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# THE CANADIAN BEE JOURNAL

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

VOL. VII, No. 18. BEETON, ONT., DEC. 15, 1891. WHOLE No. 930

## 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	8 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 twelve 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 change, \$1.

#### STRICTLY 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., Ltd., 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.

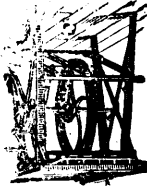
# The Wide Awake Bee-Keeper

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.**

## BARNES' FOOT-POWER MACHINERY

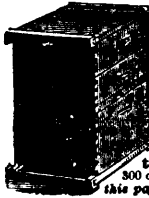
Read what J. J. Parnet, of Charlton, N. Y., says—"we cut with one of your Combined Machines, last winter 50 chaff hives with 7 in. cap, 100 honey racks, 500 broad frames, 2000 honey boxes, and a great deal other work. This winter we have double the number of bee hives, etc. to make and we expect to do it all with this saw. It will do all you say it will." Catalogue and price list free. Address W. F. & JOHN BARNES, 54 Ruby St. Rockford, Ill.



## 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, Cincianati



## BEES AND HONEY

The Dovesailed 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 48 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies**. Our **A B C of Bee Culture** is a cyclopaedia of 400 pp., 6x10, and 300 cuts. Price in cloth, \$1.25. *U. S. Mention this paper.* **A. I. ROOT, Medina, O.**

## ALLEY'S IMPROVED AUTOMATIC SWARM HIVER

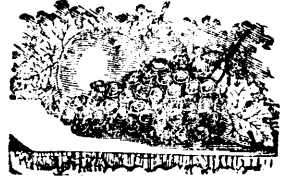
Thoroughly tested and guaranteed to **'SELF HIVE** every swarm that issues. Sample by mail for \$1.00. American Apiculturist one year and swarmer by mail \$1.50. Sample Apiculturist giving full illustrated description of Swarmer free

H. ALLEY, Wenham, Mass.

## Michigan Lands For Sale!

**12,000 ACRES**  
**GOOD FARMING LAND**  
—TITLE PERFECT—

On Michigan Cen 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.



## 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; Roses Plants, Bulbs, etc. Best improved Pumps for spraying trees, bushes, sidewalks, floors, bees, etc., and washing buggies, windows, etc. Galvanized Iron, \$3.50, Brass, \$4.50. Wilson's improved Woven Wire Tree Guards, for hindering Rabbits, 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,**

Proprietor

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.

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, Faten'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.**

**White Wyandottes Exclusively**

**MATINGS:**

**PEN No. 1**—Headed by a Towle Cock that has sired some of the highest scoring birds in America. Mated to eight fine pullets.

**PEN No. 2**—Headed by the **First Prize Cocker** at the "International," score 96. Mated to hens that have proved themselves good breeders.

In these pens are females scoring 95½ and 97 points, and more just as good. Eggs, \$1.50 per 13. I can ship from Buffalo, N.Y., to American customers. Stock for sale after Oct. 1st.

**J. F. DUNN,**  
RIDGEMAN, ONT.

**BROWN LEGHORNS**

**Benner's Prize-Winning Strain.**

**EGGS** for sale from a grand pen of my strain of Brown Leghorns at \$1.50 per 13, \$2 per 26. Satisfaction guaranteed. This pen is headed by a fine cock, winning 1st as a cockerel, by Bicknell, at Owen Sound, 1890, score 94, and 1st as a cock at Owen Sound, 1891, score 93, by J. K. Felch, a fine large bird. One hen has won three first and two special prizes three years in succession, and looks like a pullet; scored by Felch as a pullet, 96½; as a hen by Felch, 95; one pullet scored by Bicknell last year 95½; also 2nd prize hen at Owen Sound last year, score 94½; and other hens and pullets that will score from 93 to 95.

Will sell Exhibition Cockerels and Pullets in the fall  
Address

**J. C. BENNER, Owen Sound.**

Care Polson Iron Works. MENTION THIS JOURNAL.

**THOMAS A. DUFF,**  
267 LANSLOWNE AVE., TORONTO,

BREEDER AND IMPORTER OF

**WHITE AND BLACK MINORCAS.**  
**AND HOMING PIGEONS.**

I have a great number of chicks for sale. If you want stock to win with you should write now and secure the best. My record at New York, Detroit, Toronto, Hamilton, London, Brampton, Bowmanville and New Hamburg, proves that there is no better stock in America.

My Homers (breeders) consist of the best stock that money could buy in Belgium, England and America. I have young birds bred from these in my loft that have flown 236 miles when five months old. Call and inspect my stock.

**SECTIONS ! SECTIONS !**

I wish to inform the bee-keepers of Canada that I have purchased \$2000 worth of new machinery for cutting one and four-piece section, and we are running our factory every day and cutting as fine a section as I ever saw. No. 1 section, finished on both sides, White basswood, \$3.50 per thousand. No. 2 section, when I have them, \$2.00 per thousand. All kinds of bee-keepers' supplies always on hand. Don't fail to get a sample of one section before you buy for 1892. New price list will be out by December, 1891. All orders with cash before January 1892 discount of 5 per cent.

**R. E. SMITH**

BOX 72 TILBURY CENTRE, ONT.



**WILL A. LANE,**

**TURNERVILLE, ONTARIO**

Has for sale some extra fine young **Mammoth Bronze Turkeys.** Get his special Fall Announcement.

MODERATE PRICES. \* SUPERIOR STOCK

**JOHN GRAY & CO'Y**

BREEDERS OF

*Golden, Silver & White Wyandottes*

**BLACK AND WHITE MINORCAS**

\* AND \*

**R. C. W. & B. LEGHORN.**

We breed choice specimens of above varieties and can furnish show birds at a reasonable figure. Our show record for the fall 1891, speaks for itself.

**EGGS IN SEASON, \$2.00 PER 13.**

●—**STOCK ALWAYS FOR SALE**—●

Also Lop Rabbits, Guinea Pigs, Fancy Rats, Mice, Homing and Fancy Pigeons

**At Reasonable Prices**

ADDRESS:

**JOHN GRAY, - TODMORDEN, ONT.**

EXCHANGE AND MART

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

**A FEW PAIR** of Dark Brahmas, young and old, for sale cheap. also some Light Brahma Cockerels at \$1 each. T. COCKBURN, Canada St. Hamilton, Ont.

**A GRAND LOT** of Silver Laced Wyandotte Chicks for sale. They are good and will be sold cheap as I want to make room. T. COCKBURN, Canada Street, Hamilton, Ont.

**WE** can handle a few thousand pounds more of honey, principally comb; will pay cash or trade. Let us know quality and state lowest price F. O. B. Here, also state quantity. Address E. L. GOULD & CO., Brantford, Ont., Dealers in Bees, Queens and Honey, and Manufacturer's of Bee-Keepers' Supplies.

**WE** are now able to ship by first Express, in fact we are shipping every day all the Foundation ordered. Knives, Force Pumps; in short, we endeavor to have everything go by first train after the order is received. D. A. JONES CO. Y. Beeton.

**MEYER'S B. L. WYANDOTTES** are acknowledged the best grand chicks for sale all bred from the following 2 to 4 year-old hens scored last winter by Mr. Smelt: 04; five 92½ each; 03 (first hen, Toronto, '00), 91½ and pullet 02, mated with cock, 94, cockerel 93. If "like begets like," they must please you. J. E. MEYER, Kossuth. Mention this journal.

**FOR SALE**, 3 grand Light Brahma Chicks, a lot of cockerels, hens and pullets, the best I ever raised—certain winners the coming winter. Brown Leghorns old and young. Cook and five hens, Silver Gray Dorking and a quantity of young Pekin Ducks, the best in Canada. JNO. COLE, Hamilton.

**I HAVE** about so Cocks for disposal in Partridge, Black and White Cochins, Light and Dark Brahmas, Langshans, Minorcas and Hamburgs; Silver Wyandotte, Brahma Cochins, Langshans, Minorca and Hamburg Chicks for sale cheap, as I want the room. I will be pleased to answer all enquiries when stamp is enclosed. T. COCKBURN, Canada Street, Hamilton.

**APIARY FOR SALE**.—54 Colonies of Bees, 31 upper stories for extracted honey and combs, supers, honey boards, extractor, 2 store cans holding 400 pounds each, packing boxes for outside wintering. Everything for the working of it except Foundation Mill. Foundation and beeswax enough for another season \$25.00 for everything concerned with it. Bees in good condition. SAMUEL STAFFORD, Sheddin, Ont.

1891.  
Don't you want to improve your stock Don't you want large, beautiful yellow Queens, producing bees that will please you fully; the best honey gatherers on earth. Seven years carefully breeding, 650 Queens sold and have heard of only one misrated. Queen, 75c.; 3 for \$2. A yellow to the tip, select breeder, by return mail, \$1.50. W. H. LAWS' Lavaca, Ark.

**NOW OR NEVER**. Having had placed in our hands several incubators to sell for parties who have gone out of the business. They are now put into the market at a great reduction. We have thoroughly tested them and put in all our latest improvements which makes them equal to our new ones. Remember all these machines have great records. Two 200 egg capacity, \$25 each; one 175 egg capacity, \$20; two 100 egg capacity, \$10 each. For further particulars address THE GERRED INCUBATOR CO. 125 P. S.—See large ad., go De Grassi Street Toronto. Send 3 cent stamp for reply.

**FOR SALE**—1 Partridge Cochins Cock and 3 Cockerels; 6 Light Brahma Cockerels; also a few Pulletts each variety which are all first-class; no culls shipped. R. H. Marshall, Sec'y Perfection Fanciers Club, Dunnville, Ont.

**FOR SALE**.—A lot of Partridge Cochins Cocks at \$2 and \$3 each; also two pair of Light Brahmas, and a pair of Black Hamburgs. T. COCKBURN, 64 Canada Street, Hamilton, Ont.

**FOR SALE**.—2 pair Black Java Chicks; 2 pair White Cochins Chicks; also 2 Black Cochins pullets, very large with great toe feathering. All are a 1 birds. T. D. ROBERTSON, box 164, Guelph, Ont.

