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# THE CANADIAN BEE JOURNAL

"THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER."

VOL. VII, No. 6. BEETON, ONT., JUNE 15, 1891. WHOLE No. 290

## THE CANADIAN BEE JOURNAL

*Devoted exclusively to the interests of the Honey Producer.*

Seventy-five Cents per annum in Advance.

### ADVERTISING RATES.

All advertisements will be inserted at the following rates

#### STANDING ADVERTISEMENTS.

Time.	1 in.	2 in.	3 in.	4 in.	1 col.	page
1 month.....	\$2.00	\$3.00	\$3.50	\$4.50	\$6.50	\$10.00
3 months.....	3.00	4.50	5.50	6.50	11.00	17.00
6 months.....	4.00	5.50	7.00	9.00	15.00	25.00
12 months.....	6.00	9.00	12.00	15.00	21.00	40.00
18 months.....	10.00	15.00	20.00	25.00	40.00	75.00

#### Breeders' Illustrated Directory.

One-fifth column, \$8 per year; \$5 for 6 mos. All yearly advertisements payable quarterly in advance.

#### Condensed Directory.

Occupying one-half inch space, THREE DOLLARS per annum.

#### Transient Advertisements.

10 cents per line the first insertion, and 5 cents per line for each subsequent insertion. Space measured by a scale of solid nonpareil of which there are eleven lines to the inch, and about nine words to each line.

#### Exchange and Mart.

Advertisements for this Department will be inserted at the uniform rate of 25 CENTS each insertion—not to exceed five lines—and 5 cents each additional line each insertion. If you desire your advt. in this column, be particular to mention the fact, else it will be inserted in our regular advertising columns. This column is specially intended for those who have poultry, eggs, bees, or other goods for exchange for something else and for the purpose of advertising bees, honey, poultry, etc., for sale. Cash must accompany advt. Five insertions without charge, \$1.

#### STRICTLY IN CASH IN ADVANCE

Contract advertisements may be changed to suit the seasons. Transient advertisements inserted till forbid and charged accordingly. All advertisements received for THE CANADIAN BEE JOURNAL are inserted, without extra charge, in THE CANADIAN POULTRY JOURNAL.

THE D. A. JONES Co., Ld., Beeton, Publishers.

## PUBLISHERS' NOTES.

We will always be glad to forward sample copies to those desiring such.

THE JOURNAL will be continued to each address until otherwise ordered and all arrears paid.

Subscriptions are always acknowledged on the wrapper label as soon as possible after receipt.

American Currency, stamps, Post Office orders, and New York and Chicago (par) drafts accepted at par in payment of subscription and advertising accounts.

Subscription Price, 75c. per Annum. Postage free for Canada and the United States; to England, Germany, etc., 10 cents per year extra; and to all countries not in the postal Union, 50c. extra per annum.

The number on each wrapper or address-label will show the expiring number of your subscription, and by comparing this with the Whole No. on the JOURNAL you can ascertain your exact standing.

Communications on any subject of interest to the fraternity are always welcome, and are solicited.

When sending in anything intended for the JOURNAL do not mix it up with a business communication. Use different sheets of paper. Both may, however be enclosed in the same envelope.

Reports from subscribers are always welcome. They assist greatly in making the JOURNAL interesting. If any particular system of management has contributed to your success, and you are willing that your neighbors should know it, tell them through the medium of the JOURNAL.

ERRORS.—We make them: so does every one, and we will cheerfully correct them if you write us. Try to write us good naturedly, but if you cannot, then write to us anyway. Do not complain to any one else or let it pass. We want an early opportunity to make right any injustice we may do.

We do not accept any advertisements of a suspicious or swindling nature, but our readers must not expect us to be responsible should our advertisers not do as they agree. They will find it a good rule to be careful about extraordinary bargains, and in doubtful cases not to pay for goods before delivery.

#### Clubbing Rates.

THE CANADIAN BEE JOURNAL and THE CANADIAN POULTRY JOURNAL ..... \$1.00  
 THE CANADIAN BEE JOURNAL and premium queen 1.00  
 Both JOURNALS and premium queen..... 1.25

#### Job Printing.

All we ask is the privilege of an opportunity to estimate. Free use of all our cuts given to those who favor us with orders. Specimen sheets furnished on application.

ADVERTISEMENTS.

# The Wide Awake Bee-Keeper

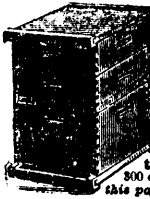
Who reads the BEE-KEEPERS' REVIEW one year, or even a few months, is almost certain to become a regular subscriber. As an inducement to non-subscribers to thus become acquainted with the REVIEW, I will send it during the three succeeding months for 20 cents in stamps, and I will also send three back numbers, selecting those of which I happen to have the most, but

of different issues. A list of all the special topics that have been discussed, the numbers in which they may be found, and the price of each will also be sent. Remember the REVIEW has been enlarged, a beautiful cover added, and the price raised to \$1.00. W. E. Hutchison, Flint, Michigan.

## Muth's Honey Extractor.

Perfection Cold Blast Smokers, Square Glass Honey Jars, etc. Send ten cents for "Practical Hints to Beekeepers." For circulars apply

CHAS. F. MUTH & SON,  
or, Freeman & Central Avenues, Cincinnati



## BEES AND HONEY

The Doves-tail Strongest, Best and Cheapest BEE-HIVE for all purposes. Please everybody. Send your address to the Largest Bee-Hive Factory in the World for sample copy of *Cleanings in Bee Culture* (a \$1 illustrated semi-monthly), and a 44 p. illustrated catalogue of Bee-keepers' Supplies. Our A B C of Bee Culture is a cyclopedia of 400 pp., 6x10, and 200 cuts. Price in cloth, \$1.25. *U.S. Mention this paper.* A. I. ROOT, Medina, O.

## ALLEY'S IMPROVED AUTOMATIC

## SWARM HIVER

Thoroughly tested and guaranteed to SELF HIVE every swarm that issues. Sample by mail for \$1.00. American Apiculturist one year and swarmer by mail \$1.50. Sample Apiculturist giving full illustrated description of Swarmer free

H. ALLEY, Wenham, Mass.

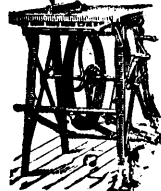
## Michigan Lands For Sale!

12,000 ACRES  
GOOD FARMING LAND

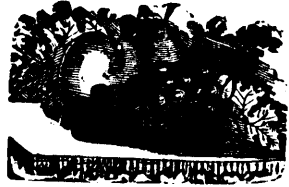
—TITLE PERFECT—

On Michigan Central and Detroit & Alpena and Loon Lake Railroads, at prices from \$2 to \$5 per acre. These lands are close to enterprising new towns, churches, schools, etc., and will be sold on most favorable terms. Apply to R. M. PIERCE, West Bay City, or to J. W. CURTIS, Whittemore, Michigan.

## BARNES' FOOT-POWER MACHINERY



Read what J. J. Parent, of Charlton, N. Y., says—"we cut with one of your Combined Machines, last winter 50 chaff hives with 7 inc cap, 100 honey racks, 500 broad frames, 2000 honey boxes, and a great deal other work. This winter we have double the number of bee hives, etc. to make and we expect to do it all with this saw. It will do all you say it will." Catalogue and price list free. Address W. F. & JOHN BARNES, 5 Ruby st. Rockford, Ill.



## Wilson's Nurseries!

—ESTABLISHED 1876—

CHATHAM, ONT.

Largest variety, Best Quality, Lowest prices. All the worthy old and promising new Fruit, Nut and Ornamental Trees, Bushes, Vines; Rosas Plants, Bulbs, etc. Best improved Pumps for spraying trees, Bushes, sidewalks, floors, bees, etc., and washing buggies, windows, etc. Galvanized Iron, \$3.50, Brass, \$4.00. Wilson's improved Woven Wire Tree Guards, for hindering Dam-bits, Mice, etc., 50 cts. per doz. \$4 per 100. Great Danes and St. Bernard Dogs, 8 weeks old, \$20 to \$25 each, smooth-coated Fox Terrier, 8 weeks old, \$5 to \$10 each. Above dogs are from the best blood of Europe and America and won the best kennel prizes in Toronto and Greatest Bench shows in '89 and '90, where there were hundreds of competitors.

### TERMS:

CASH—small but sure profits. Send your address now for my large catalogue and Guide to Fruit Growers, which will be issued about March—free to intending purchasers.

F. W. WILSON,

Nurseryman

Chatham, Ont.

MENTION THIS JOURNAL.

Piso's Remedy for Catarrh is the Best, Easiest to Use and Cheapest.

## CATARRH

Sold by druggists or sent by mail, 50c.  
E. T. Hazeltine, Warren, Pa., U. S. A.

## CARNOLIAN QUEENS.

I expect to continue the breeding of Choice Carnolian Queens next season, and orders will be booked from date. No money sent until queens are ready to ship. JOHN ANDREWS, Paten's Mills, Wash. Co. N.

# CONSUMPTION SURELY CURED

TO THE EDITOR—Please inform your readers that I have a positive remedy for the above named disease. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption if they will send me their Post Office Address. Respectfully, T. A. SLOCUM, M. C., 186 West Adelaide St., Toronto, Ont.

# OVER \* TWENTY \* PENS

—OF—

SPLENDID BREEDING STOCK of the following varieties:

Wyandottes, Minorcas, Leghorns, Plymouth Rocks, Hamburgs and Brahas

Eggs, \$2 per 13. - \$5 per 39.

—SEND FOR CIRCULAR.—

W. T. TAPSCOTT, Brampton, Ont.

## IMPORTED

# Cornish · Indian · Games

—AND—

## MOTTLED LEGHORNS.

Grand Exhibition Birds, a limited number of eggs, \$5.00 per 13. Silver and Golden, Black and White Wyandottes, Derbyshire Red Caps, Light Brahas, B. Javas, Partridge Cochins, Black Leghorn and Pekin Duck Eggs, \$2.00 per 13. White and Red Malay Bantams (just imported), Silver and Golden Sebrights, Pekin and Japanese Bantam Eggs, \$3.00 per 13.

