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## Queen breeders journal. Vol. 1, No. 1 January, 1889

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No. 1 to 6

# Queen Breeders Journal

PUBLISHED MONTHLY AT MARLBORO, MASS.

Vol. I.

JANUARY, 1889.

No. 1.

## Introductory.

The Queen Breeders' Journal is to be devoted especially to the queen rearing business. The industry of apiculture has crystallized itself into three distinct classes, viz:—Honey production, supply manufacturing and queen rearing. We believe the last named branch deserves more attention than has been given it in the past. We shall do all in our power to promote its best interests, and bend our energies to inspire the American breeders to the successful production of the best queens in the world.

America has come to the front in the excellence of her queens. On the queen largely depends the highest success in bee culture.

In short, the mission of this modest specialty journal is to improve the strain of queen bees, and bring before the breeders any and all methods that shall tend toward the advancement of this great industry. We shall welcome any new ideas, and shall do our utmost to secure the testimony of practical and successful breeders from all over the country.

Trusting our new journal will receive a fair share of support, we present herewith the first number of the Queen Breeders' Journal.

## Queen Cages and Shipping.

There are many points to be observed when selecting a cage to ship queens in. Of the cages that have ever been put upon the market the Improved Peet beats them all. With candy as Mr. Viallon recommends, and stiff brown paper slipped between the bees and tin on the under side and another small piece over the sugar on the upper side, the package is neat and complete.

All cages that have jackets of rough wood or slides of wood, to cut the queen's legs off whenever they are moved, I object to with all the force I can muster. Any cage that does not have a small rim where the screen cloth comes is not correct, for the queen will always have a foot stuck through the meshes, ready to be pinched off when you put the cage down. Another thing I don't like is painted cloth, especially green; the best kind that I know of is the black enamelled. It can be bought for about the same price, is neater and stronger and the bees cannot bite into it. It will not rust.

Any shipper makes a great mistake when he rushes his cages into the P. O. carelessly. Look at every one carefully and see that it is attractive and clean. Be sure that your candy is of the correct consistency, and that your queen is what you advertised her to be.

By observing all the little points



you can rest assured that orders for your queens will increase every year, without complaint from either purchaser or post office officials.

#### NOVICE EXPERT.

We received queens lately that had poorly made candy, and our postmaster wanted to make a rumpus on account of the package being sticky and dauby; on opening we found the candy had dissolved and run all over the cages. The bees and queen were in a shameful condition. We must bear in mind that we are using the mails for transportation merely on sufferance.

The candy suggested by Paul L. Viallon is made as follows: 12 ounces white powdered sugar, four ounces of brown sugar, one tablespoonful of flour, and two of extracted honey. Add a little water and stir to a stiff batter, boil for a moment, after which stir till it thickens, then it is ready for use.

#### Are They Injured by Shipping?

G. M. Doolittle has come out with a statement more than interesting. He says that queens are not injured so much in transportation as by a sudden check in egg production. He advises the rearing of young queens from a valuable mother at once, so in case she should fail or become impotent you will have her daughters to fall back upon. Then the Dadants come in Gleanings and say:—

“During several seasons, we have

received from Italy, twenty-six queens every week, from the first of June to the first of September, introduced most of them in our hives, to be shipped as ordered; and that, although most of them were taken from full colonies in the height of the breeding season, we do not remember of having had complaints from our customers as to the prolificness of their queens. Our shipper, Fiorini, to whom we used to pay good prices, was very careful to send only young and prolific queens.

“Queens lay more or less, according to the quantity of food offered them by the bees. When the weather turns suddenly cold, the bees cease to nurse them, and they cease laying as soon as their matured eggs have dropped. The eggs, which are but partly developed in the ovaries, remain till they have an opportunity to grow and to slip into the oviduct. As such sudden stops are of frequent occurrence during the life of a queen, they have no influence on her subsequent prolificness.

“As to queens losing most of their prolificness when sent by mail, I may say that one of our neighbors having brought, near our home apiary, about forty colonies of black bees, in box hives full of drones, nearly all of our young queens were impurely impregnated. To mend such a state of affairs we ordered from our friend Viallon, fifty queens to replace our mismatched ones. Every one of these queens, although received by mail, proved good and prolific. Therefore, to our mind, Ernest was right when he wrote: ‘The shipment, by mail

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or express, does not deteriorate the laying of a queen.' We may add, 'even when she is taken from a full colony during the height of the laying season.'"