**FOUR** fine W. Rock cockerels bred from pen average score 95; 1 Cock 92½; 1 White Leghorn Cock imported; 2 White Cockerels and 4 Brown, extra fine—For Sale Cheap. D. L. SOMERVILLE, Esquensing, Ont.

**MUST BE SOLD**.—A good pair of White Indian Games, colored Indian Game Cockerel, Wyandotte Cockerels, Fancy Pigeons and other stock. Wanted—a few good White Rock Hens. JOHN GRAY, Todmorden, Ont.

**FOR SALE**.—A lot of fine, strong, healthy, vigorous Cockerels and pullets in the very pink of condition. Stock is a No. 1. Won the following prizes at Almonte and Ottawa this fall: 1st on Cook and Hen; and 1st & 2nd on Cockerels and Pulletts. Will sell Cockerels very cheap. Address, F. DONALD, Carleton Place, Ont.

**FOR SALE**.—White, Brown and Black Leghorn cockerels, also Black Minorca cockerels. Single birds, Pairs or Trios of the above breeds. I have some large scoring hens for sale, one year old, also one trio of Pekin Ducks good large size.—JOHN PLETSCHE, Box 26, Shakespeare, Ont.

**FOR SALE** at The Canadian Poultry Yards—Dark and Light Brahma Cockerels, only \$1 each and upwards, bred from pair winning 1st and 2nd at Toronto, 1890. \$2 per pair, etc.; 1 White China Gander bred from pair winning 1st and 2nd at Toronto, 1890, only \$2, a dandy; 1 Yellow Jacobine Pigeon, only \$1; Tou. Geese, B. F. Rocks, Berkshire Pigs, etc. Have pair of Tou. Geese which won 2nd and 3rd at Toronto, 1890. If you want the best of birds at the lowest possible price write to S. R. B. SMITH, Brighton, Ontario.

**CHEAP**.—A good economical incubator and brooder combined (400 eggs). It costs less to run than the average 200 egg machine. Record, 90 per cent eggs are turned in it instantly without handling. The brooder part is heated by surplus heat of incubator or may be used independently as an outside spring brooder. It has 3 compartments; 18 ft. floor space; price, \$25.00. Also a neat and compact nursery brooder for dividing young chicks into young flocks, holds 150 to 200 and has nine compartments all heated by one small lamp. Only costs 1½ cents for coal oil every 24 hours in cold weather. \$12 or both for \$35.00 cash. GEO. VANDE VORDE, Weston.

POULTRY SUPPLIES

Ground Beef, Soraps, Fresh Bone and Meat-Animal Meal, Bone Flour, Granulated Bone and Oyster Shells. Prices on application.  
W. A. FREEMAN, - HAMILTON, ONT.

**ONE COLONY** Saved from Death the Coming Winter Would Repay the cost of a copy of "ADVANCED BEE CULTURE" ten Times Over. In 5 of its 32 Chapters may be Found the Best that is Known upon Wintering Bees. It costs 50 cents but its Perusal may Make you \$50 Richer next Spring. The "REVIEW" and this Book for \$1.25. If not Acquainted with the "REVIEW," send for Samples. W. X. HUTCHINSON, F. L. Michigan.



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

VOL. VII, No. 18. BEETON, ONT., DEC. 15, 1891. WHOLE No. 930

THE CANADIAN BEE JOURNAL.

ISSUED 1ST AND 15TH OF EACH MONTH.

D. A. JONES

EDITOR.

EDITORIAL.

Does Bee-Keeping Pay Better Than Farming?

Yes; farming for years past has not paid as well in proportion to the amount invested as bee-keeping. Few farmers have succeeded in making more than expenses, working hard early and late at that. The same earnestness and expenditure in apiculture would give far different results. Then again, many could engage in apiculture who cannot in farming, and many could engage in apiculture in connection with their farming. From \$500 to \$1,000 will give a person as good a start in bee-keeping as \$4,000 to \$8,000 will in farming. There is another advantage in connection with bee-keeping, and that is—a person can move into a locality where the bee pasture is very plentiful, and as soon as the locality becomes a poor one he can change to another more favorable. Many places might be occupied for a lifetime by a bee-keeper without any opposition. In that case he could sow honey plants, and have a continuous yield from spring until fall, and might occupy sufficient

ground to raise small fruits which pay even better than farming.

The new sections of our country also offer advantages for stock raising, as during the summer season it would cost nothing for pasture. In this way many people might make for themselves very happy and comfortable homes. The northern parts of Ontario are specially adapted for the work, as the forests not only produce abundance of honey for the bees in the summer, but there is plenty of pasture, so that stock can roam at will.

There seems to be a large number of bee-keepers desirous of securing a smart young man to learn bee keeping. Several have written us in reference to the matter. Now we will publish free of charge a list of names of those parties desiring to secure assistance in their apiary for a season or two; and we will also publish the names and addresses of those who would like to learn bee-keeping, in order that we may swell the number of bee-keepers, and benefit those engaged in the business. Now friends, send on your names as soon as possible.

The B.B.F. reprints our article in reference to Mr. Alpaugh's invention, and remarks as follows:

"We print the above without comment, beyond the expression of a feeling of wonder that experienced bee-keepers can be found ready to part with their dollars under the impression that

anything so wonderful in the art of bee-keeping has, until now, remained undiscovered."

From our knowledge of Mr. Alpaugh's experience in bee-keeping, and straightforward dealings, we have no hesitation in saying that he is quite confident that his system is well worth any sum he may charge for it. While perhaps we might not all agree with reference to the best mode of bringing new inventions before the public, and as there are so many frauds perpetrated on unsuspecting bee-keepers, it might be well for Mr. Alpaugh to submit his plans privately to several experienced bee-keepers in order that they might be able to express an opinion on it; but if it is what we are inclined to believe it is, it is well worth any reasonable charge he may make. How many of our bee-keepers have been experimenting in various ways, and spent hundreds, even thousands of dollars? Take for instance the introduction of queens. See the time and money that has been spent in this line alone; and yet there are many even now who cannot introduce queens successfully every time. We have yet much to learn in bee-keeping, and am much afraid that we are in our A B C's; but one thing is certain—necessity being the mother of invention—it behoves us to devise simpler and easier means of management to enable us, if possible, to produce honey, so that we can compete against the sugar and other sweets, no matter at what price they may be put on the market.

We wish Mr. Alpaugh would put a price on his system, that it may be fully explained to some of our leading bee-keepers. We feel satisfied that it is something in the right direction, from the confident way in which he spoke of it. He seemed so much elated with its success that he at least fancied a new era had dawned upon bee-keepers by which failure could be turned into success, by almost every one engaging in the business. Let us hear from Mr. Alpaugh in this matter. Come, Mr. Alpaugh, step down and tell us what you are prepared to do.

The following question and reply appears in the *B.B.J.*:

**SINFECTING COMBS**

"I have quite a number of extracting combs

that have never been bred in, and that contain no pollen, but that may or may not have been used over diseased stocks, and, as I have no wish to destroy them, as I look upon them as the most valuable part of my bee furniture, will you please tell me—1. If they could possibly contain any of the germs of disease—and, if so, can these germs be destroyed without damage to the combs by spraying with carbolic acid or fumigating? I would rather melt them down than run any risk, but should be most sorry to have to do so. 2. Dr. Miller recommends letting frost get to them to destroy wax moth. Do you know if frost would destroy germs of foul brood? If so, how many degrees?—L.H.W."

**REPLY.**

"1. Combs used in diseased stocks may readily contain the germs of foul brood, but if thoroughly fumigated with the fumes of burning sulphur, they may safely be used again. 2. Frost will not destroy the spores which generate the bacillus known as foul brood."

Now, we have taken foul broody combs and subjected them to the fumes of burning sulphur for a long time. We have hung them up in a small room in which we put a kettle containing sulphur. We burned pound after pound of the sulphur expecting that if we continued the process we might save the combs; but on trying them again we found the disease breaking out, and were forced to melt them into wax. We think this is dangerous advice, as we have never been able to destroy the germs of foul brood in combs by the fumes of burning sulphur, although we have kept up the operation for two days at a time. We have also tried combs with foul broody honey in them, subjected them to the same test, but with the same unsatisfactory results.

As everything at the World's Fair, Chicago, is to be done on such a mammoth scale, why not get up a Mammoth Convention, lasting for one or two weeks, and have all the great bee lights of Europe and America present? Let the bee-keepers of Europe send their brightest and best representatives, with models, photos, and descriptions of everything new in their land. All the good things brought out at the Convention could be compiled in a little pamphlet in as condensed a form as possible, and it would be a mine of information. Dr. Mason

being at the head of the Bee Department, would be a splendid man to take some action in this matter.

..

We notice the *American Bee-Keeper* has considerable space to Foul Brood in the December issue. While we do not urge our brother editors to keep foul brood constantly before their readers in view of the fact that we are now able to cope with the disease successfully without any medicine, we think it is well to keep our readers thoroughly educated on this subject, as it is one of most vital importance to our success.

..

In the *American Bee-Keeper* we notice that Mrs. T. Harrison gives some very sensible advice in reference to wintering bees. We think if we had a few more Mrs. Harrison's to write occasionally on bee matters many of us would be the wiser,

..

The holidays will soon be here. What nicer or more suitable present could you give your friends than a good book on bees, or the BEE JOURNAL for one year; for if you induce any one to embark in the business by that means, and he makes a success, what happy recollections will it not bring up of your kindness? A few dollars spent in this way would, perhaps, bring thousands to the pockets of your friends.

..

We would like to ask some one who has tried the experiment—whether naphthaline does not injure the honey. We fear any odor so distinct and strong put into a hive would cause the honey to smell or taste of it. Of course if it is only used in the brood chamber, and no honey stored in the sections at the time, it might not injure it; but as honey is very susceptible to odors, we question the possibility of using it when extracting from the combs, or while comb honey is being stored. Perhaps some of our friends who have tested the matter can give us some light on the subject.

..