No expense has been spared to mate the above for best results, many of them having won the highest honors at recent shows. Full particulars given on application and satisfaction guaranteed.

**CHAS. R. BACHE**

472 Parliament St., Toronto.

## COMB FOUNDATION

Brood Foundation, 45 cents per lb.; Thin Foundation, 55 cents per lb. Warranted a good article in every respect or money refunded. Brood Foundation made up for 10 cents; Thin Foundation for 18 cents per lb., in quantities over 4 lbs.

## BEE HIVES.

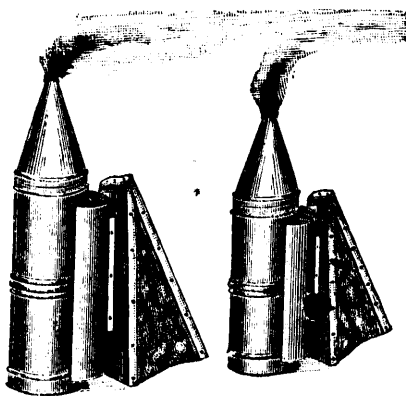
I also manufacture the Med Bee Hive, a good serviceable hive, well made from pine lumber, rabbitted joints, 9 frames, (size of L.), movable bottom with slanting alighting board, division board, and quilt flat cover 1 1/2 inc. deep. Sample painted \$1, with super also painted, containing 304 sections, \$1.50. Foundation hives in frames and sections 20 cents. Complete metal rabbits super, same as above, in flat, in luting and sheet of tin for covering covers \$1.50. In quantities slightly less. This is a good hive and very cheap at this price. Sections \$4.50, Smokers \$1 by mail. Bees from 6 to \$8.50 per colony. Honey knives, Jones', 85c. and \$1.35. Bedford is situated a little distance from Montreal and can ship goods over C. P. R. and G. T. R. and both lines of express. References—Local Bank, Editor Bedford Times or P. M. No circulars. Write me what you want and I will quote lowest prices and give you satisfaction.

**FRANK W. JONES**

BEDFORD, Que.

# SMOKERS !

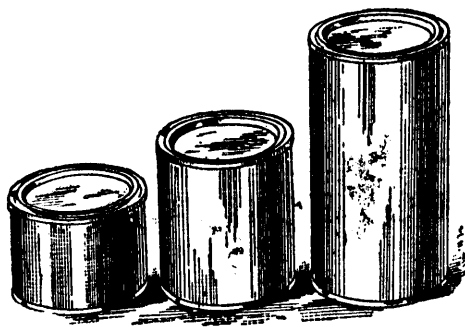
## CUT IN PRICE



Since our Catalogue was issued, we have made a contract for a large number of smokers by piece work, at such figures as will enable us to reduce the prices. Hereafter the price of the No. 3 Smoker will be \$1, (formerly \$1.35,) with goods; \$1.25 by mail.

# HONEY TINS.

We now offer the "Penny Lover" Tin in three sizes. These are probably the handiest tin to handle and the price is a shave lower than the "Scrow-top."



NO. LBS.	PRICES.			EACH
	PER 1000	PER 500.	PER 100	
5	\$60.00	\$32.00	\$6.75	6
3	47.50	25.00	5.25	15
2	40.00	21.00	4.25	

**THE D. A. JONES CO.**  
BEETON, ONT.

## ADVERTISEMENTS.

### EXCHANGE AND MART

**25 CENTS** pays for a five line advertisement in this column. Five weeks for one dollar. Try it.

**WHITE WYANDOTTE** Co k fo sale, scored 93; also Golden Wyandotte Cock, \$2.00 each. My pen of first-prize Indian Games for sale. Enclose stamp for reply. **JOHN A. NOBLE**, Norval, Ont.

**E**GGs, EGGs—Silver Wyandottes, Black Minorcas, White Wyandottes and Langshans; good stock; good value, \$1.50 per setting after May 15th. **JOHN GRAY**, Todmorden, Ont.

**F**OR SALE OR EXCHANGE—A very fine pen of Langshans, Cockerel, large vigorous bird, and three good hens, for cash or offers. **JOHN GRAY**, Todmorden, Ont.

**F**OR SALE—A nice lot of Silver Wyandottes, Yearling Hens, White Wyandotte Cockerel and other stock. **JOHN GRAY**, Todmorden, Ont.

**F**OR SALE OR EXCHANGE—Silver Wyandottes, Langshans, Cochins, White Wyandotte Cockerel, \$2.00. Some fine cockerels and hens of above for sale cheap, or exchange for honey or anything useful. **JOHN GRAY**, Todmorden.

**P**OUSTRY Netting.—See our advt. in another col with prices. Also for shipping and exhibition Coops, with owner's name printed on the canvas. Drinking fountains and poultry supplies generally. **THE D. A. JONES CO. Ltd.** Beeton

**F**OR SALE at a bargain—25 S. W. Jones and Langstroth Hives, mostly all painted; 8 and 12 combs each, all worker combs and in first-class order. Address **E. J. BERRY**, Brome, Que.

**F**OR SALE—White and Brown Leghorns and Black Minorca Hens; grand layers 65 to 80 cents each. Also Cockerels, \$1.00 each. Address **E. J. BERRY**, Brome, Que.

**E**IGHTY Colonies Bees for sale in Langstroth single walled and Jones Porous Palace Hives. Price, Langstroth, \$5.00; Jones P. P. \$5.50. Bees in prime condition. Never any foul brood in this part of Ontario. Will ship on C. P. R. or G. T. R. as preferred. **I. H. MANNING**, Tyrone P. O., Ont.

**1891** Carniolans bred from Imported Queens, Italians bred from Doolittle's selected stock, \$1.00; six, \$5.00. After June 20th we will dispose of 100 Italian Queens, one year old, bred from Doolittle's stock, \$1.50; these are tested, 1000 lbs. Bees, \$1.00 per lb. **WALKER & HORTON**, Fargo, Ont.

**W**HITE P. ROCKS—First Cockerel, first Pullet Industrial, Toronto, 1891; second on Cockerel first on Hen at Ontario show, Bowmanville, 1891, also prize winning White, Brown, Black Leghorns, (1 P. Hamburgs). Eggs from these birds guaranteed fresh and true to name, \$1.00 per dozen for balance of season. **THOS. HAWES**, Whitby, Ont.

### HONEY GLASSES.

We have an extra large quantity of one pound honey glasses, which we will, in order to reduce our large stock, sell at exceptionally low prices. Write for particulars, stating quantity required.

**THE D. A. JONES CO., Limited, Beeton, Ont.**

### DOGS AND COMB FOUNDATION.

Brood Foundation, 50 cts. per lb.

Section Foundation, 60 cts. per lb.

**L. JONES,**

**DEXTER P. O., ELGIN COUNTY, ONT.**

### CONDENSED DIRECTORY.

Advertisements under this heading, occupying one-half inch space, three dollars a year

**MICHIGAN LAND**, be t in the State for \$5 per acre; some at \$2, \$3 and \$4 Write **R. M. Pierce**, West Bay City, Michigan

**O. J. PUTNAM**, Leominster, Mass. has for sale several fine cockerels and pullets, B P Rocks, won 1st 2nd and 3rd on pullets, and 2nd on pen at Agr Jan. 14 to 16 1890, Eggs \$2 per setting.

MENTION THIS JOURNAL

**W. COLE'S** Black Minorcas. I have bred these birds for 5 years and they are as good as any in Canada, United States or England. 1889 pullets 94 94 94, 94, 94, 96, 96, 96, cockerel 95, J Y Bicknell, judge Eggs for hatching \$1.25 per 13. **WM. COLE**, Brampton

**T**ESTED ITALIAN QUEENS bred from selected mothers; principally of Doolittle stock. Prices as follows;—for those under 1 year \$2.50 each, shipped the 20th of April, or 2c. less each day until June 10th. Queens under 2 years old one-fifth less. **G. A.**

**S**END your address on a postal card for samples of Dadant's foundation and specimen pages of "The Hive and Honey-bee," revised by Dadant & Son edition of '89. Dadant's foundation is kept for sale in Canada by **E. L. Gould & Co., Brantford, Ontario** **CHAS. DADANT & SON, Hamilton Hancock Co., Ill.**

**A** FEW Trios, Buff and Partridge Cochins, \$5 to \$10 a trio, also three breeding pens of Br. Leghorns, \$6 a pen. Eggs from Cochins and B. P. Rocks, \$2 Br. Leghorns, \$1.50. **BARTLETT & GEORGE**, Clarence St., London.

**A** RARE CHANCE—If you desire a good home with in stone's throw of railway, express and post office in one of the very best home locations in the United States. Write me for particulars. Excellent neighborhood. An apiary of 90 colonies, with fixtures, will be sold or leased with the place. Terms easy. Address **JAMES HEDDON**, Dowagiac, Mich.

**FIRE** HAS DESTROYED MY BEE HIVE factory, but send along your order and we will try and fill all orders if possible. Foundation, sections, frames, hives, smokers, honey knives, queens, bees, &c., at bottom prices. Address **W. CHRYSLER**, Box 450, Chatham, Ont.

## Special Offer for May!

**I WILL SELL EGGS FROM MY BEST** Breeding Pen of White Leghorns or Langshans for the month of May at the following prices:—

1 Setting (13) - - \$1.50.

2 Settings (26) - \$2.00.

This is a grand offer as my birds are good.

**J. L. MYRS,**

Box 94, Stratford, Ont.

## BEES WAX FOR SALE—Crude and Refined.

We have constantly in stock large quantities of Beeswax, and supply the prominent manufacturers of comb foundation throughout the country. We guarantee every pound of Beeswax purchased from us absolutely pure. Write for our prices, stating quantity wanted.

**ECKERMANN & WILL,**

Bleachers, refiners and importers of Beeswax, Syracuse, N.Y.



"THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER."

VOL. VII, No. 6.

BEETON, ONT., JUNE 15, 1891.