Our own experience has been that most of the queens shipped to us have held their own, although in a few instances they have fallen far short of what they should have been. We laid this, however, to lack of care in breeding. Shall experiment.

#### **Virgin-Queen Traffic.**

The sale of virgin queens is now in its infancy, though destined to become, if properly understood, one of the most satisfactory methods of introducing new stock among the beekeepers of America, instead of the higher priced breeding queens as is now practiced, for introducing the best blood, at a much higher rate and attended by much greater risk and danger of loss compared to the amount expended and the probable results of benefit to be derived therefrom, compared with the value of the two methods. Any queen breeder in America who breeds queens for sale, will very readily sell a virgin queen from the very best breeding queen in his apiary at the nominal sum of less than a dollar, when no reasonable sum could buy the said breeding queen. Twenty dollars, in many instances, would not buy the best queen that some queen breeders have, while, for 50 or 75 cents he would sell a selected virgin daughter from said queen and guarantee safe arrival, that would, although mated to a common Italian

drone in the purchaser's apiary, produce very nearly, and in some instances better drones than would the mother queen of the virgin queen that could not be bought.

So the apiarist would, for a mere nominal sum, have secured the better half in value, than he could have done had he bought the mother queen of the virgin, even admitting that she was a fine breeding queen for queens and drones alike—which is seldom apt to be the case, for usually the best queens for breeding queens of, are not the best drone-producing queens.

The next object of the apiarist then should be to get of another breeder, virgin queens of his best selected breeding queen, and get them mated to drones from the queens of those procured of the first breeder. When he has done this, he has secured a most perfect cross of two or more strains of bees, that should give him breeding queens fully equal to the mothers of either lot of the virgin queens procured, admitting that both are of the best stocks attainable in America—and we have in America, unquestionably, some of the best strains of bees to be found anywhere in the world that has ever yet contributed any of its stock to the bees of the United States; as many of the best apiarists who have among them, tested all that have been introduced here, are ready to attest the fact.—  
[A. L. Swinson, in the Api.

Your Full Address, plainly written, is very essential in order to avoid any mistakes.



### Crossing Races of Bees.

A race, whether of men, cattle or bees, is a group of animals with certain marked characteristics which are persistent. That is to say, the individuals within a breed or race, if purely mated, will breed true to the characteristics of the race. Race and breed are essentially the same thing; though we usually use the word breed when the group referred to has originated through man's selection, as we say Shorthorn breed, Morgan breed, Merino breed, Berkshire breed, etc., while we generally apply the term race where the breeding has been done solely by nature; where natural selection, not man's, has developed the peculiarities. Thus we speak of the negro race, and the Carniolan and Italian races of bees. In case of a breed, or man-formed race, the selection and breeding, if carefully done, is towards some type or standard. Thus our Jerseys were bred for milk exclusively; our Shorthorns more for beef. In like manner, our Hambletonians are bred for speed, our Percherons for draft. As such animals are bred for a distinct and specific purpose and owe their superior excellence to the very fact of a stored up potency because of this careful breeding, to cross such animals is very unwise. It antagonizes two powerful but opposite, or at least, different, tendencies and so is a shock to both and likely to shatter both tendencies and leave only uncertainty.

In case of a race this is quite different. Here nature has selected and the gain has been solely the good of the individual. So our races of bees,

each has its virtues and all are developed in the line of the best welfare of the individuals. Some are stronger in one line, others in another. Thus in crossing bees we violate no tendency, as there is no developed monstrosity, if I may use the term, as with our Jersey cattle for milk and fat. All the tendencies are in a common line, the best good of the race. It is perfectly rational, then, to cross our races of bees. Indeed, there is probably no way to improve our bees so big with promise as by judicious crossing. Each race is strong in some valuable line and this strength is bred in the bone, if we may so speak. Thus Carniolan bees are very amiable, very industrious and fairly prolific. They are rather too ready perhaps to swarm. The Syrian bees are astonishingly prolific, have long tongues, but are not as amiable as the Carniolans. They are not given to overswarming. We see then that by combining these two races we may hope to eliminate the ill temper of the Syrians and the undue tendency of the Carniolans to swarm. From our knowledge of races and bees we might be sure of this merely as a theory without the actual trial. I have, however, put the matter to actual test, and I am very pleased with results. I have now been breeding these two races for five years and I am pleased with the quiet temper, industrious habits, prolificness and freedom from the swarming habit of our bees. I am not yet satisfied with the type; I wish at least five or ten years more when I hope to have developed a race better than any of our present races, and one

without any of the undesirable peculiarities found in the several races of today. I believe our hope lies in just this line.

