day and distributed, one to each of the prepared nuclei.

Cells from colonies that have cast swarms when the queens are of approved stock are always acceptable.

HOW TO OBTAIN SWARM BUILT CELLS.

When a colony having a pure blooded queen, purely mated, casts a swarm the swarm is hived on the old plan, i. e., the swarm is hived on a new stand so as to leave the parent colony to catch all the straggling bees to keep them strong and red hot to cast after swarms. On the seventh day after the swarm has issued I cut out the queen cells and give them to such nuclei as are ready for them, and as the hive is now full of young bees I remove all unsealed brood and give the colony a frame from my breeding queen of just hatched larvæ and eggs and the result is another set of queen cells reared under the swarm impulse.

G. W. DEMAREE.

Christiansburg, Ky.

The Queen Breeders Journal

CAPPINGS.

SAMUEL CUSHMAN has recently been appointed to the R. I. state experimental station.

J. C. FRISBEE REPORTS heavy loss by the recent storm in Virginia.

WE ARE WORKING on an improvement for controlling swarming. If it proves to be a success it will be fully explained and illustrated in the Q. B. J.

THE MAGNITUDE of G. B. Lewis & Co.'s supply business was well set forth in the British Bee Journal.

THE DOVE-TAILED HIVE with recent improvements as suggested by many "old heads" is nearing perfection. The section holders have been made by the Falconer Co. for years with success.

THE WARM WEATHER that has prevailed for the last few weeks is excellent medicine for spring dwindling.

IF YOU WERE TROUBLED with a short crop, not enough honey for your bees to winter on try, the Carniolan bees this season. They are good honey gatherers, prolific, gentle and hardy. We will furnish you with a nice pure queen from imported mother for \$1 each. H. E. and E. L. Pratt, Marlboro, Mass.

WE ARE COMPELLED to leave out of this number a lot of very valuable matter on account of space, but it will all appear in due time. Our advertisers want to do some talking about now.

ALL OUR MATTER is original and from the best minds in the country. Remember that our journal is not one-sided; all can have a hearing on important impersonal apicultural matters.

THE BOOK now in press by G. M. Doolittle on "Queen Rearing" will

be one of the most practical works ever published on this all important subject. Thos. G. Newman & Son, of Chicago, Ill., are the publishers.

FOR THE HONEY PRODUCER who does not look so much for purity as for honey, drones by the pound will be a boon, especially if his bees be all common blacks. For the queen breeder drone brood from the south, as Jno. Nebel states, is the only method practicable.

IN HIS ARTICLE on another page, G. M. Doolittle brings out facts on Purity of drones that completely squelch the theories of many apicultural authors.

HON. JAS. HEDDON of Dowagiac, Mich., was recently elected mayor of that city.

OUR Q. B. J. brings out the best thoughts of the best writers in the right direction as never before. On the queen depends the best results with bees.

LAST MONTH G. W. Damaree said he had a breeding queen worth \$50. Now we want to say that we would not sell the two we have for thrice that amount.

IT IS A SIMPLE MATTER to raise queens, but to a honey producer it is necessarily expensive, as no one in a honey yielding locality can rear a few queens without their costing him as much as breeders would charge for tested queens.—J. E. Pond.

OF LATE, I have inclined to the opinion that on the queen rests, to quite an extent at least, much of the cause of our wintering troubles.—G. M. Doolittle.

WE HAVE TO REPORT the superior condition of our Carniolan bees. After setting them out of the cellar, we examined all and found them far better off than any bees we ever wintered before.

WE WISH to call your attention to the Eureka Paints for preserving roofs and all out-door work. This paint is the cheapest, best and most lasting for hive covers, etc. It will not crack or leak, and one coat will last for 20 years. The agents say: We are engaged in the iron business and know just what is required to protect iron from rust and wood from decay. Mr. J. W. Jarboe is the inventor and patentee of the successful Paper Water Pails, Paper Wash Basins, Spittoons, and Paper Carriage Bodies. The Water Proofing material of his invention for preserving the Paper he has compounded properly so as to make the very best Roof Paint in the world, as well as for Wood or Iron, Tin or Brick. He has also invented the only acid-proof Paint that is a success and largely used by the sugar refiners and salt manufacturers to prevent the rusting out of their Iron Vessels." For particulars, see adv or address J. W. Jarboe & Son, 521 E 19th St., New York, N. Y.