WHOLE No. 290

## THE CANADIAN BEE JOURNAL

ISSUED 1ST AND 15TH OF EACH MONTH.

D. A. JONES,

EDITOR-IN-CHIEF.

F. H. MACPHERSON,

ASSOCIATE EDITOR.

### EDITORIAL.

Some further Points in reference to  
Chaff Packing.

**A** MR. HENDERSON, near Arlington, is one of our most successful bee keepers, and when visiting him the other day we noticed some points in reference to his chaff or outdoor packing, which we think are good ones. He winters all his bees in clamps or chaff-packing singly. Some of his clamps hold 4 to 6; others 10, 12, or 15. By placing posts in the ground his clamps are kept from 12 to 18 inches above ground, and he leaves 6 or 8 inches of packing all around the bees, with perhaps a foot or more on top. The principal point to which we wish to call attention is the entrance to the clamp. Just under the entrance to the passage into the hive he has placed a slanting board about 10 inches wide, permanently nailed against the clamp. Then there is one of about the same width, 6 or 8 inches above the entrance, thus forming a projecting roof over the entrances, as well as a floor for bees to walk out in front of entrance. Partitions between the various entrances keep these boards

in their place, against the side of the clamp. Then there is a board cut to fit in between the pieces at the outer edge, forming a box in front of entrance to each hive, say about 2 feet long, 8 or 10 inches wide, and 6 or 8 inches high. This forms a sort of an air chamber or portico in front of the entrance. About 4 or 6 inches from entrance in the bottom board is a 2 inch auger hole bored through, and covered on the top side with wire cloth. This gives plenty of air without letting in much light or any rays of sun. Mr. Henderson has wintered his bees in this way for a great many years, and during cold weather puts boards up, thus keeping out a certain amount of cold air, as well as the direct rays of the sun and light. Any bees that get uneasy run out into this portico, and not finding an opening go back into the hive. This prevents bees from going out in the winter and being lost in the snow, or on cold windy days in spring. By sliding in the front, and closing the portico the bees have plenty air, and remain in the hive, instead of getting lost in the fields in a vain search for something in the way of pollen or honey which, if secured, would be very dearly bought, when we take into consideration the number of bees that are lost and worn out, by going out in such windy, cold weather to gather it.

The importance of young queens is receiving more attention. It is time friends, that you were beginning to wake up a little.

## Pollen from Spear Grass.

**W**HIS morning going through the bee yard we heard a great humming near a pear tree, where two swarms alighted yesterday, and we wondered if some of the bees had returned to the tree, as they occasionally do, if they are allowed to mark the locality, and the hives are moved away. On examining the tree we could see no bees, but looking down on a knoll of spear grass we found the bees by the thousands gathering the pollen from the grass. It was amusing to see them fly up to a head of spear grass and take out the pollen. By shaking the heads we found there were immense quantities of very fine particles of pollen in the spear grass. In the middle of the day the bees did not work on it much, but they were busy early in the morning taking off this spear grass pollen. We tried to see if there was any honey being gathered, but could not discover any, although they frequently remained hanging to the heads for some time, working their proboscis among the fine blossoms or bloom. Is it a common thing for bees to gather pollen from spear grass, and do they get any honey from it? Who can tell us something about this? The other day two swarms issued about the same time in our apiary and went together all lighting in a large cluster. We set two hives down about eight feet apart, one on one side of the cluster and one on the other, and commenced dipping the bees off from the cluster, first pouring a dipperful down one hive and then at the other, which is a very good plan, but must be done properly; and we think a little instruction right here will not be out of place. We use an ordinary tin dipper, but dip it in cold water just to cool it off, if it has been where the sun was shining on it. We recollect once seeing a party use a dipper to take off bees, the tin being so hot from exposure to the sun that it would almost burn your hand. It so exasperated the bees that very few remained in the dipper, but instead they attacked his face and hands. If the dipper is wet and cool the bees will remain in it like so much grain; if dipped off quickly. For fear some should drop on the ground, it is better to have a second dish much larger than the dipper to hold underneath which also must be wet and cool. After we had clipped off

all we could, and emptied every alternate dipperful at each hive, thus dividing them as quickly as possible, with the swarm catcher we shook the rest into the wire basket and emptied them down. Then we instructed the student who stood by watching the operation and assisting us to see if both hives had queens. He immediately remarked:—"How will I know?" "Why," we said, "just watch, and if both queens are in one hive the queenless colony will commence running about, become agitated and fly out, and light on the other hive." In a few minutes it was evident that both queens were in one hive, as the bees became quite contented and commenced drumming at the entrance, while at the other they became agitated, rushing about, out and in the entrance, around the front of the hive, and commenced to light on and go into the other hive. We told him to open the other hive and hunt for one of the queens. Taking out a frame of comb with the bees on it, and examining it, he soon found a queen which he set in the hive that was being deserted. Unfortunately not being faster than necessary in manipulating hives, the bees destroyed one of the two queens, and so only one remained. The result was that when it was set over into the other hive with the queenless bees, and that hive moved to a new location the bees remained quiet. In less than half an hour the bees in the hive where the queen was taken from became as agitated as the other, and it was evident from their movements that they had discovered they were queenless. After finding out the difficulty we had to place the two swarms in one hive, or rather we took the combs and put them in a second story, setting on the brood chamber with the queen in. We would therefore warn those having swarms together after they are hived to ascertain the queenless one as soon as possible. It is better to watch them run in at the entrance, and catch one of the queens, and as soon as you find the queenless colony let this queen run in.

We notice that our worthy President Mr. Allen Pringle, is sowing the foul brood treatment broad cast throughout America. We find it in the Farm and Home and a great many of our exchanges.

## GENERAL.

## Groundless Foul Brood Scare.

SEVERAL parties seeing something in the journals in reference to foul brood being in foundation, have sent us samples and asked us to examine it and tell them if there were any foul brood germs in the foundation. We question very much if anybody could tell without testing it in the hive. It is useless to send us comb foundation samples for examination, as our microscope is not powerful enough to detect the germs, and we think the danger is more imaginary than real. The following by F. H. and E. H. Dewey, in an article in the *American Bee Journal* is to the point:—

So much has been said about the foul brood pest in Italy and America, that many will be glad to know that much of the talk is pure sensation.

The *American Bee Journal* has been the field of more or less discussion of the matter; one article in particular, an extract, reporting prevalence of a very malignant type of the present time in Italy, occasioned an investigation. We sent a few questions to the Italian exporter in Bologna, Chas. Bianconcini, with a view of learning the prevalence of the disease in Italy, the truth of the reports regarding its extent and virulence in Jesi, the symptoms and evidences of the disease, if they were unique, and the remedies which the Italians use.

He writes: "Happily, in the district (Provincia) of Bologna, and in all this part of Italy we never have had foul-brood; so that all I can say about it is what I have read in apistic books (meaning bee-books) and in the bee-periodicals. So I cannot speak from my own experience, and I suppose in these conditions it is useless to answer your questions, because I could only translate articles of bee-keepers' periodicals. They write me from Jesi, that in that town, and its vicinity, they never had foul-brood, but in a country that is not very far from Jesi, three years ago some colonies had foul-brood. But, generally, this disease is rare in Italy."

So it took three years for the story to reach America! That last sentence, all the recent agitation, especially to the north of us, notwithstanding, describes the condition there—"this disease is rare."

Of the tens of thousands who keep bees, how many have never seen a case! How many also

have been misled and mistaken. We once heard of a case of foul-brood which was not contagious. The honey from the dead colony had been fed out, and not the slightest symptoms of the trouble resulted "Was it foul-brood?" "Certainly; there was the stench, noticeable a rod away; the brood was decayed, and the bees dead." This colony was not very strong.

Upon further inquiry it was ascertained to have occurred during one of those wet, chilly Springs of recent years. So the colony had dwindled, perhaps starved in the dampness and cold in the sight of honey, and the brood decomposed, producing an instance of putrified brood, not foul-brood—foul though it may have been.

For the sake of a little sensation, how much suspicion, groundless anxiety, and, frequently, deep injury, a report or an article that is simply popular and stirring may cause. The same taste for novelty and sensationalism has led into undue conspicuousness many slurs and suspicions against the honey industry, injuring both producer and consumer.

In view of the fact that disquisitions have been as emphatic as if the pest were now epidemic, and since a man with an international reputation at stake has opened to the centre one of these airy nothings, flimsy but harmful, is it not time to give the right impression to the public?

The recent discussions that have brought out many valuable points, are for possible prevention, and are not present heroic measures. If statements are made, improperly qualified, they become dangerous misleaders.

Who and how many have received injury from foul-brood by the purchase of bees or queens, in the past year? How many have met with hives or apiaries infested with the pest? If all reports are sifted, we warrant that a very small numeral can stand for the answer to either of the questions.

Westfield, Mass.

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#### The Malagasy Bee—"Apis Unicolor."

IF we agree with those entomologists who consider that the honey-bee has wandered westward from India and the East, spreading northwards and southwards over Europe and Africa, and owing to climate and isolation, has slightly altered its habit and appearance in the different regions where varieties are found, then the comparison of the English (*Apis mellifica*) with the Malagasy bee (*Apis Unicolor*) presents special interest, for in them we can see in what way, and to how great an extent, the two oppo-



site streams of migration have differed during thousands of years of separation.

Supposing also that the social bees have, as is only in accordance with the laws of evolution, sprung from the solitary bees, we must admit, I think, that this development must have been complete before the great western migration began; for had this not been the case, it is scarcely likely that there would have been so great a similarity in the result, as I shall point out in the course of this paper. Yet, again, there must have been some land connexion, or else some great change of habit common to all the varieties—which is contrary to the supposition above—seeing that it would be impossible for a swarm headed by its queen to cross so large a stretch of water as the Mozambique Channel, or perhaps even the English Channel, or, if not impossible, yet contrary to all present habits; and yet a single queen, or a queen followed by one or two neuters only, cannot raise a colony. Thus we see that there is no small geographical and scientific interest in the subject before us.