A. J. COOK.

**A Combination Method of Getting Queen Cells.**

Three days previous to the time you wish to start queen cells, for use in the apiary or any other purpose, go to any prosperous colony in the yard; remove the queen from it and at the same time put a feeder in place unless the bees are getting plenty of honey from the field.

Three days after taking the queen away, at about two o'clock p. m., go to the colony and take all the combs having brood in them away, shaking the bees off the combs in front of the entrance to the hive, when the combs of feed and honey are to be brought to one side of the hive, leaving space in the center of these combs of honey for one frame to be inserted. Re-adjust the feeder and contract the hive to suit the requirements, by means of a division board. Give the combs of brood, after pinching off the queen cells which have been started, to weak colonies in the apiary.

Now go to the colony having your best queen, and from one of the combs select a piece having little larvæ in the cells not over twenty-four to thirty-six hours old, cutting it out; when it is to be taken to a room whose temperature is kept at from 85 degrees to 90 degrees of heat, unless it should happen to be as warm as that anywhere.

After getting to the warm room, shave off the cells on the little piece of

comb with a sharp knife, down to within one-eighth of an inch of the base of the comb, so that the little larvæ can be easily seen. Cut into strips and attach to an old comb with a large hole cut through the centre. Now with a quill remove or destroy the little larvæ in the following manner:  
\* — — \* — — \* — — \* — — \*  
leaving about twelve or fourteen undestroyed.

Now take the frame of cells, supplied with little larvæ, and insert it in the queenless hive, in the space left for it, closing the hive. When you get to the hive you will find the bees in terrible agitation over their hopelessly queenless condition; but as soon as this prepared frame is lowered into the hive, a hum of joy will greet it—such as is not often heard—and in four hours, if we examine, we shall find our little larvæ floating in an abundance of royal jelly, the same as they would have done if they had been intended for queens from the start.

This is a combination of the Doolittle and Alley method as advised in "Nature's Way" and the "Handy Book."

Do not crowd down the prices of queens. They are low enough. If there is to be any crowding done, let it be for quality, and a higher price will naturally follow. There is nothing so cheap about an apiary as a cheap queen.

A queen that is worth a great deal to a breeder is one that possesses desirable traits and can produce daughters all of the same stamp.



### Loss of Young Queens at Mating Time.

Not a single author of our standard works on bee culture has ever thrown any light on this subject so far as I have seen. They all tell us that the young queens are lost by entering the wrong hive on their return from their wedding flight, or they may be captured by birds, etc. There is hardly a shadow of truth in the causes paraded to this day to account for so many missing young queens at mating time.

In the early part of May, 1884, I made up about twenty-five nuclei as a commencement of the queen-rearing season, and gave each of them a maturing queen cell; but before the cells had time to hatch out there came on an unusually cold spell for the time of the year, and the result was the loss of about fifteen out of the twenty-five queen cells by reason of being chilled during the cold nights. The weather continued cool for some days and there was delay in getting other cells ready and this delay brought on an abnormal condition in the nuclei, by reason of the presence of too many old and indifferent bees. The sequel was many of these nuclei were an entire failure. They "balled" every young queen given them—always at mating time, and this, notwithstanding they were supplied from time to time with hatching brood with a view to restore the nuclei to normal condition. Here I got my first clue directing to the real cause of the loss of young queens at mating time. The cause is the presence of old, cranky, jealous bees, not necessarily laying workers, for in the case I have men-

tioned and in divers others since then, under careful observation, no signs of the presence of fertile layers could be discovered.