We notice "Rambler" in *Gleanings* has got Dr. Mason behind the bars. Most people when behind the bars look very unpleasant; but the Doctor is one of these agreeable gentlemen who is always

happy, and does his best to make everybody around him happy. This time it is not the prison bars, but the post office bars, and the nicest part of the picture is the comb honey boxes on either side of the wicket. We have held a similar position for over 25 years, but never thought of having boxes shaped like cells.

..

While we are writing we expect that some of the most important questions of the day are being discussed at the National Convention. We are sorry that we are unable to be present, but expect to be able to give our readers a full report.

..

The Chicago Convention appears to have been a great success, and why shouldn't it, when some of our best and most enthusiastic bee-keepers were present? This week we give Dr. Miller's report, but hope to have a further report for next issue.

..

We believe that cork dust is now acknowledged to be the best packing for bees. It is claimed that it neither moulds nor becomes damp. If we remember correctly, Mr. Corneil, of Lindsay, we believe, is one of the first and strongest advocates of its use.

..

Since we started to give away Birdseye Views for less than cost—10c. instead of 25c.—our large stock is going down very rapidly. Nearly every mail brings us orders. We would be pleased to have some of our friends send us \$1.00 for 12, to present to their young friends about Christmas.

..

If there are any of our subscribers who feel any remorse of conscience for being so far in arrears for subscription to the JOURNAL, if they will just look at the number on the address label they will be able to tell when they are paid up to.

..

We have just examined our bees in winter quarters, and find them very quiet; in fact all the hives but two were so quietly clustered that you could scarcely see a move, and the two in question were two that were doubled up. Now doubling up should be done very early, but what are we to do when we have so many queens late in the fall to supply customers?



## GENERAL.

FOR THE CANADIAN BEE JOURNAL.

### Bacillus Alvei.

IN his reply, page 717, Mr. Doolittle intimates that I am remiss in the discharge of my duty as a Director of the O. B. K. A. because I do not insist that the Foul-brood Inspector shall cure by the Cheshire plan. In answer to this charge I have to say that the Board of Directors have no more control over the teachings of the Inspector, as a "foul-brood curer," than they have over the teachings of Mr. Doolittle himself. The duty of the Inspector is to see that diseased stocks are either cured or destroyed. If he chooses to give advice as to how they may be cured, he does so as a private individual; it is no part of his duty as a public officer, and the directors have no responsibility in the matter. Mr. Doolittle's error is a pardonable one, because it is well known that the Inspector takes great pains to show bee-keepers how to cure their bees of foul-brood.

Mr. Doolittle's "position against Cheshire on the foul-brood matter," as stated by himself, is as follows: "If Cheshire is no more correct as to the name of the disease than he is in his diagnosis of the same, there can be little dependence placed on what he says regarding the matter." Diagnosis is defined as the art of distinguishing diseases, that branch of medicine which discriminates diseases, the determination of disease by distinctive marks and characteristics. From these definitions it will be seen that the diagnosis of foul-brood has nothing whatever to do with the means by which it is propagated, or with the method of treatment. As I previously stated the charge substantially is, that Cheshire does not know foul-brood when he sees it, and I repeat that there has not been the slightest attempt to show that there is any ground for making the accusation.

From his reply it is evident that Mr. Doolittle understands the term, diagnosis, to include methods of cure, and the means by which a disease is spread. After writing about the Quinby method of cure he says "If I have made no attempt to justify my position, all right; I am willing to abide by the judgment of the general reader," and in regard to the means of spreading the disease he says "Well, if proving that honey is the chief, if not the only way that foul-brood is spread, in the United States or the whole of North America, while Mr. Cheshire says that only occasionally can honey convey it, is no attempt to justify my position, then I am no judge of logic." I believe those who are skilled in logic are very particular about

using terms according to their definitions. As I understand the case, Mr. Doolittle, through mistake, makes a charge he does not intend, and proceeds to discuss entirely different matters.

Mr. Doolittle says "No one respects or prizes scientific research more than I do, but to be of value to me that 'research' must not run right squarely up against *positive known facts*." This is only another version of what he wrote in GLEANINGS in 1886. I shall now show that some of Mr. Doolittle's "*positive known facts*" may, after all, be only imaginary ones. I take his supposed fact that "where no foul-broody honey goes no disease goes." It is known, on the testimony of more than one reliable observer, that bacilli are very plentiful in the chyle stomach of diseased worker bees, that is, in the stomach in which honey and pollen are digested and changed into brood-food. A glance at page 122 of Mr. Cowan's new work, THE HONEY BEE, shows, that, by means of a prolongation of the stomach mouth, reaching entirely through the honey sac, food is conveyed into the gullet, and is driven directly into the cells, without being mixed with honey which may still be contained in the honey sac. The reader will see that since bacilli swarm in the chyle stomach, it is exceedingly unlikely that the honey and pollen could be digested there, and regurgitated and placed in the combs with the larvae, without carrying with it some of the microbes. As a matter of fact "Schoenfeld has proved that the food which is given to the young larvae contains, in a foul-broody hive, a large quantity of these microbes." Thus we see that whether the honey taken into the honey sac contains the infection or not, the brood-food prepared from it, by diseased nurse-bees will almost certainly contain germs which will give the disease to the larvae. To the ordinary observer, the disease would seem to come from the honey. This shows how mistakes may be made, when "we go by practical experience," instead of being guided by experience gained by observation with the microscope.

Mr. Doolittle will probably call this hair-splitting, as he did in his reply, when referring to a somewhat similar matter. If an astronomer states that by the aid of his telescope he sees stars and planets, which to the unaided eye are invisible, all well informed persons will believe him, provided he is veracious, and skillful in the use of his instruments, but when the most skillful and veracious observers turn their lenses upon the microbe of the foul-brood instead of distant worlds, Mr. Doolittle discredits their statements, if he finds their observations are not in accord with his opinions, formed from

what he has seen with the naked eye, of course Mr. Doolittle has a perfect right to believe or disbelieve, whatever he pleases, but, if he persists in discrediting observations made with the microscope, when he "lifts up his warning voice," let us hope some one will feel it to be his duty to set him right, if he teaches error.

Mr. Jones calls attention to an alleged error by Cheshire, in regard to the angles of cells, which bees are capable of building, and he refers to a comb exhibited by himself, in proof of Cheshire's mistake. The inference he wishes the reader to draw is, that, since Cheshire is not infallible, he should not be looked upon as an authority on foul-brood. Every bee-keeper knows that when combs are soft from the effects of heat, they may be stretched or compressed, so as to put the cells altogether out of shape. Something of this kind may have happened to the comb in question. If infallibility is a requisite qualification for an authority on foul-brood, I fear Mr. Jones is in a much worse position than Cheshire. Some years ago Mr. Jones taught that he 'could start foul-brood in his yard at will, by decapitating drone brood, and leaving it to rot over a nucleus. Lately he stated in the C. B. J. that it cannot be started at will in this way. This was one of his *believed* facts, stated with as much confidence as if it had been *ascertained*.

There are more unwarranted statements and assumptions, in the science of foul-brood, as taught by Mr. Jones and those who agree with him, than are to be found in any department of bee literature. For instance, Mr. Jones says, "We have no knowledge of the disease ever being spread by the bees after the honey in their sacs was consumed." I reply that it is an unwarranted statement to say that he ever knew when the honey in their sacs was consumed without killing the bees. Then again, Mr. Jones says, "Perhaps some of the scientists can tell us why it is that a bee, with its sac filled with foul-broody honey, can consume or remove every particle of it from the sac, so that clean honey put into the sac never gets a trace of foul-brood." Before any real scientists would attempt to tell Mr. Jones *why* it is, he would ask him first to show that the fact is as stated, and then Scientist Jones would find he had a contract on hand which he could not fill. Mr. Jones can never know, in the first place, that a certain specimen of honey is foul-broody, unless he knows that the infecting matter has been either purposely or accidentally placed in it, and even if infected honey were fed, he is not warranted in telling us that it can be known when the contamination has disappeared from

the alimentary canal, without microscopical examination.

To show that Cheshire is not the only well informed writer who holds that the disease is not always conveyed in the honey, but is sometimes conveyed by diseased queens, and that other remedies besides the starvation plan are required, I shall quote selections from a foot note by the present editors of the British Bee Journal. They write as follows: "One hundred and twenty-five years ago Shirach wrote: "The most simple remedy is to remove from the hive the infected combs, and to make the bees fast ten days, after which fresh combs can be given them." In those days, and until quite lately, it was supposed that honey was the medium through which the disease was communicated, and means were taken to induce the bees to consume all the honey they carried, before they were allowed to raise any brood. Over and over again has this been tried; combs have been removed, and bees have been starved, to make them consume their honey, and when brood rearing commenced, the disease has again broken out."

"We English know something about foul-brood, and the remedy proposed on the other side (of the Atlantic), and those who have been bee-keepers long enough know that it has been thoroughly tried here, and has as thoroughly proved a failure. German beekeepers have also advocated the same thing.\*\*\* All the leading bee-masters of Europe have tried and failed."

"We have no need to take a lesson from our Canadian friends on the treatment of foul brood, for they are now only where we were ten or fifteen years ago, and it would be well for them to take a lesson from us, for we have taken precautions against it spreading."

They say further: "Although not denying that honey is a possible source of infection, that it is the usual means, we cannot admit, as we have abundant proof to the contrary. We know of many instances where the introduction of a queen has resulted in foul brood, and we also know that it can be carried from one apiary to another." See B.B.J., pages 42 and 43, 1891.

The foregoing extracts confirm in the strongest terms possible, what Mr. Cheshire said, and yet Mr. Doolittle thinks he should take it all back. Let it not be supposed that this is a case of one writer backing up another writer's statements, simply because they happen to be countrymen. Most readers of the B.B.J. know that for some years past the relations between the editors and Mr. Cheshire have not been cordial.

When bacteriologists wish to be sure that they

have found the germ of a disease they cultivate it, watch its mode of increase, observe its chief characteristics, transfer it from culture to culture, until it is ascertained beyond doubt that its distinctive marks are constant. If, after repeatedly inoculating animals, (possibly bee larvae) with infection from the culture flasks, they find the symptoms uniformly the same as those of the disease under investigation, they feel justified in saying they have found its true **germ**.