*Apis unicolor* differs but little in appearance from *Apis mellifica*, so slightly in fact that one is surprised; many of the European varieties differing much more from each other, as also some African varieties. *Apis unicolor* is darker, smaller, and less hardy, with less decided rings on the abdomen. The drones are likewise identical. In both the queens have reddish brown legs, whereas the workers have black legs; the queen of *Apis unicolor* perhaps having redder legs than that of the European variety, and in general appearance the latter more closely resembles the worker. The queen of the Malagasy bee has a most beautiful bluish-black sheen over its abdomen, and the hair on the thorax is lighter than that on the neuter. Both varieties have the peculiarity of a curved sting in the queens, and a straight sting in the workers. We thus see how true the bee has kept through countless generations and under vastly different circumstances. No other domestic animal has varied so little or thrown so few sports, for there are only twelve species of *Apis* known, and with but few varieties, differing slightly in coloring and habits. This, no doubt, is due in a great measure to the difficulty of artificial selection, yet *Apis* is emphatically an in-breeder, brother and sister almost invariably pairing when in their native haunts; so that varieties, or even malformations, might have been expected to a much larger extent than is the case.

In a country, too, as regards its fauna as Madagascar, we might have easily expected some more decided type of *Apis*, or none at all—as is

the case in Australia—but such we see is not the case; in appearance and in habits, too, there is a great resemblance. They choose the same situation for their hives if left to nature. They multiply in the same way, by the old queen leading the first swarm, and the young ones the casts.\* This last fact is important where the geographical distribution is concerned, for an old queen is generally heavy with eggs, and in any case is not accustomed to fly far, certainly not across the sea; whereas the young, active queens who lead the casts are still unfertilized, and must be in the proximity of the drones after a site has been found, for not only workers but also drones must follow in her wake. Then again the drones are idle and are killed off at certain seasons. Fertile workers appear if the hive is queenless, but, as in England, they only produce drones. They gather the same food in the same manner. Even in the minutæ of habits they are the same. They hum if excited, and when ventilating their hives. They only gather one species of flower at one flight, a habit among the solitary bees as well. Even their enemies are the same, the wax-moth, the *Sphinx atropos* (death's-head moth,) and the rat. Some of the diseases I have not found, but possibly these are products of a higher state of domesticity. Their very behavior when robbed or queenless is the same. Both will raise queens from the worker eggs on an emergency, and in precisely similar a manner, by enlarging the worker cells and altering the food; both diminish the entrance if harassed, and cling in clusters for warmth and for wax-making.

Yet there are many slight differences. Drones seem to be bred with much more regularity by the English bee. There is one great breeding season, and another small one later on; whereas the Malagasy bee seems to breed drones on and off all the year round. There is seldom a month in the year, summer or winter, when drone brood can be found. Then, again, the English bees kill their drones off in autumn, the massacre perhaps lasting a day, and not a single drone being left, except in the case of a queenless hive; but the Malagasy bees, though they kill them off to a large extent when food begins to run short in autumn, yet they seem always to leave a few even in the most prolific colonies—in fact, the greatest number was left in the hive that had the most fertile queen among mine last year.

\* A "cast" is a swarm led by a newly-hatched or virgin queen. The first swarm is led by the mother queen; all others that follow from the same hive are "casts."

This year however all the drones were killed. † but not in one day, only a few at a time. This, I fancy, was owing to food being short on account of the ravages of *Sphinx atropos* earlier in the year.

Difference of climate most likely accounts for this, for the drones being perfectly lazy, collecting no honey, and consuming a considerable quantity, would in England help to exhaust the stores before spring, and hence greatly endanger the chance of the colony surviving the winter; but in Madagascar the bees work all the year round without intermission—except, perhaps, a day or two at most in Imerina—consequently there is no such danger, for they even find sufficient food to raise brood during the winter months. Only in one month during the whole of last year did I notice the hives without brood, and possibly there may have been some then for not having the colonies at that time in hives with movable frames, I could not examine the centre, where in all probability it would have been. The fact of the bees keeping their useless drones after the swarming season was past, and breeding more, would, one would think, point to a second swarming season in countries where brood can be raised all the year round; yet I have never seen or heard of such a thing here—in fact these bees seldom swarm at all unless cramped for room. I have now two hives that have not swarmed for three seasons; but one that was in a small native water pot, and full to the mouth, threw a very large swarm and four casts in one season, which weakened it to such an extent that, eventually losing its queen during fertilization, it died out. I watched it to see if there were any fertile workers, which I found to be the case. These fertile workers are supposed to be those which have been bred near the royal cells, and have inadvertently obtained a small amount of the royal food during the larva stage; but they never produce the eggs of workers, only those of drones, and cannot save a colony from extinction.—British Bee Journal.

#### Foul Brood And Foreign Bees.

THE following extract from the series of articles appearing monthly in the B. J. on "Development in the Honey Bee," by Mr. R. A. H. Grimshaw, appears in the Bee Keepers Review, an English publication, and is published as throwing some light in the subject of the spread of foul brood in

† Since writing the above I have discovered the presence of drones in two of my hives which have fertile queens.

England, by the introduction of Foreign bees :

"Whilst on the subject of the results amongst our bees of the admixture of foreign blood, we cannot close our eyes to the singular coincidence, to say the least of it, that before the importation of Italian and other bees the disease known as foul brood is not recorded in this country, so far as I can find (and I first got the idea of this fact from Mr. Hooker). The only serious disease that troubled the British skep-man was dysentery, until improved hives and improved bees (!) came into vogue. Foul brood was known, however, on the Continent, for in 1848 Dzierzon lost nearly the whole of his 500 colonies by the pest, and from 1770 to 1780 (according to Della Rocca) an epidemic raged amongst the hives in the island of Syros, nearly annihilating all the bees. We have it since we began importing; we had it not before that time; and this significant fact, coupled with the knowledge that our Continental brethren were troubled with the disease amongst their bees, goes very far to support the theory that it was imported with imported bees, which were, of course, crossed with our own, and that these bees transmitted to their progeny, perhaps for all time, a tendency to succumb to the attacks of their microscopic enemies.

I look at the foul-brood question precisely as I look at those human or animal diseases which are the result of, or the accompaniment to, attacks by bacteria or bacilli. Diseases caused by spores or germs of bacilli are very often resisted by animals which have such a peculiar condition of the blood that the pathogenic germs effecting an entrance into the veins, or into the alimentary canal, are dealt with seriatim. Myriads of minute white bodies, swarming in the healthy blood, rush to heal up wounds and block up with their dead remains, glued together, every possible aperture likely to afford ingress to the marauding disease germs which would almost seem to be waiting for such an opening. When these find entrance the vigorous white bodies wrap themselves round the germs, rendering them innocuous, and carry them to where they may be cast forth, along with the self-sacrificing encystment, from the animal attacked. Should, however, the blood of the animal be so poor in these minute white bodies that they are neither numerous enough nor vigorous enough to keep up the defence of the citadel, each attacking soldier being seized by a defender, the gateway is passed, and the disease germs in such a suitable fluid medium multiply at so marvellously rapid a rate, the blood soon teems with them. Fever accompanies their

movement, poison—deadly animal alkaloids—is given off or produced by them, and it entirely depends on the stamina and vigour of the subject whether the strain on the vital parts caused by the fever can be borne or not, whether death or victory result. Well, then, to apply this to my subject, animals brought northward from warmer, kinder climates bring with them tender susceptibilities to attacks from the microscopic enemies which swarm in the suitable conditions of their own habitat. Becoming interbred with their northern species, they hand on to their progeny the peculiarity or idiosyncrasy which disenables them to resist particular diseases: this is the compensation demanded by Nature for some of the benefits resulting from assisted cross-fertilisation, and it effects many species in the plant world, following the same law. We may now perhaps see the rationale of the argument that foul brood is materially assisted by, if not entirely the result of, the importation of bees which may be all right at home, but in our climate succumb to attack, and propagate disease."

In reference to the above, would ask Prof. Cooks to give us his opinion. We must say that we very much doubt the theories advanced by some in reference to foul-brood. It is cured so thoroughly and easily, by the fasting or changing system, or perhaps it might be better understood if we said, by any system which consumes all the diseased honey in their abdomen before it is placed in the cells of combs, or prepared in the food for larvae. We have yet to know a single case of foul-brood from the bees themselves, after the above has been properly carried out.

#### An Experiment.

HOW THE BEES WERE SHIPPED SUCCESSFULLY 2500 MILES IN THE DEAD OF WINTER.

**FRIEND ROOT:**—When I first reached this place with my bees I wrote you a card saying I had met with unexpected success in getting them here. I have now to report unexpected failure to keep the bees in good condition after getting them here. I have lost over half of them from spring dwindling, and those left are weak; but I have bought as many as I have lost, and propose to know what the honey resources are here, and hope to be able to winter them here all right. I believe they will breed very much longer here in the fall, and thus go into winter quarters with many more young bees in each hive.

It has been an unusually late and backward spring here, I am told, although bees that were wintered here seem to be almost ready to swarm. Alfalfa is knee high, and will begin to blow out in a few days. Wild flowers are quite plentiful already.

I will now give you an account of how I prepared my bees for shipping, and brought them through so well, nearly 2500 miles, with the loss of only seven stocks, and very few dead bees in each hive. There were only six or eight combs loosened from their frames in the whole lot, and yet there was not a wired comb among them. A very large share of the combs were those that had been transferred from box hives, and were, of course, fastened all around—an important factor in keeping them whole.

Last fall, some weeks before the hives were prepared for the cave in which I wintered them, I took burlap, old carpet, etc., and folded it so as to fill the space between the frames and covers, so that the covers, when pressed down, would hold the frames secure. Then I took a strap of sheet iron, and bent over the cover and screwed one end to each side of the hive, setting the screws so that they drew the cover down tight. I then took old burlap and cut it up in strips about four inches wide, and dampened them with water so that they would pack tight; then I turned the hive bottom side up, and, with a broad-pointed putty-knife, packed the burlap, that had been dampened, between the ends of the frames and the hive in such a way that the frames were held very firmly. This at the same time made a cushion that broke the jar of the train endwise, as when coupling cars and stopping and starting the train, which at times was very severe, so that it seemed as if every frame must be broken, so great was the shock and jar as the cars came together.