I have noticed that under these conditions the young queens are never disturbed till they attempt to seek a mate, and then the persistent spiteful "balling" commences and nine times out of ten, results in the ruin or actual death of the young queen. By means of smoke and a close watch over such abnormal nuclei, I have saved the lives of many young queens, but such rescued queens are hardly worth the time and labor bestowed on them, as they are generally maimed and cowed by the severe ordeal through which they have passed. The remedy is to give hatching brood to the nucleus, and when the young queen is three days old, or thereabouts, move the nucleus hive to a new location in the apiary. This will draw off the old bees, as they will go back to the old stand, and the young queen will be left to mate and enter upon her life's labors under the care of young friendly bees.—[Api.

Mr. Doolittle thinks that when breeding for color you weaken other desirable points, but we think that it does not necessarily follow; we have run for color and secured the other points as well.

Don't condemn the Carniolans until they have been thoroughly tried. We must confess that we are falling in love with that race and have great hopes for them. Prof. Cook, we believe, is a defender of the Carniolans.

### **Heredity and Bees.**

For several years the publisher of the Queen Breeders' Journal has given his enthusiastic attention to bee culture, especially with a view to the production of the best strains of Queen bees.

He has justly earned the title of bee "crank" by reason of his devotion to a profession that he so ardently loves.

The question has often been asked "How did you happen to develop this specialty?"

Evidently his love of bees comes by heredity, through a long line of ancestry, who also loved this busy worker.

The father, Stillman B. Pratt, a widely known journalist, was always the one man in all his neighborhood, who kept bees in Middleboro and in Marlboro, Mass.

On the old Reading, Mass., homestead of the grandfather, Rev. Stillman Pratt, and the great grand-father, Deacon Benjamin Pratt of Revolutionary fame, a few swarms of bees were always found. This was long before the days of scientific culture, when once a year all the surplus swarms were treated to the fumes of sulphur, as the only way they knew to get at the honey and beeswax for the family use.

On the maternal side of the house, the bee business was better understood, even eighty years ago. At that time, the great-grandfather, Deacon Ransom Dickinson, of Amherst and Sunderland, Mass., looked as carefully after his bees, as he did after any line of stock on his rich Connecticut valley farm.

The deacon's first hives were sections of hollow logs, with a board nailed on top and bottom, and auger holes for entrance.

He was an indomitable worker, allowing himself very few holidays. Fourth of July celebrations never tempted him away from his bees and mowing, but he always took, in proper season, three days for recreation, besides his frequent visits to family friends and his Thanksgiving and New Year's outings.

One of these days was given up to picking blueberries, one to the mountains after chestnuts, and one to bee hunting in the woods, and some famous stores of honey were thus secured.

The deacon's homestead buildings stretched in one unbroken line over 200 feet, from the front of his generous brick house, to the rear of his 80 foot barn, and midway of this group of contiguous buildings was a large carriage house, in the upper story of which, there was finished off a bee house, some eight feet high and six feet wide and deep. This was a building flowing not with milk and honey, but with carriages and honey, and the wax and honey flavor of that upper story was sweeter than the perfume of roses.

It goes without saying that out of the deacon's huge hives very rarely any swarms departed.

He had caught on to the idea of movable honey boxes. The boxes he made were generous enough, holding ten or fifteen pounds each, and his family was never without all the



honey sweetening they could use or give away.

No bees were ever killed by the deacon's management in order to get at the honey. The bee house contained immense colonies of bees, and the product of honey was something unusual for those days in Massachusetts.

This family experience, covering as it does three generations and nearly a hundred years, has undoubtedly left its hereditary influence.

Now let us turn this heredity proposition around and set its influence at work in breeding bees for a definite purpose, and the highest possible standard.

In bee life, as much can be accomplished in a single year, as can be brought about in a human family in a hundred years.

When he first became interested in bee culture, he had only the common black bees. In 1885, he had raised the standard of his queens in a marked degree.

In 1886 and 1887, he tried every strain of noted imported queens that he could secure, not only to propagate pure breeds, but also to cross various strains and races in every conceivable way with a view to securing the very best results.

The fruits of the experiments have been most satisfactory and we have as a product, today, an "American" strain of Carniolan bees that we challenge the world to equal in beauty, for ease of handling, for prolific features and for honey-producing qualities.