All this work has been done to determine the germ of foul brood. Prof. Burrill, of Champaign, Ill., made such investigations. See his paper, page 37 A.B.J., 1885. Mr. Cheshire and Dr. Watson Cheyne, of London, made cultivations, and re-introduced the disease from their culture material. See their paper entitled "Pathogenic History, and History under Cultivation of a New Bacillus (Bacillus alvei)" by Frank R. Cheshire, F.R.M.S., F.L.S., and Watson Cheyne, M.B., F.R.C.S., etc., (Journal of the Royal Microscopical Society, August, 1885.

This paper is referred to as authority on the subject by bacteriologists.

Notwithstanding the results of these experiments, and the acknowledged ability of those who conducted them, without even a pretence of pointing out wherein they are inaccurate, Mr. Jones says: "Whether the scientists have discovered the germs of foul brood or not, is a question." Fie, Mr. Jones, whoever would have thought it of the editor of the C.B.J., the greatest foul brood doctor in America, and one of the most widely known bee-keepers in the world? Well may Canadian bee-keepers hang their heads, when they find their representative man, the bee king of Canada, giving himself and them away by saying, "at this late day," that it is not certain that the germ of foul brood has been, as yet, discovered. Let us hope that in future, Mr. Jones will be able to find time to give his subjects more thought, and not commit himself by making unguarded statements.

I purpose pointing out wherein the experiments, made by Mr. Jones and others, in the bee-yard, are exposed to errors which make them inconclusive, and worthless as proof, but space forbids

S. CORNELL.

Lindsay, Dec. 1891.

FOR THE CANADIAN BEE JOURNAL.

Ontario Bee-keepers' Association.

**D**EAR SIR,—The annual meeting of the O.B.K.A. will be held in the City of London on the 5th, 6th and 7th of Jan., '92.

A number of the prominent bee-keepers of the Province have been invited to write papers on interesting subjects.

Arrangements are being made for reduced railroad and hotel rates.

All interested in bee-keeping are cordially invited to attend the Convention. When I learn the place of meeting and rates at hotels I will let you know, and also papers to be read. Any persons wishing information in regard to the meeting will please apply to

W. COUSE,  
Secretary.

Streetsville, Dec. 8th, 1891.

FOR THE CANADIAN BEE JOURNAL.

### A Good Season.

**I** NOW take the liberty of sending in my report for this season from 45 colonies, spring count. I got 3,000 of extracted honey, and fifteen new swarms; nearly all clover honey, and of the finest quality. As per reports received from purchasers, I sold about 600 lbs. at 9½ to 9¾ cts. per lb., and the balance was sold at 10 cts. per lb. except of course that which was consumed in the household.

My bees suffered severely in the month of May from the want of stores and the inclemency of the weather, but when clover came in they soon pulled up. There has been very little honey gathered from any other source here this season. I cannot say anything about basswood, as there is none in this locality. Although a large quantity of buckwheat was sown, there was very little yield from it. My bees were put into their winter quarters on the 27th and 28th of October in a very strong condition, with plenty of stores. I winter in cellar under dwelling house; my only fear is the mice, which are very plentiful.

Now, brother bee-keepers, of the eastern counties of Ontario, why cannot we get a rousing good District Association here as our western brothers have? Surely there is pluck and energy enough if one started. Last winter, I think it was, through one of our local newspapers, I called the attention of bee-keepers in this district to this very important matter in our interest, but the matter was not taken up then, so I hope ere another season passes we will be formed into one of the largest Local Associations in the Province.

Wishing my bee-keeping friends from east to west, and from north to south, a merry Christmas and a happy New Year.

W. J. BROWN,  
Chard, Dec. 10, 1891.

### Bees at the Big Exhibition.

**D**R. A. B. Mason, of this city, who is probably one of the best known bee-keepers of America, has just returned from Chicago, where he has been to confer with Mr. W. S. Buchanan, the chief of the department of Agriculture for the Columbian Exposition, in regard to the preparation of an exhibit of bees and honey, and everything used by bee-keepers in increasing the number of colonies of bees, and securing the products of the labors of the bees that "work all day and never sleep nights"

The doctor has been recommended for appointment as superintendent of the apiarian department at the World's Fair in 1893, by the North American Bee-Keepers' association, and his selection for that position would give universal satisfaction to the bee-keepers.

Mr. Buchanan having been quite an extensive bee-keeper himself, takes a deep interest in the apiarian exhibit, and assured Dr. Mason that he would do all he could to aid the bee-keepers in making a creditable exhibit of their industry, and suggested a plan for an exhibit of bees that was just in accord with the method that had been devised for their exhibition, and the doctor feels quite elated over the prospect for a grand exhibit.

In a paper read by Dr. Mason, at the last meeting of the North American Bee-keepers' association, he outlined a plan for the exhibits that has received the endorsement of the bee-keepers, and been adopted by all the state societies that have taken action in the matter.

He says that Illinois Bee-keepers tried last winter to get an appropriation of \$5,000 from the legislature, with which to make their state exhibit, and at the recent meeting of the Northwestern Bee-keepers at Chicago, he said he thought that was not the way to do. His idea is to let the State Bee-keepers' associations of the different states have charge of the apiarian exhibit from their state, under the direction of the State Board of commissioners and let the State Board pay the expenses, which he thinks ought not to exceed one half that sum, and perhaps even less.

The bee journals of the country are in favor of the doctor's appointment, and the Canadian Journal says: "If the apiarian exhibit at the World's Fair is not a success it will not be Dr. Mason's fault."

The space for the exhibit will, like many other departments, probably be somewhat limited, occupying not more than three or four hundred feet in length.

There will probably be a honey exhibit from

fifteen or twenty States, so the space for each will be very small indeed.

In a letter to the doctor, Mr. Buchanan says: "I would suggest that in considering the question of space, it should be borne in mind that in all probability demands will be made in all departments of the exposition for vastly more space than can be assigned, and in my judgment the most careful thought should be given to the question of how best to fully illustrate an industry in the most attractive and thorough manner, in a limited space."

At the Ohio centennial one party occupied fifty feet in length and full width of that allotted space, and the doctor thinks bee-keepers will be very much disappointed in not being allowed to "spread themselves."

It is intended to have honey in all sorts of fanciful shapes, and in all kinds of attractive and beautiful receptacles, so as to call forth from the visitors all the "sweet" expressions of amazement that all the languages of the world are capable of furnishing.

An effort will be made to have a large variety of honey-producing plants growing and in bloom on the grounds.—Toledo Blade.

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### Honey Beverages.

**T**HE earliest manufactured kind of intoxicating liquid was probably mead. From honey a fermented beverage is made, which is largely used throughout the Soudan. Mead is said to have been the principal beverage of the Britons before the use of malt liquors among them, and long after the introduction of the latter beverages mead was a favorite drink. Under the name of metheglin it was frequently alluded to by old writers. Mead formed the ancient, and for centuries the favorite, beverage of the northern nations. It is still called by the Germans honey wine. Mead is frequently mentioned by Ossian. Dryden has a couplet:—

"T'allay the strength and hardness of the wine,  
Let with old Bacchus new Metheglin join."

Queen Elizabeth was so fond of mead as to have it made for her every year.

Mead formed the nectar of the Scandinavian nations and was celebrated by their bards; it was the drink which they expected to quaff in heaven out of the souls of their enemies, and was, as might be expected, liberally patronized on earth. The Scandinavian mead is flavored with primrose blossoms. In Spain mead is known as aloja.

The Africans use several honey drinks, hives being common. In Madagascar they make a

honey wine, a composition of three parts of water to one of honey, which they boil together and skim after it is reduced to three-fourths. They afterwards put it to ferment in large pots of black earth. This wine has a pleasant tartish taste, but is too luscious. In Abyssinia, according to Bruce, they use five or six quarts of water to one quart of honey. These they mix together in a jar, throw in a handful of parched barley meal and some chips of bitter bark, which in two or three days take off the cloying taste of the honey, and makes the beverage wholesome and palatable.

Braggen, or bragget, was a sort of metheglin. Hydromel is honey and water submitted to fermentation. Oxymel is a mixture of honey and vinegar. Here is a more modern recipe than Queen Elizabeth's for mead: 8 ounces each of sarsaparilla, liquorice root, ginger, and cassia bark; 2 ounces of cloves and 3 ounces of coriander, suitably cut and bruised, are boiled for 15 minutes in 8 gallons of water, allowed to cool and settle, and then strained through flannel. To this is added in the fountain  $1\frac{1}{2}$  gallons syrup,  $\frac{1}{2}$  gallon honey, 4 ounce each of tincture of ginger and solution of citric acid, and afterwards sufficient water to make 10 gallons, when it is charged with carbonic acid gas.

Honey Wine is made of the juice of the best grapes, well ripened, and kept twenty days before pressing, to which five parts of the finest honey should be added, and all well stirred in a wooden vessel. Cover with a linen cloth, and allow to ferment for forty days, the scum being occasionally removed. It is then put in a light cask, and so kept till the ensuing spring, when it is bottled.

The Jews in Morocco are very fond of Mahaya, a weak, colorless spirit flavored with aniseed, which they prepare from water in which honey combs have been boiled. The distillation of this spirit is conducted in the rudest manner. Dr. Lark, in his work, Morocco and the Moors, states having witnessed the process. The condenser consists of an old gun-barrel, while the water into which the lower end was plunged, in order to cause condensation, was allowed to become too hot for the hand to bear.

Honey Current Wine.—To 3 quarts of juice add 3 pounds of honey and water to make one gallon. Let it ferment four or five weeks with open bung, and keep the barrel always full, in a warm place, then drain and put into another barrel in the cellar. It makes a most delicious drink.