The first thing after setting bees out of the cellar is to let them have a good fly. Then examine them to ascertain how they stand for stores. If a colony is well supplied with honey don't waste time and sugar with stimulative feeding, but mark it in such a way that you will know that it has *plenty*.

When you come to those colonies having only a little honey in the corners of each frame, or one frame or so of stores, that you want to mark *feed*. Those colonies having plenty of stores are packed warmly and let entirely alone until within six weeks of white clover; then go through them and stimulate by uncapping the sealed honey a la Doolittle. It does not pay to monkey with very weak colonies at all, except to see that they do not starve.

The Carniolans.

The March number of the BEE-KEEPERS' REVIEW, for 1889 was given up for discussion of "The Best Races of Bees." The Carniolans were given the preference by ten to one of any other race. Those who advocated other races had never seen Carniolans.

Following are a few of the many kind words spoken in behalf of the beautiful and well behaved Carniolan race of bees, from different parts of the Country.—

CHALON FOWLS OF OHIO.

I have had all of the three varieties mentioned, both pure and crossed. Carniolans I have not fairly tested for honey, as the last three seasons have been too poor, but, there are some other points I have noticed. The bees are very quiet on the combs, like the best Italians, but *are easily shaken off* not over prolific; and no more inclined to swarm than many colonies of Italians, and hybrids in my yard. In one point I think they excel the Italians, that is in hardiness.

E. E. EWING OF MD.

My experience with the Carniolans was sufficient to induce me to replace all others with this variety. On cool days, they are out and away as lively as though the temperature were up to 70° Early in the morning and late in the evening they are busy, while the Blacks and Italians keep close in the hive. They are equal in working qualities to the best Italians, and can be handled at all times without smoke—not a colony here and there, but the whole yard.

H. D. CUTTING OF MICH.

I have tried the Carniolans two seasons. They are good honey gatherers, very quiet until after the honey season then they prefer to be let alone. One colony of Carniolans, the past season, filled a hive, four stories high, with comb, (from ½ sheets of foundation.) They are excellent comb builders. I shall buy several Carniolan queens this season to mate with Italian and Syrian drones.

JOHN ANDREWS OF N. Y.

For myself and Mr. Lockhart I can say that we consider the Carniolans ahead of any bees we have tried. They hang to the combs as well as the Italians; fight robbers and moths, are easily handled, and uncommonly quiet in winter. This winter our bees are in a temperature of 48° to 50°, yet they are as quiet as any Blacks we ever wintered. The one Italian colony in the cellar has gone down to a small cluster, loosing as many bees as the whole 121 Carniolans have lost.

S. L. WATKINS OF CAL.

Mr. T. Eversult, a bee-keeper of this place thinks that the Carniolans and their crosses are superior to all other bees that he has ever tried. My colonies are in better condition, as regards the number of young bees at this time of the year, than they have ever been since I have kept bees. This is probably owing to the large number of Carniolan colonies that I have at present. I have had two years of experience with Car-

niolans, and I am fully convinced that they possess very desirable characteristics as regards white comb building, non-robbing disposition, gentleness and prolificness. I believe they will play a prominent part in the near future in apiaries where the Italian bees are now the favorite.

DR. S. W. MORRISON OF PENN.

I discarded the Blacks because of their restlessness when being handled, and their inability to defend themselves against the moth. I condemned the Syrian and Cyprian because of their irritability. Italians are gentle, industrious, quiet when handled moth proof, and prolific; but I have not found the Carniolans lagging behind in any of these good qualities; in fact, they are more gentle and industrious. Especially do they get out earlier, and find the honey before any other variety of bee gets there. There is not half the trouble with robbing in a Carniolan apiary. In my experience with Italians, robbing was often very annoying; sometimes almost uncontrollable. I don't know whether it is because Carniolans are afraid of getting hurt, or because they defend themselves better, but I do know there is greater freedom from robbing. Carniolans do not swarm any more than Italians, use less propolis, and make whiter combs.