### Late Queens.

I have just had my attention called to a matter which interests me from a scientific point of view: One of the most prominent queenbreeders in the Northern States writes me that his queens which have come forth from the queen cells on and after September 15th are none of them laying, although he has practiced feeding them. Drones are abundant, and have been flying freely every two or three days and often for several consecutive days together. Some of the queens have flown out that were more than ten days old. He adds, further, that some imported queens which have just arrived he has failed to make lay, even though he has fed the colonies.

The breeder is of the opinion that these queens are impregnated, and will lay all right if kept till another spring. One of the queens was sent to me for microscopic examination, that I might confirm or disprove the breeder's opinion by a discovery of the facts.

The queen looked like a non-laying impregnated queen. I examined the contents of her spermatheca, and found that she had been impregnated. The contents swarmed with thread-like sperm-cells (spermatozoa), which positively attests that she had successfully mated (see last edition of *Bee-Keeper's Guide*, p. 102, where sperm-cells are illustrated, and the process of fecundation fully described). Now, it seems well established that, while laying, the queen is fed chyle, or digested food, by the workers. Is it not probable that, in this case, the

workers, realizing that the time for egg-laying for this season is past, refuse to yield of their digested aliment, and so the queen, of course, can not lay? I believe the explanation lies just in this fact: The workers refuse to feed the queen the proper food, and her eggs are, as a consequence, not developed. Of course, it is just possible that living so long—months—before egg-laying, she may never be a very fertile queen, possibly be wholly sterile; but I should not expect this. It is a frequently observed fact, that, when a queen once stops laying in the fall, at the close of the honey harvest, feeding oftentimes wholly fails to start egg-laying again. It seems to me quite probable that the cause is the same as before. The worker-bees refuse to furnish food of the requisite quality.

Have not some of our extensive queen-breeders like Hutchinson, Alley, Root, etc., observed on this matter of queens before? If so, have they found such queens any less valuable the next year? I hope our friend who has just sent me the queen for dissection will keep all the other queens, note results carefully next spring, and inform us of the facts. I think the matter an interesting one, and very possibly it has practical significance as well.

A. J. COOK.

LATE-HATCHED QUEENS.

In connection with Prof. Cook's report on late hatched queens I sent him, please add G. M. Doolittle's report on the same class of queens viz.: "My experience is, that four out

of five such queens prove to be good layers the next season, and I would keep over what I could of them." It is remarkable that only one queen in ten hatched after Sept. 16th could be induced to lay by regular feeding." Drones are yet abundant in my apiary, and have been flying almost every day.—[S. W. Morrison, Oxford, Pa., in Gleanings.

CAPPINGS.

Very kind words with good wishes have been received from a great many friends, for which we are thankful. As friends Mason & Sons say: "It makes the way brighter and inspires us to do better work if possible." Kind words cost but little, yet they bring with them a peace of mind and kindly feeling worth more than all the gold in the overloaded treasury at Washington.

The Cook cupola wind mill is a novel invention. See adv. in another column.

Those wily fellows, who have been having it with the American Bee Journal, seem to have been thoroughly squelched.

The wet, drizzly weather of the past fall put a stop to all thoughts of queen rearing in the New England states.

We never could bring ourselves to the seemingly cruel practice of clipping the wings of nice queens.

G. M. Doolittle reports \$550 net cash from the queen rearing business for 1888.

What pleasure it is to have everything in the yard moving along



smoothly. That is, having virgins come in all O. K. at the proper time and commence laying without delay. Then it is that we thank God for the blessed sunshine.

What is more discouraging than to have a fine batch of cells fail on account of being chilled or torn down, etc.

Gleanings has struck a grand thing in its honey statistical reports from all over the country.

G. W. Damaree brings out a splendid thought in his article on the loss of young queens at mating time. See elsewhere.

We are glad to see that the Review defends the Carniolan race and wants to give them a chance to become American citizens.

D. A. Jones tells us of an experiment he is to try this winter of preserving queens with nuclei in small wooden tubes with candy plugged in at the top for stores. We tried a similar experiment on a small scale, and failed utterly. Hope Mr. J. will have better success in giving the experiment a good fair trial.