Honey Noyeau.—Four ounces of bitter almonds 2 ounces of sweet almonds, 2 pounds of loaf sugar, 3 lemons, 2 quarts of gin, 2 large

spoonfuls of clarified honey, and one pint of milk. Blanch and pound the almonds, and mix them with the sugar, which should be rolled. Boil the milk, and, when cold, add all the ingredients together and let them stand ten days, shaking them every day. Filter the mixture through blotting paper, bottle off for use, and seal the corks down.

Cheap Harvest Drink.—To those engaged in harvesting and other occupations tending to create thirst, the following preparation may be recommended, which makes a very palatable and healthful drink in hot weather: Take 12 gallons of water, 20 pound of honey, and 6 eggs, using the whites only. Let these boil one hour, then add cinnamon, ginger, cloves mace, and a little rosemary. When cold, add one spoonful of yeast from the brewer; stir it well, and in twenty-four hours it will be good for use.—P. L. SIMMONDS, F.L.S.—W. M. Trade Review.

#### Bees-keepers Will Meet.

THE North American Bee-keepers' Association meets in Albany, New York, December 8th to 11th. Dr. A. B. Mason will represent Toledo city and will present a paper on "The Outlook for Agriculture at the Columbian Exposition."

#### Notes From the Chicago Convention.

AS REPORTED BY DR. MILLER.

THE Chicago convention was good. It always is. Nine states were represented, and a crowd of good workers were there. I think a little more solid work than usual was done. A business trip to the North by O. O. Poppleton gave us a representative from as far away as Florida. A. I. Root, who formerly did not favor conventions, has been converted from his errors; and as he never does things by halves, he is now a convention man all over, and was a faithful worker through every session.

I saw there for the first time J. H. Larrabee, the representative of the United States government. I like him. He is modest enough not to think he knows everything, and I don't see any reason why he should not be a real help to the fraternity. He was urged to communicate more frequently and more directly with bee-keepers' and he expressed himself as desirous to hear from them, and especially to know upon what subjects they wanted experiments made. I think he has done this before, but, strange to say, I believe he reported that only one man

had sent in any request as to experiments. This should not continue.

The convention tackled the very important item of grading honey. I think no convention has ever had the hardihood to undertake it before. A committee of seven, with Dr. Mason as chairman, were instructed to report a scheme for grading. Several times the report of the committee was called for, but each time the reply was, "Not ready." At last the report was that they couldn't agree. Then the convention resolved itself into a committee of the whole, and "rassled" with the problem in dead earnest. But the problem "downed" the convention, and dinner time found them without an agreement. "Too bad that we couldn't agree upon something, and at least make some kind of a start," was the comment of more than one during the noon hour.

After dinner, with perhaps a little feeling of desperation, the subject was renewed, in the attempt to see how far there could be any agreement. Then the good sense and the good spirit of the convention showed itself, and each one seemed willing to make any reasonable concession to the views of others. So a system of grading was agreed upon, subject to the revisional judgment of the assembled Albany wisdom. I think it is far from a perfect system; but it is a start, and that is at least something.

Among other things, the ubiquitous question as to Sunday closing of the World's Fair came up. Two to one were in favor of Sunday closing, but in the interests of harmony the majority yielded. It is not entirely clear to me why it would not have been just as graceful and proper for the minority to yield to the majority.

Although no action was taken, there was considerable discussion as to honey being entitled to the same bounty from the government as maple sugar. It was argued that the McKinley bill had so lowered the price of sugar imported that the home product could not compete. To this it was replied that the same action had brought down the price of honey to meet sauces made with cheap sugar.

The convention backed by two commission men, recommended the shipping of comb honey in single-tier cases holding 12 or 24 sections each. The weight of opinion seemed to favor, for extracted honey, square 60-lb. tin cans packed in wooden cases, two in a case, but some were quite earnest for cheap barrels.

Publication of honey quotations had some attention. The practising of publishing above or below what could be actually obtained was

depreciated, and it was urged that those publishing quotations should give them somewhat as they were given of staples such as butter and wheat. That is, a man who sells on commission should say at what price honey is actually selling; and if he is a cash buyer he should say what price he is paying.

Action was taken toward allowing the society in future to be part and parcel of the State society organized last winter. It was the general opinion that this would be a good thing for both sides with no advantages to either. In any case, the same members will attend at Chicago, and, with low rates so frequently available and such a central location surrounded on all sides by live bee-keepers, there seems no good reason to suppose that there will be any failure in always having a good convention in Chicago.

That prince of secretaries and bee-reporters, W. Z. Hutchinson, was busily engaged throughout the session in pushing his pencil, and we shall undoubtedly have a full report in the proper time and place.—C. C. MILLER in Gleanings.

Marengo, Ill., Nov. 24.

FOR THE CANADIAN BEE JOURNAL.

#### Alvinston Bee-Keepers.

A MEETING of the Lambton Bee-keepers Association was held in Alvinston on Nov. 2nd. Members were present from various parts of the County, and more than usual interest was taken in the proceedings.

Election of officers resulted as follows: President, Lewis Travers; Vice-President, John Armstrong; Secretary-Treasurer, W. E. Morrison.

A great many interesting subjects were discussed, but "the spraying of fruit trees while the blossom is on," created the most interest and it was found to be the feeling of those present that while we should do our best to educate people to the fact that it is not only needless and useless but absolutely injurious to spray while trees are in bloom. We should have a law enacted making it a misdemeanor to do so.

L. Travers was appointed delegate to the O.B.C.A. annual meeting to be held in London.

From reports given it is found that the past has been a good average season in Lambton, but no one has a very large crop. Prospects are that good prices will be realized for honey of good quality. Meeting adjourned to meet in Oil Springs on the second Monday in May.

W. E. MORRISON, Sec. Treas.

Alvinston, Ont.

Subscribe for the Canadian Bee Journal.

## Foul Brood.

**E**ARLY last June we had a specimen of foul brood sent to us from a correspondent in Kent which differed in some respects from ordinary foul brood. Upon examining it under the microscope, the ordinary *Bacillus alvei* of foul-brood was not found, but another one, quite distinct, was seen. We at once inoculated two tubes of nutrient gelatine and agar-agar, and the growth in these was quite different to the usual appearance of the ordinary bacillus. Whether this is a pathogenic species or not we have not had the opportunity of testing. It may, however, be interesting to our readers if we reproduce an article by M. Canestrini which we have just found in the *Ltti della Societa Veneto-Treutina di Scienze Naturali*, published in Padua, and which throws some light on a new bacillus discovered by M. Canestrini, although no definite conclusions from the experiments can be arrived at:—

## 'ON A NEW BACILLUS FOUND IN BEEHIVES.

'On the 10th of March last Signor Luigi Martini, director of the Bacteriological Institute of Osino, in the Marche (Central Italy), wrote me as follows:—

"Here in the Marche, where bee-farming has made sensible progress, almost all the hives have been recently attacked by the plague of foul brood. Many hives have been destroyed, many infected, and few enjoy immunity from the disease. A friend of mine had an apiary of forty hives, and they have been all destroyed by this plague."

'Being anxious to be better acquainted with this disease, I required Signor Martini to send me a piece of infected comb in a hermetically sealed case, to which request he replied with a promptness for which I am most grateful to him.

'I thought that I had found myself face to face with a typical case of foul brood, which, from a bacteriological point of view, has been already described by Cheshire and Cheyne, Crookshank and Eisenberg; but my researches, made in conjunction with Dr. Giacomo Catterina, did not lead me to identify the *Bacillus alvei*.

'In the cells of the piece of comb sent to me from Osino I found the brood reduced to a black and pulpy mass, which, however, did not emit any characteristic odour. With this mass I made, in the usual way, culture in nutrient gelatine, agar-agar, blood serum, and potatoes, and I was able to separate in a pure culture a distinctly characteristic bacillus.

'It is from 4 to 6  $\mu$  in length and about 2  $\mu$  in breadth. When it is isolated it is of greater length than when several elements are united in a chain. Its two extremities are rounded, and never attenuated or clavate. It is mobile, but exhibits slow and oscillatory movements. In the mass it may be called a squat-shaped bacillus, somewhat similar to that of splenic fever *Bacillus anthracis*, and still more like *Bacillus megaterium*. It is spore-forming and ohomogenic, as I shall explain more fully somewhat further on. It is easily stained with all aniline colours by the usual methods, and also by the method of Gram. It is developed slowly in the four culture media mentioned above at a temperature of about 17° Cent., but with more rapidity at a temperature of 37° Cent. It liquefies gelatine and blood serum, and in the latter it becomes surrounded by a sheath. It is not pathogenic in the case of white mice, guinea-pigs, or crickets, but it germinates freely in the brood of bees and in the bees themselves.

'To render this diagnosis clear, I will give the following fuller particulars.

'In nutrient gelatine this is liquefied, and during growth of the bacillus it forms a simple funnel with a blunt and whitish apex. After a few days the funnel is surrounded by a liquid film of a rather pale pink colour.

'In nutrient agar-agar it grows on the surface, forming a whitish film, and produces spores in abundances. The spores are 3  $\mu$  in length and 1.5  $\mu$  in breadth, and of an oval shape; they become coloured, for example, with fuchsine, if submitted to a high temperature, or by passing the cover-glass eighteen or twenty times through a flame. Very interesting is its behaviour in blood serum, in blood serum, in which it becomes surrounded by a most unmistakable sheath; several rods—as many as fifteen or twenty—may be collected in one sheath; but it usually happens that for every rod there are corresponding notches in the sheath. Moreover, in some cases the sheath is converted into a uniform sac containing many bacilli. At times there are to be seen sheaths perfectly white, or not containing any bacilli. In the same medium, moreover, a whitish film forms on the surface, and after two days it commences to liquefy it. I found it sheathed even in dead bees. In some cases the sheaths were very long, and contained as many as fifty rods.

'On potatoes it is developed promptly, so that after twenty-four hours there may be seen on them a stain of the colour of red wine.

'Cultivated in milk, it makes it muddy, and

white flakes are formed, also a farinaceous deposit.

'If with the material taken from blood serum we make a preparation and mount it in Canada balsam, we observe that the bacilli within the sheath approach its walls, and sometimes arrange themselves diagonally.