The bees thus prepared were ready for the cave in which they were wintered. I then took a half-story full of empty comb, and prepared (to put under each hive) in this way. I covered one-third of the bottom with wire cloth, and the remaining two-thirds I covered over with half-inch lumber, nailed on so as to leave a chance for the air to circulate under each hive clear across it, the wire cloth being above the strips of lumber, so that, when the hives were piled on top of each other, the air could circulate clear through under each tier of hives. The wire cloth and strips of wood were fastened on the bottom of each one of the half-story hives during the winter; and lugs made of sheet iron were screwed to the sides of each

one, and left so that a single screw on two sides would fasten them to the hives when ready to ship.

The bees were taken from the cave, or cellar, the last of February, and placed on summer stands for a cleansing flight; but the weather not being quite warm enough, only a few of them flew, although they were out over two weeks. March 11th the half stories were all placed under the hives, and fastened, except six colonies that began to fly before we could get around to them; and the afternoon of that day coming off very warm, those six colonies had a very thorough cleansing flight. I then thought those were in the best condition of any for the long trip, and I felt that, had I delayed my trip one day longer, it would have been very much better for all of the bees; but now every one of those six colonies is dead, and they were among the very best I had. This has been a very great surprise to me, as I believed with others that a cleansing flight just before starting them would be very beneficial to them.

On the 12th they were hauled to the depot, 16 miles, over one of the roughest roads one could imagine, and loaded in the car. At 8 a. m. of the 13th they were started, and reached here at 5 p. m. on the 21st, and were all unloaded before daylight of the next day, so that they had a flight on the 22nd, and seemed stronger than when I started with them. There were but a very few dead bees in each hive, and I fondly hoped I should be able to save very nearly all of them; but they very soon began to die off in large numbers, and the result has been as above stated. It will be some weeks or months yet before I can demonstrate whether or not it will pay me for the very great expense of the undertaking in removing my apiary to this place, while I have so many interests and cares that need my attention in Windham, N. Y., a little of which Ernest and wife saw while with us last season a few days.

O. R. COE.

Fort Collins, Col., May 26.

*Gleanings.*

### Putting on Sections, Etc.

G. M. DOOLITTLE.

**A** CORRESPONDENT writes: "Will you please tell us in *Gleanings* just how we may know the right time to put on the sections or surplus arrangement to our hives, so that we may secure the best results in honey? I am a novice at the business, and should like to have you explain minutely in regard to this matter."

In the first place, I would say, that, if our correspondent does not have one of the many good bee-books of the present, he should at once procure one, and this will tell him more of the minutiae of bee keeping than is expected to be found in any article written for the press.

If we have our sections all in readiness to go on the hive, each having a nice starter in it, and all in the surplus arrangement, we have only to wait till the time is ripe for putting on the sections. If we are not thus in readiness, the first thing is to become so. I do all of this preparatory work during the winter months; and from past experience I would advise every one else to do the same thing, no matter if we do have a few more dollars invested in this way than we should just like, when not knowing how our bees will winter, or what the harvest will be. I find that, in the long run, this course pays much the best. Having them all in readiness we are to decide when to put them on the hives. To know just when to do this is often difficult; for, if put on too early, brood-rearing is materially retarded; and if put on while there is no honey coming in, although there may be plenty of bees so the brood does not suffer, these bees, not having any thing to do, will often go into the sections, and, apparently bent on mischief, will amuse themselves in gnawing down the foundation starters, thus causing a delay in entering the sections for work, when the harvest does arrive. The rule which was given me when I commenced bee-keeping was to put on the sections when the white clover came into bloom; and for the bee-keeper who uses box hives, or the one who never handles his frames to know what condition his bees are in, perhaps this is as good advice as can be given, although many hives may have sections put in them when the bees are so few in numbers that they may not enter the sections during the whole season. Most apiarists however, handle their frames, and know the condition of each hive, and can ascertain when the hive is full of brood, and bees are sufficiently plentiful to protect the brood after the sections are on, even if a cold snap should come, putting them on those that are thus ready, and leaving the weaker ones till they are ready also. To show what I mean, P. H. Elwood once wrote me that his bees were not in the shape that he wished them, about June 10; "for," said he, "about a third of them will be ready to take advantage of the clover: a third more, with the first third, will be ready for the basswood, while the remaining third will not be strong enough to work to advantage on anything but buckwheat." Don't you see what a waste it would have been to put

the sections on all of those bees according to the advice given me when I started in bee keeping?

But we will suppose that our bees are strong enough to enter the section, and clover is in bloom—shall we put them on? No, not till honey is coming in. One year, in which my average yield from the whole apiary was over 100 lbs. of comb honey from each old colony in the spring, the sections were not put on till July 15th, for previous to this time, the bees were living only from "hand to mouth:" being so short of honey that a week of rainy weather would have starved the whole thing had I not come the rescue by feeding. When we have all in readiness to go on the hives, as I give at the outset, 100 hives can be supplied with the surplus arrangement so quickly that no time need be lost after the flowers begin to yield honey. My plan is to go along the fronts of some of the strongest colonies, each day, and, by the actions of the bees, tell whether they are gathering honey or not; but where one is not sure that he can tell in this way, it is a good plan to wait about putting on the sections till you find little bits of comb started about the hive, and honey being put into them, or the cells being lengthened out along the top-bars of the frames, and honey being stored there. When you see this, and your colonies are strong enough to enter the sections, don't delay putting the sections on such hives a single day; for if you do you will be losing honey more than what is coming in at this time, for the bees may go to crowding the queen, and thus be slow in working in the sections all the rest of the season. Another item is, don't put on too much surplus room at once, but put on a capacity of from 15 to 25 lbs., according to the strength of the colony, and as your surplus arrangement will allow. One of the favorable things about the Manum clamps lies in the fact that he can put on one, two, or more of them, as he desires, at a time; and I believe this has much to do with his success. With the wide frames as I use them, I can do the same thing; and when the bees are well at work in these, more are added, and so on till the full capacity of the hive is reached.

From many experiments I have come to the conclusion that 60 lbs. capacity is about right for a good strong colony, when worked for section honey, and 120 lbs. when worked for extracted honey, exclusive of the brood-frames. In putting on sections it is well to have a part of those first put on filled with comb left over from the previous season, so as to start the bees at once to storing above. Don't wait till your

bees swarm before putting on the sections, as some do, fearing that the sections will retard their swarming, for bees often refuse to swarm, and hang idle on the hive all summer. Swarming is retarded but very little, if any, where the sections are put on as above. Always keep an eye to business, never forgetting that a thing done in the right time brings success, while a delay of only a few days may turn that success into a failure.

*Gleanings.*

### Size of Passage-Ways the Bees Require.

JAMES HEDDON.

Consider it a matter of great importance to bee-keepers to have a correct idea of what mechanical appliances do, and what do not, facilitate and encourage bees to enter and rapidly carry on work in the surplus apartment.

When first adopting queen-excluding metal between the brood and surplus apartments, mainly for the purpose of knowing where the queen was at all times, especially when removing surplus cases of comb honey, I will admit that I felt a little nervous as to the matter of whether the workers would be able to squeeze through these passage-ways with their loads of honey, so readily as not to lessen the amount of surplus honey which might be stored.

D. A. Jones, of Canada, rightfully has the credit of the great benefit which has been derived from the use of the queen-excluding metal. To satisfy myself, I began making experiments with about 40 colonies with the queen-excluders, and the same number, as nearly equal as could be chosen, without. Three times, in three different years, did I repeat the experiment, each time with a large number of colonies, and satisfied myself that there is no hindrance whatever, as I am pleased to see is the prevailing opinion of those who answered Query 767.

The object of this article is to do away with the expensive, troublesome, and erroneous idea of Dr. Tinker. I have experimented a great deal in regard not only to the kind, but the amount of passage-way needed by the bees to do their best, and I tell you here that two rows of queen-excluding holes, the full length of the Langstroth hive, will fully accommodate the largest colony of bees that ever resulted from one queen (and that, too, in the busiest season of the year) between the brood and surplus apartments, while there are eight such rows in the break-joint bee-space board.

If one-half of them, or more, were filled with comb or glue, as they sometimes are when not

properly adjusted, there is more passage-way than any colony can use and that fact is probably one reason why the bees are not slow to plug up many of the holes, when everything is favorable for so doing.

Now, there is a serious objection to using two rows of holes. There has, of late, been discussion enough to convince the greatest novice in apiculture, that to avoid brace-combs and glue, the bee-spaces much be exactly the right measurement.

Now, then, if the measurement is right between the upper and lower-surfaces of the slats, and the brood frames below and the surplus sections above, that space will be too large between the brood-frames and sections and the surface of the zinc, because zinc is so very much thinner than the slats.

Owing to to this well-known law, the closer the slats come together (that is, the narrower the space between the edges of the slats), by all odds, the less will be the likelihood of brace-combs being built to either side of the honey-board.

There must be some play, or allowance, in the practical construction of honey-boards and before I would put the slats far enough apart to take in a zinc strip with two parallel rows of holes, I would, by all means, make the honey-board entirely of metal, such as I described in *Gleanings* something over two years ago.

In that honey-board either one or two rows of holes can be used over each top-bar, and the break-joint and bee-space principles both be preserved. The bee-space can be made by turning up the edges of the zinc, or by tacking on a wood border as I made them in the first place, when Mr. Jones first announced the queen-excluding idea.

*American Bee Journal.*

We have made a great many experiments with this queen excluding perforated metal. At one time we thought we could make the full sheets of metal answer the purpose, but found the changing temperatures of the hive, seemed to spring it, so that we could not keep it from bulging. We did not find quite as satisfactory results as when we used the perforated metal in the bee-spaces, between the wooden bars of the wood and metal honey boards. One row of holes for each comb in the hive, will give four times the access to the sections, that is necessary for a colony. The break joint honey board, with the zinc in bee space will give satisfaction, we believe to everybody, and as Mr.