C. L. FISHER OF MASS.

If every bee-keeper would give the Carniolan race of bees the fair trial that I did, in the same yard with Italians, blacks and their crosses, they would be compelled, in truth, to report the superiority of the Carniolans. With me, they are the surest to winter and less liable to dwindle in spring. They build up very rapidly in spring and ready for the early honey flow; they enter the sections readily and work in them all through the honey season, often neglecting to supply themselves with winter stores.

They proved their honey gathering qualities in the last poor season, giving a fair surplus while the other races gave none. They cap their honey very white, even the dark grades, and leave their sections cleaner than do the other races. They are very gentle and cover the combs well while being handled. They are as good as Italians to defend their hives. It has been said of them that they are excessive swarmers. To that I will say, that, being so much more prolific than the other races, they must do something to relieve the pressure; and if they are pinched for room to breed and store honey, they will naturally find relief by swarming but if they have store room and the queen is not limited for room, all works well with them. I have had many swarms of Carniolans build up numerous enough to occupy a three story hive, and work like beavers the whole season. They were too numerous to winter in a common hive, and I divided them with swarms that were weaker. At present the Carniolans are not as popular as the Italians, but I predict it will not take them as long to work their way into general favor as it did the Italians.

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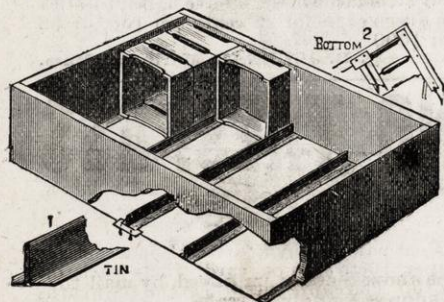
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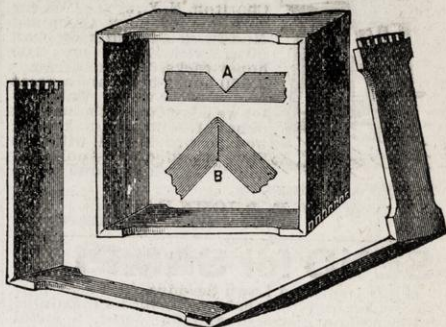
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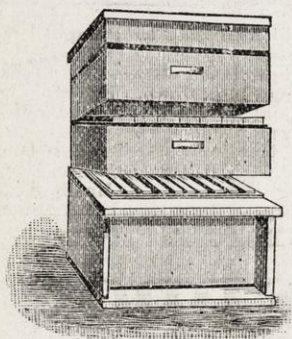
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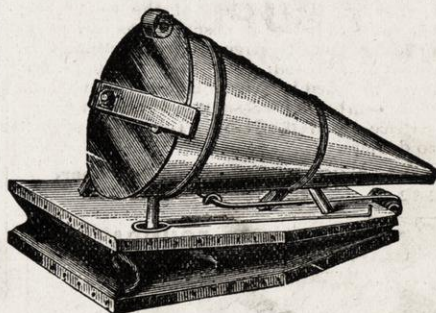
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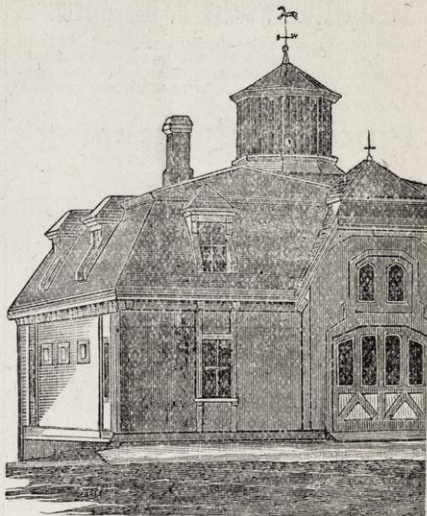
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