'This bacillus, forming spores, resists a high temperature. A culture, after having been exposed for four and a half hours to a temperature of 75° Cent. will still produce new colonies in twenty-four hours. It resists successfully a four per cent. solution of boracic acid, but it does not resist that of corrosive sublimate of one-half per thousand.

'Subcutaneous injection of a white mouse and of a guinea-pig gave negative results, for no pathological phenomena, general or local, were observed. A similar result was obtained after smearing the back of crickets with a pure culture, forcing it into their mouths, and inoculating them with the point of a steel needle, a circumstance which, after all, does not cause any surprise, as we know from the researches of Balbiani that the cricket enjoys particular immunity from the action of bacilli.

'It is useful to observe that in this species the bacilli arrange themselves in a chain, one in front of the other, and that the spores in the preparations taken from cultures in agar-agar from irregular masses.

'I believe the bacillus described above to be different from the *Bacillus alvei* of Cheshire and Cheyne, for the latter comports itself differently in nutrient gelatine, and produces upon potatoes a yellow spot; is arranged, both itself and its spores, in a different manner when grown in agar-agar; does not form a sheath in blood serum, and is pathogenic in mice and guinea-pigs. It differs similarly from *Bacillus megaterium*, which it somewhat resembles in shape; for *Bacillus megaterium* forms a yellowish spot on potatoes, does not produce the above-mentioned pink colour in nutrient gelatine, and does not form a sheath.

'In order to ascertain its action upon the brood of bees, I obtained at Santa Maria di Cervarese, in Padovano, a piece of comb containing brood, which I infected with the pure culture taken from the dead brood, which came from Osino, by pouring small quantities of it into the cells which contained the brood. Within four hours the latter were dead, some of them being literally covered with black spots, whilst others were reduced to a pulpy mass. From this last-mentioned I re-established in the different culture media pure cultivations of the bacillus described above.

'I cannot, however, deny that the brood may have died from simple cold, as I kept it in my laboratory outside the hive.

'On a subsequent occasion I brought from the country about 300 bees and some pieces of comb with brood, and I infected one of the pieces of comb. After forty-eight hours the bees were all dead, although I had supplied them with honey. Both in the bees and in the dead brood I found the bacillus. But on a still later occasion I infected in the open country an entire beehive with a culture two months old, and the beehive did not suffer. From this I am inclined to believe that this bacillus is not pathogenic. On the other hand, I cannot absolutely deny the contrary, for this culture was old, and might have lost its virulence.—G. CANESTRINI. in B.B.J.

From the above it would appear that foul brood germs differ somewhat, or there are different kinds of foul brood. From the probing this is getting of late, we certainly should be able to get to the bottom of the whole matter ere long.

#### Patents on Bee-Hives.

ANOTHER patent has just been issued on a bee-hive. It is dated Nov. 10. 1891, and was given to Reuben H. Ewing, of Iowa. It is the old story—a moth-proof hive—worthless and useless, with not a new feature in it. Here is the claim of the so-called invention:

"The bee-hive A, having a horizontal bottom B. with the central hole *b*, just large enough to allow the bees to pass through it, and an upwardly convex bottom C, whose oppositely inclined sides meet in a vertex *c*, directly under the said hole, and just far enough therefrom to permit the bees to reach the hole, the said hive being provided with opposite entrances *c' c'* for the bees and moths between said bottoms, as shown and described

The inventor does not even know the sex of worker bees, as will be seen by the following from specifications, where it is called he every time.

"The tendency of the bee is to move upwardly and as soon as he reaches the vertex *c* he will make for the entrance *b*, while the moth will travel up one side of the bottom C, and down the other thereby failing to get into the honey or bee-chambers at all, not being able to reach the hole *b*, even if inclined to do so."

What a pity it is to fool away good money for such a worthless patent!



What *stupidity* it is to maintain a lot of useless "examiners" to approve of inventions, the practical workings of which they know nothing about!

What *dishonesty* it is to grant patents, over and over again, to different persons on precisely the same thing!

What *robbery* it is to take the money of the credulous inventor and render no equivalent for it!

In this case the patentee has sold one-half of the "invention" in advance to secure the money to get a patent, which, for practical purposes, is not worth the paper it is printed upon! Bah!  
—*American Bee Journal*.

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#### Epilobium, or Great Willow Herb.

FROM my front door, looking over the valley of the Jordan River, I see 100 acres a solid purple sea of the beautiful Indian pink, purple fire-weed, or, correctly speaking, *Epilobium angustifolium*, or great willow herb. It is not only a feast of beauty to the eye, but a flow of honey to the greedy bees, who neglect even the loaded linden bloom for the delicious white nectar of this grand honey-producer. Happy indeed is the apiarist who lives in the land where this plant reigns supreme among weeds.—*Rural New-Yorker*.

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#### Mich. Stste Bee Keepers' Ass'n.

THE twenty-sixth annual meeting of this association will be held in Grand Rapids, Dec. 31st, 1891 and Jan. 1st, 1892. Reduced rates of \$1.25 per day have been secured at the Eagle Hotel. A nice room to meet in under the same roof, and everything indicates one of the best meetings ever held in the State. There will be reduced rates on all railroads. A goodly number of ladies have promised to be present.

The following is the program.

Morning session, Dec. 31st, 1891, 10 o'clock. Secretary report of last meeting. Appointing of committees. Reception of members. Adjournment.

Afternoon session, Dec. 31st, 1891, 2 o'clock. Annual address, Pres. R. L. Taylor. The best all purpose brood frame, J. H. Larabee, Agr'l College, Mich. The Bicycle vs. The horse for out apiary trips, E. R. Root, Medina, Ohio Question box. Reception of members. Adjournment.

Evening session, Dec. 31st, 1891, 7 o'clock. Bees, poultry and fruit, J. A. Pearce, Grand Rapids, Mich. "Trying new things." W. Z.

Hutchison, Flint, Mich. Question box. Adjournment.

Morning session, Jan. 1st, 1892, 9 o'clock. Cellar vs. out-of-door wintering, A. J. Acker, Martiney, Mich. What business can be profitably combined with bee keeping? Wm. E. Gould, Fremont, Mich. Cause and cure for foul brood, Dr. A. B. Mason, Auburndale, Ohio. Question box. Reception of Members. Adjournment.

Afternoon session, Jan. 1st, 1892, 2 o'clock. The uses and abuses of Foundation, W. H. Hunt, Bell Branch, Mich. Carniolan bees, H. D. Cutting, Clinton, Mich. Deciding next place of meeting. Election of officers. Report of committees. Financial report of secretary. Miscellaneous business. Adjournment.

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#### Out-Door Wintering of Bees.

W. Z. HUTCHISON.

IF bees can enjoy frequent flights, out-of-doors is the place to winter them. If deprived of these flights a temperature of about 45° enables them to bear a much longer confinement than does a temperature below freezing. In the South frequent flights are assured; in the North no dependence can be placed upon the matter. Some Winters are "open," or there are January thaws, allowing the bees to enjoy cleansing flights, while other Winters hold them close prisoners for four or five months.

It is this element of uncertainty attending the wintering of bees in the open air that has driven so many bee-keepers to the adoption of cellar wintering. Still, there are some bee-keepers who, from some peculiarity of location, winter their bees in the open air with quite uniform success; others are compelled, for the present at least, to winter their bees out-of-doors; in short, a large proportion of the bees, even in the North, are wintered in the open air, and probably will be for a long time to come, and while my preference is for the cellar, I have no desire to ignore the out-door method.

#### PROTECTION AND WINTER FLIGHTS.

It does not seem as though the question of whether bees should be protected in the North, need receive any consideration whatever, yet it has been objected to on the grounds that the packing becomes damp; that it deprives the bees of the warmth of the sun, and that they sometimes fail to fly in the Winter (because the outside warmth is so slow in reaching them) when bees in single-walled hives may be in full flight.

There is occasionally a still, mild day in Winter, upon which the sun shines out bright and strong for an hour or two, and bees in single-walled hives enjoy a real cleansing flight, while the momentary rise in temperature passes away ere it has penetrated the thick walls of a chaff hive.

On the other hand, there are days and weeks, and sometimes months, unbroken by these rises in temperature; and the bees must depend for their existence upon the heat generated by themselves, and the more perfect the non-conductor by which they are surrounded, the less will be the loss of heat.

When bees are well protected, there is less necessity for flight than when the protection is slight. If the bee-keeper thinks, however, that bees in chaff hives ought to fly on a warm day, but they do not fly he has only to remove the covering over the bees and allow them to fly from the tops of the hives.

For several Winters I left quite a number of colonies unprotected. I discontinued the practice only when thoroughly convinced that, in this locality, the losses were lessened by protection. In mild Winters the bees came through in pretty fair condition.

In severe Winters the bees in the outside spaces, or range of combs, died first; the cluster became smaller; the bees in more ranges died; and by spring all were dead, or the colony so reduced in numbers, and the survivors so lacking in vitality, as to be practically worthless.

#### VENTILATION.

I have never seen any ill effects from dampness, but I have always given abundant ventilation above the packing. When the warm air from the cluster passes up through the packing, and is met by the cold outer air, some condensation of moisture takes place. This moistens the surface of the packing slightly, but it is comparatively dry underneath. With a good, strong colony of bees and ventilation above the packing I have never known of trouble from moisture.

#### CHAFF HIVES.

In the giving of protection, chaff hives have the advantage of being always ready for winter, and of doing away with the labor and untidiness of packing and unpacking, but they are expensive and cumbersome. It is some work to pack bees in the fall and unpack them in the spring, but light, single-walled, readily-movable hives during the working season are managed with enough less labor to more than compensate for that of packing and unpacking.

Then there is another point. The work of packing and unpacking comes when there is comparative leisure, while the extra work caused by having great, unwieldy hives, is brought in at a time when the bee-keeper is working on the "keen jump."