Heddon says, too many holes are sometimes plugged up with the bees, and too broad space, between the wooden bars, which support the zinc, induces brace combs. But when you want clean honey boards, free from brace combs, and perforated metal, without a speck of propolis or comb built on it, or in the perforations, just give them a little soaking of petroleum cerate or vaseline and you will soon reap the benefit to be derived from it.

#### Advantage of Using Comb-Foundation.

W. Z. HUTCHINSON.

If the securing of perfect worker-combs is not the chief advantage to be obtained by the use of comb-foundation, it certainly stands second in the list. To be able to hive swarm after swarm, year after year, as bees are ordinarily managed, and know that each and every comb will be a perfect worker-comb, is a comfort.

To have each comb in the apiary perfect and straight—so exact a counterpart of all others that there will be no difficulty in interchanging—is a great convenience.

To have such combs that no honey, nor labor of the bees, will be wasted in the rearing and maintenance of a horde of useless consumers, may be a factor that will throw the balance upon the right side of the ledger.

If it were necessary, in order to secure such brood-combs as these, it will be advisable to buy and use foundation, even though the use of starters only in the broodynest does result in a greater surplus.

I presume that to some of you—those who have read my little book, "The Production of Comb-Honey"—it will be a surprise to hear me express such views. I know it is not customary for authors or editors to acknowledge their errors; but let me be author, editor or orator, I shall always proclaim what I believe to be the truth, even if it does contradict my former published conclusions.

Do not imagine that I am ready to "take back" all I wrote in that little book. Far from it. But I wish to make this explanation. When I wrote the book I had practiced, for several years, the plan of hiving swarms on starters only.

With the exception of the last year I had used only the Langstroth hive, contracting it to five frames when hiving swarms. This gave the bees but small space in which to build combs. They could start only a few—five and all were

begun, grew, and were completed at the same time. All grew alike. There was no bulging nor crookedness. Occasionally there was some drone-comb, but not very much, unless the queen was old. The last year I used the new Heddon hive. This worked nicely, so far as results were concerned, but as I have since handled those combs, and the combs subsequently built in these hives, I find that many of the outside ones are imperfect. Having eight, instead of five frames in which to work, the bees sometimes neglect the outside ones until the center combs were more or less completed, and the result was that the outside combs were not always built straight within the frames.

When such men as Joshua Bull, R. L. Taylor, H. R. Boardman and J. A. Green have experimented largely with the plan of hiving swarms upon starters only, and they say that it cannot be depended upon for securing perfect combs, we may well consider the question of hiving our swarms on full sheets of foundation. Perfect brood-combs we must have.

Mr. Boardman has told us how we can manage, by cutting out imperfect drone-comb and using it in the sections. He has also told us that we can unite our swarms, in the fall with the old colonies, and then sort over the combs, melting the imperfect ones into wax. Still further, he has told us how to have perfect combs built by feeding the bees sugar in the fall.

But everybody will not adopt these methods. Well, they will have to choose between these and some imperfect combs, and the use of foundation. I still believe—in fact, I know—that it is an advantage, so far as the securing of surplus is concerned, to allow bees to build their own combs in the brood-nest when plenty of comb or foundation is given them in the supers, and about the only objection that can be urged against the practice, is that it cannot be depended upon to furnish perfect combs under all circumstances.

Perhaps the greatest advantage to be secured from the use of foundation, is the rapidity with which it enables bees to furnish storage room when honey is coming in rapidly. Some bee-keepers assert that they can so manage that no honey will be lost, or, at least, not enough to pay for the expense of foundation, if the bees are allowed to build their own combs, even for storage. While I have no disposition to dispute such assertions, I am well satisfied that for the great mass of bee-keepers, foundation in the supers is used at a profit—*Read at the Toledo Convention.*

If bees are hived in proportion to the

size of the colony—and they have a young queen—preferably a young queen, just mated—they will build all worker combs if they are managed properly, but if the queen is not mated they are liable to build some drone combs. If the queen has been laying for a few days before the swarm issues, results will be more favorable. That is just the difficulty with a good many in getting all straight, nice worker combs. We have frequently hived third and fourth swarms on from one to four combs, and let our students watch their progress in building nice worker combs to the bottom bar. The frames were fourteen inches deep, have sometimes taken a quart of bees, and had them fill frames with as beautiful worker combs as a large colony. If 8 quarts of bees will build worker combs on 8 frames down to the bottom bar perfectly, one quart will build one frame, of just as perfect comb; but the space they work on must be so surrounded as to prevent the escape of heat, and give them all the advantages they would get in that respect in the full colony. There is no doubt that foundation in the supers is used with profit, and a larger profit may be made from foundation placed in the second story than can in the first story.

WE are sorry to learn from the American Bee Journal, that the Foul Brood kill, was killed in the Wisconsin Legislature. It died for want of votes. The disease, says the Journal, is spreading in that state. The Wisconsin Farmer of May 9th says—"If the disease continues to spread the time will soon come when bee-keeping in Wisconsin will be a thing of the past." It does seem strange that bee-keepers will rest contentedly and allow their servants in the legislature to treat them with contempt. Let them rise in their might and make themselves felt. The justness of their cause must eventually command success, at least we have found it so in Canada. We have only to show our legislature in Ontario that what we ask is in the interests of our province and the matter receives immediate attention.

\* \* Please take a postal card and write on it the names of all who keep poultry in your vicinity, and forward to us, that we may send sample copies.

**CAPPINGS.**

CUT FROM A VARIETY OF COMBS

**Vaseline A Sting-Preventer.**

A writer in the British Bee Journal says:

There have been many notes lately in the British Bee Journal in reference to the uses of vaseline in hives. It will be found to be equally as useful as a sting-preventer. Four or five years ago I suffered badly with eczema of the hands. It was painful to touch anything, and it made me very sensitive to the stings of bees. I tried the best recommended sting-preventing lotion, but, though it pacified the bees, it had a bad effect on my hands by drying the skin. I therefore had recourse to vaseline, and found that, in addition to benefiting my hands, it had as good an effect, as a sting-preventer, as any remedy I have tried. Perhaps this information may be of use to others. The remedy is cheap, efficient, and a benefit to the hands.

Petroleum cerate is cheaper and better than vaseline for the above purpose, but any one not having the cerate, had better try the vaseline. We would recommend, before putting it on the hands, that all the hair on the hands be thoroughly scorched off, which can be easily done by lighting a piece of paper and then swinging the hands through the blaze. The hair on the hands seems to tangle the feet of the bees, which they dislike very much. Dipping your hands in cold water and handling the bees while they are wet will keep them from stinging. Honey rubbed on the hands will also prevent bees from stinging, but the feeling is so disagreeable, that we doubt very much whether the pain of the sting which lasts but a very short time, is not preferable.

**AFRICAN BEES AND ACTIVE COLONIES.**

Mr. J. Denner in giving a review of the Bee Journals of Austria and Germany in the British Bee Journal describes briefly many of the articles therein contained from which we clip the following:

"Brother Zeno, from a convent of Trappists, in South Africa, gives a description of the bee of that country. The South African bee is a little smaller and darker than the German bee, and easily supports great heat, the sole condition being that the hives are placed in the shade. Generally speaking, they are very quiet, but during the principal honey harvest, and on the approach of a storm, the bee-keeper must be on his guard, for they then become veritable furies."

"C. J. H. Gravenhorst describes a simple method of inducing activity in a colony. As soon as the bee-keeper notices that a hive is not very active he removes two frames of capped brood and replaces them by two similar frames from a vigorous hive. Junginger has noticed that after having pounded and rubbed honey in a porcelain basin for an hour the aroma became much more distinct and the flavor more delicate, making it more suitable for medicinal purposes. This would lead one to suppose that nature had neutralised the medicinal properties in honey (possibly through the formic acid), and that it is by the electricity produced by friction that these properties become more efficacious."

**IMPROVED HONEY EXTRACTOR.**

Bro. Hill in Bee-Keeper's Guide makes the following announcement:

We have made quite an improvement on our honey extractor, getting up new castings for it. It is constructed so that by removing six  $\frac{1}{2}$ -inch bolts we can slip the comb receivers down into the can, thus reducing its bulk and making it convenient to ship or store. The comb-holders with cross-bars may be lifted out, and we have an excellent can to store honey, cook or mix bee feed or any other use that a large tin can can be put to. The extractor is now wholly constructed of iron and tin of the best quality, the centre rod is a turned rod with small smooth bearings which makes it easy running and a very durable machine.

Now friend Hill, instead of getting up a new pattern for an extractor, which we have no doubt is a good one and very cheap, but which necessitates the removing of six bolts, why did you not send to us for a set of gearing and castings for honey extractor, which are all of malleable iron, and so peculiarly constructed that it needs no bolts, screws, wedges, or fixtures of any kind to hold the gearing and extractor basket in place. That part of it is automatic. The gearing and basket may be taken out in five seconds by an expert, and replaced in from ten to fifteen seconds, and it forms a double and cross brace to the basket and can. It has been pronounced the strongest and most suitable extractor made, and may be shipped without the removal of any of the gearing. In fact the gearing supports it while in transit. As we do not ship extractors to the U. S., the duty preventing us from doing so, we would have no objection to you or any person else copying our gearing.

**DISTANCE THAT BEES GO FOR NECTAR.**

Some writers maintain that bees will go from three to four miles in search of nectar, and store a large quantity of surplus. I have found hun-



dreds of colonies in the woods, and but very few of them were lined the distance of a mile. At this distance the line would lead through open fields and brush lots. During the past two seasons my apiary has consisted of 19 colonies of Italians. When at work in the fields, traveling the highway, picking wild berries on the mountain where golden-rod, aster, pinks, old field balsam etc., grew in profusion, I kept strict watch, and not an Italian bee was seen at the distance of  $1\frac{1}{2}$  miles from the apiary. One mile seemed to be about the limit of their search, and but very few were observed at this distance.—Farm and Home.