A pure clean field for queen-rearing is very necessary and can only be had by eternal vigilance on the part of the master. All impure and faulty queens should be rejected and a watchful eye kept on neighboring bee keepers for it is very annoying to the purchaser of a queen to have her turn out mismated. We should have our dollar queens more purely mated. Neighboring bee keepers do not object to having their hives requeened as a rule.

That is an interesting article on another page, by Prof. Cook on Crossing different races.

At the recent gathering of the North American Bee Keeper's Association, the following resolution was passed by a unanimous vote:

RESOLVED, That it is the sense of this society that the National Bee-Keepers' Union has been productive of good and deserves the hearty moral and financial support of all bee-keepers, and that the general manager deserves and receives the hearty gratitude of this association for his very earnest, efficient and disinterested services.

The membership fee is \$1. Thos. G. Newman, of the American Bee Journal, Chicago, Ill., will receive new names. W. Z. Hutchinson, Flint, Mich., secretary.

We were surprised to learn that "Mr. and Mrs. We" did the mechanical work on that Review paper. We always supposed that W. Z. Hutchinson was just a successful bee-keeper, and now, after keeping it secret for a long time, he shows us that he is also a thorough and practical printer. The composition work on the REVIEW is without fault.

This is a hobbyhorsical age, and the apicultural corps of drivers is nearly complete. Add the "Queen Improvement" crank to the list. We are ready to face the music.

When rearing for breeders do it in the most favorable season, that is, during swarming time. By doing this and selecting all the while we are constantly improving our stock

and producing a better dollar queen.

We offer the following bill of fare for the next International American association convention to be held in the Dominion of Canada :

CANADIAN HOUSE,

In honor of the Queen.

B. Z. WORKERS, Proprietor.

—MENU—

SOUPS.

T Soup(er), Heddon Soup(er).

MEATS.

Roasting weather, with or without shade.

Hot discussion on Toast with V gravy.  
Young Bee flights with Caper Sauce.

ENTREES.

Buckwheat and Sugar Syrup.  
Fresh laid eggs.

SAUCE.

Unadulterated honey with gab.

BREAD.

Bee Bread, (Geo) Grimm Bread,  
(JM.) Hamburg Crackers.

CAKE.

Wiley Lies, Hot Ivar S. Youngs  
Patent Rights.

DESSERT.

Winter Losses, Poor Seasons,  
Failures.

DRINKS.

Tin T, Floral Nectar.

RELISH.

Royal Jelly, Popular Theories on Ice.  
PROF. A. JAY, Cook.

If breeding for color, do so during a warm season and you will succeed best.

We have been anxiously awaiting what the Api has in store for us on getting cells in full colonies with queen present.

**Breeding.**

The following is from the interesting serial now being published in the C. B. Journal, under head of Practical bee-keeping, by D. A. Jones.

It is not well to decide because a first cross is of extraordinary value that you have reached the goal, for they seldom duplicate themselves. First crosses are too often adopted as a standard, with the impression that breeding from them will give equally good results. Unless the mating of the queen can be placed more under our immediate control, we cannot hope to attain perfection. We can only take the various crosses irrespective of color, and breed from those only which give the best results for a number of years. The aim of apiarists should be to breed bees not for beauty but for general utility. The breeds of horses and animals over which man has complete control are being constantly improved through the persistent efforts extending as far back as memory can cover. But bee keepers do not act on the same principle as cattle men. The former introduces a queen of superior race to a hive, whereas the horsemen rely more on the excellence of the male knowing that the male has more influence on the quality of the progeny. Too little attention is paid to the drones. I have taken drone brood to my islands in the Georgian Bay, the larvæ have matured and been carefully fed until they looked much unlike the common drone of the country. They were plump, sturdy fellows, and queens mated with them gave grand progeny. Na-



ture acts on this plan, and young queens are not hatched until after the honey flow has set in, and her future mate has an opportunity of coming to maturity on the new stimulative nectar.

#### **A New Way of Raising Queens.**

From experiments made in our apiaries this season, but not completed as yet, we are confident that ere long the old queen will be carrying on brooding in the hive in the ordinary way, whilst young queens will be raised in the supers of the same hive. The old queen will be at work, the bees building fine large queen cells elsewhere, and the beekeeper will be having young queens mated in the same colony! This will simplify and cheapen the means of queen rearing, avoiding the great waste of making so many nuclei and losing a large portion of the honey flow. This system of mating queens in the parent colony, having the old queen on deck at the same time, is one with which we have been experimenting for years, and a long time ago we broached the subject to some of the prominent American bee-men. The modus operandi has been tested so far as to establish its worth, but not to maturity.—[C. B. Journal.