#### CORK DUST FOR PACKING.

For packing material, I have used wheat chaff, forest leaves, planer shavings and dry sawdust. I have never used cork dust, but it is probably the best packing material. Its non-conductivity is nearly twice that of chaff, while it never becomes damp. The only objection is that it is not readily obtainable, and usually costs something, while the other substances mentioned cost nothing. What they lack in non-conductivity is easily made up in quantity and this brings up the point of the proper thickness for packing.

I have often thrust my hand into the packing surrounding a populous colony of bees, and found the warmth perceptible at a distance of four inches from the side, and six inches from the top. This would seem to indicate the thickness when chaff or saw-dust is used. I presume that packing has often been condemned when it was not more than half hand—that is, when not enough material was used. I do not appreciate the argument of those who advocate thin packing. I do not believe that the benefit of the heat from the sun can compensate for the lack of protection during the months of extreme cold.

#### DEAD-AIR SPACES.

Hollow walls, with no packing, have their advocates; and it has been asked if these dead-air spaces were not equally as good non-conductors of heat as those filled with chaff. They are not. In the first place, the air is not "dead," it is constantly moving. The air next to the inside wall becomes warm and rises; that next the outer wall cools and settles; thus there is a constant circulation that robs the inner wall of its heat.

#### BOXES FOR CHAFF PACKING.

If chaff hives are not used, how shall the packing be kept into place? I know of nothing better than boxes made of cheap, thin lumber. If there is a lack of room for storing them in summer, they can be so made as to be easily "knocked down" and stacked up when not in use.

Of course bees can be packed more cheaply by setting the hives in long rows, building a long box around them, and filling it with the material used for packing. With this method the packing must be postponed until there is

little danger of the bees flying again—until they have forgotten their old locations; else some bees will be lost, or some colonies get more than their share of bees.

When the bees have a "cleansing flight" in winter, there is also a likelihood of bees returning to the wrong hives. Then when the bees are unpacked in the spring, and moved to their proper places, there is more confusion and mixing; but I do not look upon this as so very serious a matter. At this time of year, other things being equal, a bee is worth just about as much in one hive as in another. If there is any difference in the strength of the colonies, the weaker ones might be left nearest to where the bees were unpacked.

#### EARLY PACKING.

Speaking of being compelled to wait about packing the bees until they were not likely to fly again until some time in winter, reminds me that advantages have been claimed for early packing; that the bees in single-walled hives only wear themselves out with frequent flights that are to no purpose, while those that are packed are not called out by every passing ray of sunshine; that the early-packed bees sooner get themselves settled down for their winter's nap, and are in better condition when winter comes.

It is possible that there is something in this, but there were two or three years in which I tried feeding a colony or two as early as the first of September; and I continued to pack a colony every two or three days until the forepart of November, and I was unable to discern any advantage in very early packing. If the bees are protected before freezing weather comes, I believe that is early enough.

#### SPACE BELOW THE COMBS.

There is one other point that ought not to be neglected in preparing the bees for Winter, whether indoors or out, and that is the leaving a space below the combs.

When wintered out-of-doors, there ought to be a rim two inches high placed under each hive. This allows the dead bees to drop away from the combs to a place where they will dry up instead of molding between the combs.

Then if there is an entrance above the rim there will be no possibility of the entrance becoming clogged. This space under the combs seems to be a wonderful aid in bringing the bees through in fine condition, and I am not certain why.

Weak colonies can seldom be successfully wintered out-of doors. They cannot generate sufficient heat. In the cellar, where the tem-

perature seldom goes below 40°, quite weak colonies can be successfully wintered.

#### SUMMARY.

As I understand it, this whole matter of outdoor wintering of bees might be summed up in a few words: Populous colonies, plenty of good food, and thorough protecting. Simple, isn't it? Yet there is a world of meaning wrapped up in these few words.—*Country Gentleman*.

READ AT N. A. BEE CONVENTION, ALBANY.

#### Some Facts Not Generally Known About Rendering Bees-wax.

R. F. HOLTERMAN.

THE subject to which I am about to refer I shall not attempt to clothe in much language, but it is important, and particularly so in view of recent discussions upon the spread of foul brood through wax, and how it is to be prevented.

We know that there is scarcely any, if any natural produce, be it in the animal or vegetable kingdom, which can be heated to any material degree above that in which it was produced, and retain the same properties or nature as it did before so heated, yet we appear to ignore the fact in the melting of bees-wax. The general bee-keeping public do not appear to be aware that wax can be injured by heating almost to the boiling point, or by long and continuous heating at a somewhat lower temperature. Is such the fact? I am convinced that whilst the average wax is rendered with less injury now than in former years, the average wax has lost a portion of the valuable properties which it possessed when first generated by the bee.

Of course, you have a right to ask, is this a suggestion upon the line of which I wish you to experiment and observe in the future, or have I proof? Well, it is both. I believe it will only require careful reflection and a few arguments in favor of my, call it theory, if you like, to lead many of you to at least reflect.

Wax produced in countries considerably south of us, should surely, if anything, be stronger and better able to resist a high temperature, and yet the average bees-wax from the south will break more easily in the hive than our own. After months of reflection, I can only come to the conclusion that the reason is in these localities the methods of rendering are more crude, and it is more liable to injury from over heating in that process. Again, I know and have seen, comb foundation made from wax rendered in the solar wax extractor, put in the hive much thinner than ordinary, and yet, not

sag or break down. I could assign no other reason for this, than that by rendering it received less injury, as it had not likely reached the same temperature as that rendered by different methods.

Observation has led me to conclude that natural comb is, for the amount of wax in it, stronger than that built from the average bees-wax for comb foundation. I can assign no other reason for this than that already given. You will all be able to understand what this has to do with the foul brood question. Instances of foul brood, although never in my own apiary, have come under my notice, and I do not feel inclined to believe that the disease is spread through bees-wax after melting. Yet we should use every precaution until we are sure it is not so spread. If we have to injure our bees-wax by using such a precaution, it is certainly time steps were taken to find out if the disease of foul brood can be spread as indicated, and that arrangements were made to properly test the matter.

#### The New Method of Handling Bees.

AS I have been watching the discussions in the *C.B.J.* of late in connection with this so called new system of handling bees, I have to smile when I see the way it is handled. Of course, any one knowing Mr. Alpaugh and his new method (as I have the pleasure of knowing him), would smile also. As Mr. A. is not writing these articles himself, and as the ones who are discussing them through the *JOURNAL* are doing it blindfolded, they must be excused until they know more about it. The first article which came out in the Oct. 1 number seemed like a huge joke, and it was a lucky thing for Mr. Alpaugh it did seem so, for if it had not he would have been flooded with inquiries about his new method of handling so many colonies in so many different yards, and getting such large yields of honey that he would not have time to eat or sleep. Any one knowing Mr. Alpaugh as well as I do knows that would be hard on his constitution.

The second article I noticed was on Oct. 15, headed, "Something further about the new system of handling bees." It is a long way better than the first, and whoever the writer is, if he keeps on doing as well as he has in these two he may get somewhat near the new method in the course of a few months.

In the *C.B.J.* Nov. 1 there is another article headed, "Old bees—new management," written by G.W. Demaree. Mr. Demaree seems to think this new method a huge joke. He says, "be

this as it may, I guess the new arrangement (as he calls it) will never make the flowers secrete nectar," Mr. A. does not claim that it will, but he does claim, with his new method, that he can get the right quantity of bees and in the right place when the nectar does come with very little handling. Then Mr. D. gives you his new method which I need not give, for you have all read it.

In the *C.B.J.* of Nov. 15 there is still another article headed, "New system of handling bees." The writer goes on to say he does not need to guess that the new plan will give good results, for it is so nearly like his queenless system which he abandoned many years ago for his new system. He says if he understands the Alpaugh system right it must necessarily increase the colonies 50 per cent. each season; but as Mr. Alpaugh and I understand the new system, we need no increase, or we do not get any through handling as he does. The writer seems to think the increase a serious objection, that is the reason he abandoned it. Abandoned what?—his old system—not Mr. Alpaugh's new system—and what did he abandon his old system for? Because it was so fussy. It is very fussy still if I understand it right, compared with Mr. A.'s new system.

As I have been with Mr. Alpaugh the last season, and know him personally, and know his new method thoroughly, I am prepared to say, by personal practice, not theory, there is nothing like the new method—it is going to be a great boom to the comb honey producer.

As Mr. Jones has given you a few outlines of Mr. Alpaugh's new method in the *C.B.J.*, and as I have bound myself not to "give the secret away." I will not do so now—I may at some future time.

D. ANGLISH.

Nellis Corners, Ont., Dec. 1, 1891.

#### Bee-Keeping in South Australia.

THE following extract from a recent letter written at Mount Barker, South Australia, by Alfred Wright, a minister of the Society of Friends in England, may be of interest to our readers:—

"F. Coleman has an apiary here of 160 hives of bees, many of which are Ligurians. The wooden hives are made in New Zealand, and cost about 10s. each. They have two compartments, a top and a bottom one, the bees breeding below, while they store the honey in the top one. The apiarians here manufacture the foundation for the comb themselves, and I was shown the process the other day." (Here follows a description of the process, which it is needless to

give.) "The honey is chiefly gathered from the gum trees, and, as these flower only alternate years, they have a good season and a poor one. The season lasts two months, and when the weather is hot the quantity of honey gathered in one day is enormous, for the flowers are so full of it that it may be shaken out. Our friend had one hive from which he took 450 pounds in one season, which said hive, when weighed two days in succession, had increased in weight eleven pounds in the twenty-four hours. The frames are taken out twice a week in the busiest part of the season, put into an extractor, emptied of their contents, and the comb returned to the hive to be re-filled, and this goes on through the summer. The honey thus obtained is very pure and good, and fetches, on an average, in London, 3d. per pound. It is sent to England in tins containing £6 pounds each. One season recently our friend obtained twenty tons from 200 hives, which, at 28l. per ton, was not such a bad result. At any rate, it seems better than farming here. I understand that since eucalyptus oil has been thought so much of as a medicine, honey made from the gum tree is supposed to have some special virtue in cases of sore throat, &c., and is being largely used for that purpose. A chemist in London is a large customer for our friend's honey for this object."