There is no greater mistake than that bees will only go a mile or less for pasture, we have known bees to gather buckwheat honey from between two and three miles from the apiary, and store the hive full of it, when not a stock of buckwheat grew any nearer the apiary. We have lined bees over three miles to trees in the woods, and we have lined bees 4 miles to our own apiary, in times of scarcity. When we were traveling in the east, in the interests of bee-keeping, we took special pains to observe the distances bees would go, and the following very striking illustration occurred showing how far bees would sometimes fly. At Bethlehem, there were a great many bees kept on the roof of a monastery, from appearances, there were some hundreds of colonies. As we rode along there was a continuous stream of bees passing down the valley. The lane on either side seemed to yield no bee pasture and in fact, very little of anything, no trees, and very few shrubs. But away to the right, what was termed the edge of the wilderness of Judea, was a kind of sandy shale, very hilly, with here and there a little water trickling down into this valley, and as our route lay in that direction for about eight miles, we tracked the bees going and coming directly from the apiary on the roof of the monastery, which could be plainly seen from a great many points along the route. After we had gone perhaps from four to six miles, the bees were not quite so plentiful, but still quite a number continually passed us laden with honey. We watched them as far as the eye could see and that was very much further than we can see in this country, and are confident they were the Bethlehem bees. Some of them must have gone from eight to ten miles, which was a great surprise to us as we had no idea

before that bees ever travelled so far in search of stores. As the water dried up, and the flowers quit yielding in the vicinity of Bethlehem, the pasture kept getting farther off and the little workers continued their course downwards, tempted along mile after mile, and day after day, by the yield of nectar in the flowers further down the valley. We recollect of friend Doolittle or some other bee-keeper telling about bees following up the side of the mountain or height of land perhaps from four to six miles, until they had gathered a quantity of honey.

#### THAT WONDERFUL PUNIC BEE.

The writer in the American Bee Journal signing himself "Veritas" deals with a Hallamshire Bee-Keeper's new breed of honey bee in the following sascastic strain :

Hurrah! The bee-keepers' millenium has dawned, and with that dawning has faded the vision of *Apis Americana*. We old fellows who have worked for a quarter of a century to develop the good and eliminate the bad from what was supposed to be the best honey-bee on earth (excepting, perhaps, *Apis dorsata*, which was not getatable), might as well hang up our horns. Is it not strange that a thing may be so plain before our eyes and yet we do not see it until some one calls our attention to it, and that one generally from a distance.

It is all plain now. The punic bee originated during the second Punic war, and was a cross between the African pissmire and the Roman mosquito. They retain all the indomitable energy of the pissmire, with the strength of wing of the mosquito.

The centuries have come, and the centuries gone, and Punic remained in the dark, because the bee was dark, and was in the "Dark Continent." But the bustling bee-keepers of America will care less for the origin of a thing than for prospective results. I must be very brief, for I am excited, and in a great hurry to start for Hallamshire for two or three of those wonderful queens, and I expect at least a dozen fellows will get the start of me.

Why, my head fairly swims, and you must make some allowance for this article.

Let us see, a colony will increase to twenty, and give 1,000 pounds of the nicest honey in one season. The second year, to 400, and give 20,000 pounds. The third year, to 8,000 colonies and give 8,000,000 pounds of honey.

O, shades of Colvin, Cary and Quinby! why did you not get the "Punic" instead of the "yellow jackets." By this time we might have had 100 colonies for each man, woman and child in the United States and Canada.

In a private note from a friend in Europe, in answer to questions regarding the qualities of the Punic or African

bee, he wonders if any people in America will be induced to mix the blood, with our present stocks, and advises us to go very slowly and thinks we will lose nothing, by letting some body else try the experiments. There could be no harm done, in allowing Prof. Cook and some of our other colleges, test these bees a little in their apiaries, but would advise them to be exceedingly careful, not to rear any drones until some further confirmation of their valuable points can be brought out.

#### BLACK SHINY BEES.

B. W. Peck, writing in the American Bee Journal, says :

Bees in this vicinity are doing quite well, but the weather is very cold. On May 16 ice formed half an inch thick, but still there is considerable fruit unhurt. My loss was 3 colonies out of 61 ; two colonies starved and the other one was queenless. On pages 677 and 678 of the Bee Journal, I notice questions by J. T. Wilson and William Craig, about black, shiny bees, and like Mr. Craig, I think it is disease. About two years ago some colonies in my apiary, that I knew had lots of old bees, had no black, shiny ones among them, while other colonies had from a few to a good many. This spring I have 8 or 10 colonies affected, out of 58, and 2 colonies that wintered well are almost ruined with it. These colonies have plenty of brood, yet they die off faster than the young ones hatch, although the young are hatching quite fast, and the bees are piled up in front of the hives by the hundred. I examined them yesterday, and if I could see straight there were young bees affected in the same way. I examined them with a microscope, and they are hairless, or nearly so. As I have had 11 years experience with bees, and have studied their nature quite thoroughly, I have been considerably worried about the disease (if such it is), and would like to hear from others on this subject. We are having a splendid rain to day.

Richmond Centre, O., May 21, 1891.

The above is very much like a number of letters we have had to answer this spring, in reference to Black Shiny bees, which are very common in the spring and fall, when there is plenty of robbing going on, or when they have been soaked with dripping honey in the hive. There are some colonies, apparently like human beings, they prefer to steal for a living and are always wanting to rob some other hive. Nearly all the old bees in such colonies will have a black, shiny appearance. We once heard a party say they believed these bees scraped the hairs off themselves, so that they would be so slippery that when they went into a hive to rob, that the

bees of the hive could not hold on them to sting ; or in other words, that they could slip in and out so easily, that they could carry on their work with perfect ease and impunity. One thing is certain, that wherever we find hives addicted to robbing, we find a great many of these bees having the black appearance. Of course they do not live long, because many of them are despatched in the hive, when they go in to steal honey. They slip in by the guards, and as soon as noticed, a lot of bees pounce on them and they are very frequently stung to death, before they can get out. It is not an unusual occurrence in a time of scarcity of honey, if you look in front of the hives, you will find these black shiny bees lying dead in front of those colonies that they have been operating on. The bee that has a black shiny appearance, we consider carries a sign of dishonesty. You will find few, if any, at the end of a good honey flow, as there is an innate principle in bees to gather honey from flowers when it may be found, and the old thieves usually die off before the end of the honey season, if it lasts from four to six weeks as it should.

#### PURITY OF BEESWAX.

The quantity of adulterated wax on the market, is astonishing. Some large dealers seem to fancy, that almost anything will do, to sell for pure beeswax. We have been forced to refuse a large number of consignments of wax, on account of adulteration. To customers that have not received their foundation the day it was promised, we wish to state here, that it is on account of the delay in getting shipments of pure wax. We expected, to be able to fill all orders, but there has been so much of it, turn out to be adulterated, that it had to be returned, hence has kept us back very much with orders. We were determined, this year, if possible, to ship out every order, for foundation, by the next train. We are several day's behind yet but hope to catch up, unless some of the wax that is on the way is adulterated, and we will be able to close out all orders by the 18th.

We have just secured about 40 Combination Honey Boards, 9 frame, and 23 combination honey boards 8 frame, as good as new, perforated metal queen excluding, which we will sell at two thirds-regular price.

## Queries and Replies

UNDER THIS HEAD will appear Questions which have been asked, and replied to, by prominent and practical bee-keepers—also by the Editor. Only questions of importance should be asked in this Department, and such questions are requested from everyone. As these questions have to be put into type, sent out for answers, and the replies all awaited for, it will take some time in each case to have the answers appear.

### Should Importation be Discarded.

QUERY No. 301.—If the importation of bees was stopped, would our own bees become superior to what they now are, owing to the gradual adaptation to climate, as we know they have adapted themselves to climate in other countries?

—J. G.

G. M. DOOLITTLE, BORODINO, N. Y.—I think so.

J. F. DUNN, RIDGEWAY, ONT.—I don't know, who does?

J. K. DARLING, ALMONTE—I don't know; let some person try.

H. D. CUTTING, CLINTON.—Under certain considerations "yes."

G. A. DEADMAN, BRUSSELS.—I am inclined to believe they would.

ALLEN PRINGLE, SELBY, ONT.—I think they would become superior in wintering qualities and capabilities.

C. W. POST, MURRAY.—Our bees are improved by importations, and I am not prepared to say that we would be better off to have it stopped.

JAS. HEDDON, DOWAGIAC, MICH.—Yes, unless there is yet, undiscovered, some very superior race of Bees. Since the introduction of our Italians, I am persuaded that all latest importations have been a damage to us.

PROF. A. J. COOK, LANSING MICH.—I think it would depend much on the pains taken in breeding. Importation of new blood if not better blood is of no use. If we breed carefully so as to produce the best bee, and why may we not, then we would need to import no more.

EUGENE SECOR, FOREST CITY, IOWA.—I think they might become superior or inferior according as the breeding might be wisely or unwisely carried on. I should not like to depend on nature for improvement. The finest cattle and horses are not developed without skillful breeding.

J. E. POND, NORTH ATTLEBORO, MASS.—Much

depends, I don't think importation will effect the matter of acclimation, but we do want importations of pure races from time to time, to keep up purity. To do this though, importations must be made from reliable sources, I should myself prefer no importations at all, to making them generally, and without regard to the honesty of foreign breeders.

G. W. DEMAREE, CHRISTIANBURG, KY.—It would require years of observation to test a question of that kind, it is a law in nature that interchange of blood is conducive to increased vitality, in both the animal and vegetable kingdoms. Importations in my opinion in the future, can only benefit us in that way. I am certain that I now have better bees bred up by selection than any imported bees that have not undergone the same care in selection.

D. A. JONES, BEETON, ONT.—We know of no bees superior to those in America at the present time, and a judicious selection and breeding, constantly selecting the best, and breeding carefully under the most favorable circumstances, would give results in our opinion far superior to indiscriminate importation.

### Would United Experiments be Beneficial.

QUERY No. 302.—Would apiculture be advanced by bee-keepers conducting experiments in union, say experiments with light and heavy section foundation? Would the results of a test in this way have more weight than the testimony of individual writers?—W. F.