Number two of the Queen Breeders' Journal will contain an absorbingly interesting article on Getting an early start with queen rearing, by G. M. Doolittle, together with many other articles by prominent breeders.

T. E. Hanburg has written an interesting article for the A. B. J. on Pure bees. He is of about the same opinion as the Apiculturist, that drones from a mismated queen are not pure. We never let drones from mismated queens fly, although the masters say they are pure.

#### **Drone Eggs from a Young queen.**

I arranged a plan by which I forced the young queen to deposit her first eggs in drone cells. This is how I did it. The bees were removed from one of the best colonies I had, all the combs, save one, were placed in the hive again, the center or middle comb being left out, and a nice, clean frame of drone comb was placed directly in the middle of the brood-chamber. I then placed the queenless bees in the hive and gave them a fine, young queen, one of the brightest golden Italians I could find in the hundreds of nucleus hives in my yard. In a few days I opened the hive and drew out the frame of drone comb and to my surprise and great delight, I found that nearly every cell had an egg in it. This comb was then removed to a colony rearing queens, and the drone eggs were welcomed and nursed by the queenless bees. Another frame of drone comb was placed in the hive with the young queen and more drone eggs were obtained, and thus the supply was kept up for the season with little or no trouble.

H. Alley, Api.

#### **Southern Virgins.**

Mr. Doolittle gives an experience, in the following few words, that shows the value of the virgin queen traffic to the breeder; "During our cold weather I could not get a cell started that was good for anything, much less queens hatched and fertilized. When I saw this was to be the case I determined to keep a good quantity of nice drones I had in one hive, by feeding, and send south for virgin queens to be mated here. This I did, and being successful in introducing, I soon had queens to fill the orders of those saying, 'Send me a queen by return mail to save my queenless colony.'"

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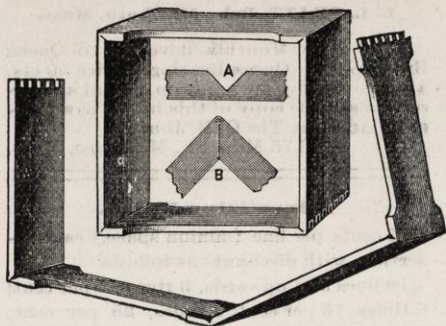
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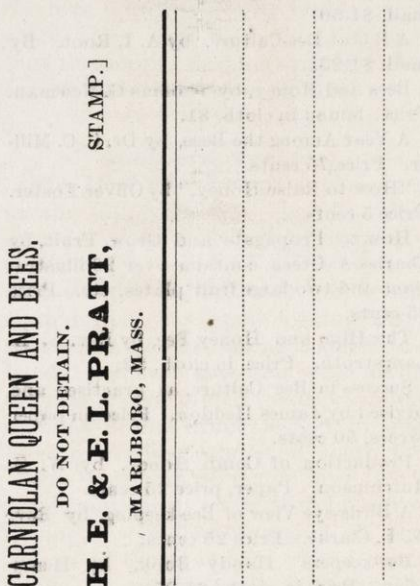
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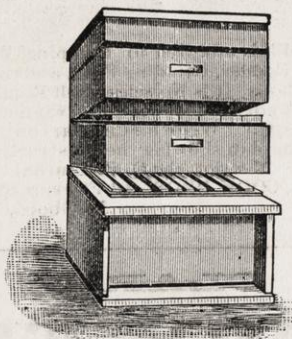
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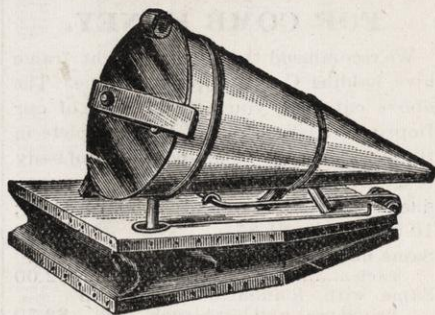
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