The writer is on a religious mission to the Friends in Australia, and is well known in Yorkshire, his native county.—W.B. LOWESTOFT in *British Bee Journal*.

We wish we had some of those fine gum trees in this country. We have sometimes known basswood trees to be about the same, but they do not last two months as the gum trees do. Now if they had our clover, willow herb, thistle, and many other plants that yield largely in this country would it not then be a land "flowing with milk and honey?"

#### Vaseline for Stopping Robbing.

**Y**OU will, no doubt, remember that I promised to give some further account of an upset among my bees in consequence of an attack by robbers through the careless replacing of a hive roof. The robber bees got into the super in hundreds, and, after the roof had been set right, they crowded about every joint and crevice of the neighboring hives as well as the one in question. So I got my smoker in play, and as the bees were smoked off I painted the joints with vaseline. To my great relief I found this stopped the robbing, for not a bee

would come within an inch of where the vaseline was. To make doubly sure, I also painted around the entrances, being careful, of course, to keep it off the alighting-board. By this time the prisoners in the hive roof were trying to escape by the cones, as I had stopped the entrances to the latter while applying the vaseline; so, before I released them I painted round the base of each cone the same way, and this effectually stopped the attack in that quarter, for in less than an hour all were working as usual. Not a bee was killed, not a sting inflicted, and peace was restored.

Another "dodge" I have found effectual is this: On the morning of the day on which you are going to take honey, put a couple of pieces of naphthaline at the ends of frames, next the sides, and it will stop any stranger bees from entering the hive by the usual entrance.

I am so much indebted to what has appeared in your pages for my little knowledge about bees that I shall be glad if any reader is, in return, assisted in his trouble by what I have written above.—T.H.C. in *British Bee Journal*.

Would it not be advisable if bees refused to touch anything that has been touched with vaseline, for those who cannot introduce queens successfully to take a fine camel hair brush catching the queen the same as if going to clip her wings and paint her slightly with vaseline? The bees, of course, would not attempt to sting her. If vaseline will drive robbers from a hive when they are so intent on getting in, we think it could be used safely in the above way. Of course it is too late this season for us to try it, as our bees are all in winter quarters; but perhaps some of our friends down south could give it a trial. They might test it on worthless queens to commence with, and report the result to us.

The family temper usually takes its tone from the parents, and if the father be harsh, grumbling, unappreciative, and the mother peevish and fault-finding, or discontented, how can the children be expected to regard home as the dearest spot on earth?—Rural New Yorker.

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MENTION THIS JOURNAL

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**SEND** 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 housey 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.**

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AT 15 PER CENT. DISCOUNT

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Gentlemen.—I take great pleasure in writing to you of my experience with the Incubator I purchased from you. I have had two hatches, hatching all the fertile eggs. The chicks and ducks are all strong and healthy and easily raised. Yours respectfully,

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THE GERRED INCUBATOR CO.

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**WE** have about 75,000 more sections on hand of the 2nd quality, which we will sell for \$1.25 retail. Large discounts for will be given agents. **D.A. JONES Co. Beeton.**

**LARGE BEES** are a consideration. Our No. 1 colony from which we purpose breeding next season produces as large Italian Bees as I have seen. I will not guarantee delivery of any queens not booked in advance. **G. A. DEADMAN, druggist, etc., Brussels, Ont.**

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ASTONISHING PRICES :

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DOGS AND COMB FOUNDATION.

Brood Foundation, 50 cts. per lb.  
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I CURE FITS! THOUSANDS OF BOTTLES GIVEN AWAY YEARLY.

When I say Cure I do not mean merely to stop them for a time, and then have them return again. I MEAN A RADICAL CURE. I have made the disease of Fits, Epilepsy or Falling Sickness a life-long study. I warrant my remedy to Cure the worst cases. Because others have failed is no reason for not now receiving a cure. Send at once for a treatise and a Free Bottle of my Infallible Remedy. Give Express and Post Office. It costs you nothing for a trial, and it will cure you. Address—**H. G. ROOT, M.O., Branch Office, 226 WEST ADELAIDE STREET, TORONTO.**



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**WHITE WYANDOTTES**  
 Exclusively.

Having decided to keep only White Wyandottes in future, I offer for sale my entire stock of

**WHITE PLYMOUTH ROCKS (EMPIRE STRAIN)**

Cheap. A large number of Chicks of both varieties for sale now.

**EGGS IN SEASON, \$2 PER 13.**

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**Dunville P. P. Stock**

**3rd Exhibition**

1st and 2nd on S. C. B. Cock, These birds are for sale  
 2nd on S. C. B. Hen, 96; 1st on Blk Minorca Pullet, 94  
 1st on S. C. B. Leghorn, B. P.; 1st on Blk Minorca B.  
 P.; 1st on Pekin Duck, 1st on Pekin Drake, drake for  
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 Park Poultry Yards, Dunnville.

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I have a few more Langshans, both cockerels and pullets, good birds, will sell in trios, pairs or singly.

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**EGGS, \$1.00 for 13.**

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

**Dark Brahmas**—Three yards. Mansfield and Bucknam strains

**White Cochins**—Two yards. Lovell strain

**Partridge Cochins**—Three Yards. Williams, Booth and Washington strains.

**Buff Cochins**—Three yards. Gold Dust strain

**Black Cochins**—Two Yards Williams strain

**Langshans**—Three yards Croad strain

**White Wyandottes**—Two yards

**Silver Wyandottes**...Two yards

**Barred Plymouth Rocks**...Twelve yards. Drake

Upham and Corbin strains

**Houdans**—Two yards Pinckney strain

**White-Faced Black Spanish**—Two yards McMillan and McKinstry strains

**Rose-Comb Brown Leghorns**...Two yards Forbes

strain

**Rose-Comb White Leghorns**...Two yards Forbes

strain

**Single Comb White Leghorns**...One yard

**Single Comb Brown Leghorns**...Two ards Bonney strain

I make a specialty of furnishing eggs in large quantities for incubators at reduced rates. Send for catalogue.

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**IN**



**PRICES**

**EVERYTHING \* GOES**

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**WE WILL ALLOW**

**20 per cent. Discount**

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**WIRE NAILS, HONEY TINS AND**

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of which we are prepared to allow 10 per cent. All orders must be accompanied by the cash.

Agents write for special cut in prices.

**D. A. JONES CO'Y Ltd.**  
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**NEW HAMBURG**  
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**2ND ANNUAL EXHIBITION**  
**JANUARY 12, 13 and 14, '92**

Prize List sent on Application.

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Favorable arrangements made with suitable purchasers.

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1882-Chester Poultry Yards-1891

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IMPORTER AND BREEDER OF  
**EXHIBITION DARK BRAHMAS,**  
**ORNAMENTAL BANTAMS.**

My birds are second to none. They have won since 1890, 97 money prizes; 4 specials. Birds for sale at all times. Eggs in season, \$3 per 13, or 26 for \$5. Satisfaction guaranteed.

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BREEDER AND IMPORTER OF  
Buff Leghorns, Indian Games (Imp.)  
Red Caps, Back Javas,  
Red and White Malay Bantams,  
Golden Wyandottes,  
Long Distance Homing Pigeons.

Canadian Agent for Mann's Bone Cutter; 100 per cent. more profit in feeding ground green bones to your poultry.

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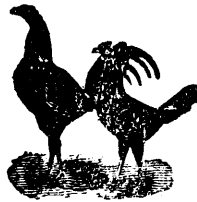
	19 GAUGE.			
24 in.	30 in.	36 in.	48 in.	72 in
\$3 10	4 00	4 85	60	9 50

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Less than full roll lots the price will be 1 1/2 c sq ft

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Breeder of  
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IMPERIAL - PEKIN - DUCKS.

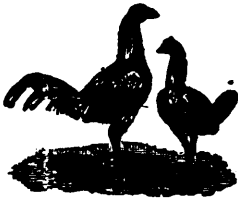
Chicks and Ducklings for sale in September. No more Duck Eggs for sale. Leghorn Eggs for balance of season, \$2.00 per setting of 13; or two settings for \$3.00, one of each if desired.

## Prices to suit the Times

A FEW pairs of Silver Laced Wyandottes and a few Plymouth Rock cockerels for sale cheap. Brown White and Black Leghorns, White and Barred Plymouth Rock, White and Silver Laced Wyandottes. Eggs of any of the above varieties, or mixed, at \$1.50 per setting, or two settings or \$

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**Bantam Fanciers**

NEW FANCIERS.

Eight Black Red Cockerels—grand ones, guaranteed Bred from a Crystal Palace cup winner. Sure to please you; from \$2 to \$5 each. Some Fine Brown-Reds at \$4 to \$5 per pair; also a good Pile Bantam Cockerel, (yellow legged), bred from a great English winner, fine station, color, etc. Price only \$3, these are sold on account of having too many birds; also large Game fowls. All are in fine health and condition. First money gets the best. E. F. DOTY, 47 Wellington Place, Toronto

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COCKERELS,	PULLETS,	HENS,
\$1.50 to \$3.50.	\$1.00 to \$2.00	\$1.25.

Barred Plymouth Rock Cockerels, \$1.50.

Setting of Eggs.  
BROWN AND WHITE LEGHORN.....\$1.50.  
BLACK MINORCAS..... 2.00.  
BARRED PLYMOUTH ROCKS..... 2.00.

I have not spared money in procuring best strains in the country, and you can rest assured you will get

**GOOD VALUE FOR YOUR MONEY.**

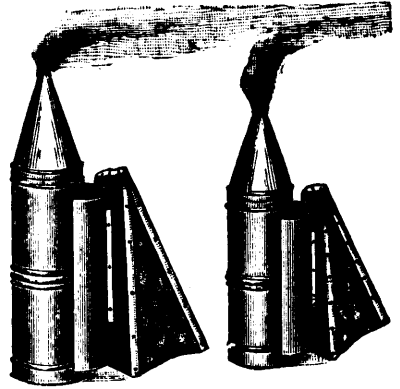
Bay of Quinte Poultry Yards with 40 acres of a run.

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See Discount on above in another column.

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