C. W. POST, MURRAY.—No I don't think it would.

G. A. DEADMAN, BRUSSELS.—No not if several individual writers would give testimony.

G. M. DOOLITTLE, BORODINO, N. Y.—Perhaps, but it is not best to even experiment with heavy foundation in sections.

ALLEN PRINGLE, SELBY, Ont.—It requires no further experiments to demonstrate that the lighter the section foundation the better. See answer to Query 300.

J. F. DUNN, RIDGEWAY—Apiculture would be advanced by bee-keepers conducting experiments as you suggest but no one would want to waste time experimenting with heavy section foundation.

EUGENE SECOR, FOREST CITY, IOWA.—Perhaps some experiments might be beneficial so conducted, but for my part I can't see how any good could come of using "heavy section foundation."

H. D. CUTTING, CLINTON, MICH.—carefully conducted experiments would accomplish great good. I find that many persons try certain experiments then "jump as it were" at conclusions and what does it amount to.

PROF. A. J. COOK, LANSING, MICH.—Yes if all were alike careful. The more evidence the more safe a probable conclusion. "In the mouth of two or three etc." If two or three hundred all the better, in case of experimentation.

J. K. DARLING, ALMONTE.—I presume that a series of experiments conducted at the same time in different localities under various circumstances would be better than haphazard work, still they would be individual experiments and testimonies. I do not believe in "Experiment Stations" in apiculture.

JAS. HEDDON, DOWAGIAC, MICH.—I think not our experimental stations would do all of this work, if we had practical men to superintend them, instead of professors. With the exception of the bee department of the Michigan State Agricultural College, I don't know of even one benefit ever being derived from these so-called experimental stations.

J. E. POND, NORTH ATTLEBORO, MASS.—I don't see why it should. If we can't believe writers of known integrity, how can we expect that there will not be collusion among the many. I myself don't think we need any more experiments to prove conclusively, that we want very light section foundation, and don't want such foundation heavy at all.

G. W. DEMAREE, CHRISTIANBURG.—May be so. I think it is already settled that "heavy section foundation" is out of place. I guess you can get a little more honey by using heavy section foundation," but once the public finds out that artificial means are resorted to, to produce more honey, they will demand more honey for the money they have heretofore been paying for the natural produce. Why should they not? everything else is done in this way.

D. A. JONES, BEETON, ONT.—If each person capable of making a test, would carefully do so, and report results more frequently, and take more interest in this line, it certainly would enable us, to arrive at more perfect conclusions, but the difficulty with a great many testing is that they are not sufficiently accurate in all details, the conclusion sometimes arrived at from results, do not take into consideration everything that tends to make it a success, or failure. There are so many things to be considered in connection with this matter, that we are inclined to believe that greater discussion on the subject

is necessary to awaken the necessary interests, before satisfactory results can be obtained.

## THE CANADIAN BEE JOURNAL

ISSUED 1ST AND 15TH OF EACH MONTH.

D. A. JONES, - - - EDITOR-IN-CHIEF.

F. H. MACPHERSON, - - - ASSOCIATE EDITOR.

BEETON, ONTARIO, JUNE 15TH, 1891.

Doolittle's Queen Cell Protectors are meeting with considerable favor.

It does not seem a bit like freezing, 80 to 90 degrees in the shade. Plenty of rain and bees booming.

We have a large quantity of beautiful section foundation, made of superior Canadian wax, perfectly free from adulteration, and clarified so that it is such as the bees are anxious to work on. Can ship same day as order is received.

We have received a few copies of the C. B. J. from our friends. The numbers were advertised for, but we would be pleased to receive more, of the following numbers, as there seem to have been a great many gone astray—Feb. 1, Feb. 15, Apr. 1, Mar. 15.

There has been an unusual amount of rain, for the last week, in fact on the 10th and 11th, we had one of the heaviest showers, ever noticed in this locality for years. The ground seems to be thoroughly soaked, and it only needs favorable weather with plenty of bloom to give us the desired yield of nectar.

We have a large lot of second hand queen nurseries, almost as good as new. The party we received them from is going out of the business and instructs us to offer them at half price. This is a rare chance. They are all for the Jones hives, holding 20 cages each. Every one using the Jones hives should have at least one or two of these nurseries. It will doubly repay anyone to keep a few queens on hand, until they get all their bees requeened. By placing the cells in these nurseries, a day or two before they hatch and allowing them to hatch out, you can examine and select the finest queens for your stock, which is a very great consideration in building up and improving your own apiary.

The demand for bees is unusually large just now. Any one having 25 or 50 colonies, that they wish to dispose of, in good condition, in movable frame hives, and absolutely free from disease, might write us full particulars, giving quotations. We are about starting a gentleman in the business, who thinks of taking that number. The bees would have to be delivered at Beeton, at the prices quoted, as we would not ship them out unless we examined them thoroughly. We must have them by the 1st or middle of July.

W. Z. HUTCHINSON'S NEW BOOK.

This week we have presented to us, with the compliments of the author, W. Z. Hutchinson, his revised and enlarged book on Bee Culture. He says it is dedicated to those who are getting their bread and butter by raising honey to spread upon the bread and butter of others. The following are his introductory remarks :

"As the result of numerous experiments in the use and non-use of comb foundation, I was led, four years ago, to the writing and publication of a little book entitled "The Production of Comb Honey." The main feature of this book was the giving, in detail, of a method, whereby full sheets of foundation might be profitably dispensed with in the brood chamber when hiving swarms. Other important points in the production of comb honey were briefly touched upon. The first edition (3,000) is now sold, and the pleasant task of re-writing and revising is now before me.

When the little book came out, one of the criticisms brought against it was that it was too small. "Give us more," was the cry then: and it comes to me yet. Repeatedly have I been urged to write a larger book, giving my experience and views more in detail and upon other points. Flattering as all this may be, I doubt if I should have yielded to these entreaties were it not that, as editor of the Bee Keepers' Review, I have, for nearly four years, had the benefit of reading, and studying over, special discussions, by the practical men, of the most important questions connected with our pursuit. In other words, a large share of the ideas to be found in the following pages may also be found scattered through the back volumes of the Review. I have classified, arranged and condensed; giving what I consider the "cream" of the discussions that have appeared in the Review. The supply of back numbers of the Review will soon be exhausted, and even those who possess them will find it convenient to be able to turn, in a moment, to a fresh, clear and concise, yet comprehensive, resume of the most important apicultural topics of the day. So

many more topics are now taken up that the old title would not be appropriate, hence it has been decided to change it to that of *Advanced Bee-Culture; Its Methods and Management.*

W. Z. HUTCHINSON,  
Flint, Mich.

Our old eye trouble, which was contracted in Palestine and the east, prevents us from reading it just now, but the fact of its coming from our esteemed friend, W. Z. Hutchinson, is sufficient to give it a large sale, without any further comment by us. As soon as eyes and time will permit, we shall look through it carefully and find all the faults we can. Friend Hutchinson has the peculiar faculty of writing in such style, and putting so many good things in such few words, that it is a credit to anybody, to find a mistake. We expect this book to have a large sale, in Europe, as well as in America, and from the few scraps that have been read to us here and there in the work, we feel satisfied that it bids fair to eclipse all his former efforts in this direction. The price is fixed at the very reasonable figure of 50 cents. The following are the topics of the various chapters: Care of bees in winter, Securing workers for the harvest, Hives and their characteristics, Honey board, Sections and their adjustment on the hive, Varieties of bees, Introducing queens, Planting for honey, Specialty versus Mixed bee keeping, Arrangement of hives and buildings, Separators, Shade for bees, Increase, its management and control, Contraction of the brood nest, Hiving bees, Comb foundation its use and abuse, Foul brood, Queen rearing, How to raise good extracted honey, Feeding back, From the hive to the honey market, Marketing of honey, Migratory bee-keeping, Out Apiaries, Apiarian exhibits at fairs, Relation of food to the wintering bees, Out-door wintering, Ventilation of bee cellars, Relation of moisture to the wintering of bees, Influence of temperature in the wintering of bees, Comforts and conveniences in the apiary. And last but not least. Mistakes in bee-keeping.

TABLE OF CONTENTS.

Advantage of using comb foundation.....	553
An experiment.....	560
African Bees and active colonies.....	555
Black shiny bees.....	557
Distance that bees will travel.....	555
Foul Brood and foreign bees.....	549
Improved honey extractor.....	555
Groundless foul brood scarr.....	547
Malagasy Bee, "Apis Unicolor".....	547
Pulling on sections, etc.....	561
Purity of beeswax.....	557
Should importation be discarded.....	558
Size of passage ways the bees require.....	552
That wonderful Punic bee.....	556
Vaseline as a sting preventer.....	558
W. Z. Hutchinson's new book.....	560
Would united experiments be beneficial.....	559

## ADVERTISEMENTS.

### BEES

**M**ENTION this Journal if you are writing about anything advertised in its columns.

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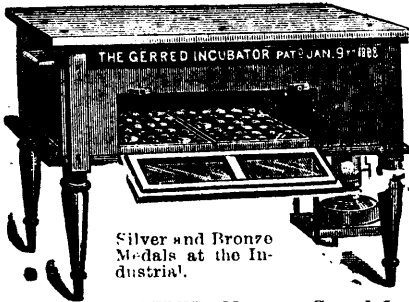
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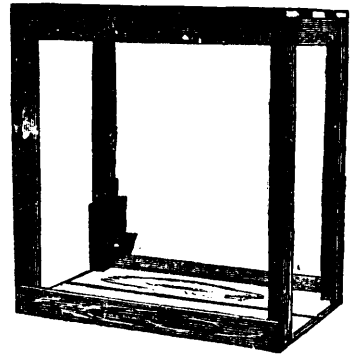
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- Light Brahms**—Six yards. Fletcher, Duke of York, Williams and Bucknam strains
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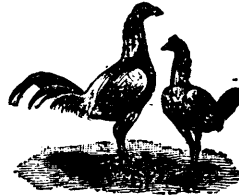
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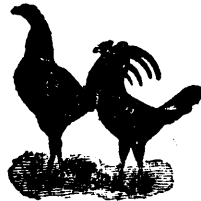
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