

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- | | | | |
|-------------------------------------|---|-------------------------------------|---|
| <input type="checkbox"/> | Coloured covers /
Couverture de couleur | <input type="checkbox"/> | Coloured pages / Pages de couleur |
| <input type="checkbox"/> | Covers damaged /
Couverture endommagée | <input type="checkbox"/> | Pages damaged / Pages endommagées |
| <input type="checkbox"/> | Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée | <input type="checkbox"/> | Pages restored and/or laminated /
Pages restaurées et/ou pelliculées |
| <input type="checkbox"/> | Cover title missing /
Le titre de couverture manque | <input checked="" type="checkbox"/> | Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées |
| <input type="checkbox"/> | Coloured maps /
Cartes géographiques en couleur | <input type="checkbox"/> | Pages detached / Pages détachées |
| <input type="checkbox"/> | Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire) | <input checked="" type="checkbox"/> | Showthrough / Transparence |
| <input type="checkbox"/> | Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur | <input checked="" type="checkbox"/> | Quality of print varies /
Qualité inégale de l'impression |
| <input checked="" type="checkbox"/> | Bound with other material /
Relié avec d'autres documents | <input type="checkbox"/> | Includes supplementary materials /
Comprend du matériel supplémentaire |
| <input type="checkbox"/> | Only edition available /
Seule édition disponible | <input type="checkbox"/> | Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées. |
| <input checked="" type="checkbox"/> | Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure. | | |
| <input checked="" type="checkbox"/> | Additional comments /
Commentaires supplémentaires: | | Continuous pagination. |

THE CANADIAN BEE JOURNAL



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

VOL. VI, No. 19.

BEETON, ONT., JAN. 1, 1891.

WHOLE No. 279

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
2 months.....	3 30	4 50	5 50	6 50	11 00	17 00
3 months.....	4 00	5 50	7 00	9 00	15 00	25 00
6 months.....	6 00	9 00	12 00	15 00	25 00	40 00
12 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 for 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 charge, \$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., LD., Beeton,
Publishers.

PUBLISHERS' NOTES.

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

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

Subscriptions in all ways 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, 50c per Annum. Postage free for Canada and the United States; 10c 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 naturally, 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.

J. L. CORCORAN

Stratford, Ont.

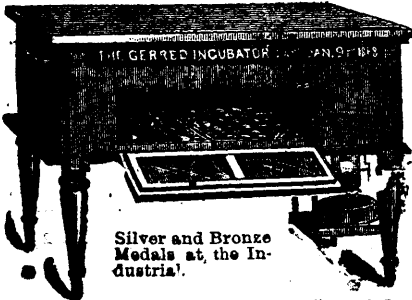
Breeder of Exhibition 1882

BARRED P. ROCKS

White Wyandottes,
S. G. and Colored Dorkings
Imperial Pekin Ducks.

BIRDS FOR SALE AT
reasonable rates.

Eggs, \$3.00 per Setting.



Silver and Bronze
Medals at the In-
dustria'.

Address **E. J. OTTER, Manager, Gerrud Incubator**
Co., 90 De Grassi street, Toronto.

All sizes, 50, 100 and 200 egg ma-
chines. Send for descriptive
Circular. MENTION THIS JOURNAL.

Poultry Netting & Fencing.

We can now furnish the best Poultry Netting at the
following low prices for 2 in. mesh No. 19 wire, in the
various widths, in full roll lots (150 feet to roll):

	19 GAUGE.	48 in.	72 in.
\$3 10	36 in. 4 85	6 00	5
25	18 GAUGE. 4 00	5 00	6 30
			9 90

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

D. H. JONES & CO. LD.
BEETON, ONT

W. T. TAPSCOTT

Has some fine young stock of the following
varieties, now ready for shipment,

Golden and Silver Laced Wyandottes,
Black and White Minorcas,
Black, White and Brown Leghorns,
Barred Plym. Rocks,
Dark and Light Brahmas,

WITH A FEW OF OTHER VARIETIES.

This Year's Breeding Stock For
Sale, Cheap.

Prices greatly reduced between now
and November 1st.



Will give full particulars in answer
to correspondents. State plainly
what you want. It will facilitate
business. Send for Circular.

W. T. TAPSCOTT,
BRAMPTON, ONT.

MENTION THIS JOURNAL.

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
- Back Cochins**—Two Yards. Williams strain
- Langshans**—Three yards. Croad strain
- White Plymouth Rocks**—Four yards
- 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 yards Bonney strain

I make a specialty of furnishing eggs in large quantities for incubators at reduced rates. Send for 1890 Catalogue.

E. H. MOORE, Melrose, Mass.

MENTION THIS JOURNAL.

WYANDOTTES!

White Wyandottes, Knapp & Croffets strain, Rose C. Brown Leghorns, Croffets & Eckers strain Pekin Ducks, Rankin's strain. Stock for sale at all times. My stock is choice.

JOHN A. NOBLE, Norval, Ont



This Space belongs to
C. H. McRae
PARK
Poultry Yards,
DUNVILLE, ONT.
Where choice BUCK MINORCAS and S. C. B. and W. LEGHORNS can be bought.



THOS. BARRETT,
Norfolk Poultry Yards
BREEDER AND IMPORTER OF
Langshans,
S. G. Dorkings,
S. C. B. Leghorns,
White Cochins,
Black Hamburg
EGGS IN SEASON \$3 per 13 or \$4 per 26, Birds for sale.
ANGUS, Ont.



25 cents will pay for a trial trip of **6 MOS.**
The Canadian Bee Journal

EDITED BY D. A. JONES,

And published on the 1st and 15th of each month, containing all the good things in the apicultural world as they come to the front. Think of a whole winter's reading for a quarter. Stamps, American or Canadian, of any denomination accepted at par. Sample copy free on application.

The D. A. Jones Co., Ltd., Beeton, Ont

Please mention this paper.

Discounts for Winter Orders

Following our usual practice, we offer the following *very liberal* discounts off orders sent in accompanied by the cash before the date specified. If you will figure out this discount you will see that our offer is an extremely advantageous one for the purchaser, amounting to a great deal more than a good interest—to say nothing of the benefit of having your goods when you want them. We will, in a week or two more have a capacity for fully twice as much goods as formerly, and we will be able to turn them out better.

DISCOUNTS.

These discounts apply to everything in our pricelist, excepting foundation, honey tins, glass, scales, and wire nails. Up to January 1st, '91, the discount will be 10 per cent. : to Feb. 1st 8 per cent. : to March 1st 5 per cent.

THE D. A. JONES CO. (LTD),
 Beeton, Ont.

PRICES CURRENT.

BEESWAX

We pay 85c in trade for good pure Beeswax, delivered at Beeton, at this date, sediment, (if any), deducted. American customers must remember that there is a duty of 20 per cent. on Wax coming into Canada.

FOUNDATION

Standard Foundation, cut to any size per pound.....50c
 " " " over 50 lbs. " " " ..48c
 " " " in sheets per pound.....55c
 Standard Foundation cut to fit 3 1/4x4 and 4 1/4x4, per lb.60c
 Standard Foundation, starters, being wide enough for 480 frames but only three to ten inches deep



RIVERSIDE
Dairy & Poultry
 YARDS.

Jas. McLaren, Prop
 STEPHENS ST.
OWEN SOUND.

Importer and Breeder
Dark Brahmas Adams strain
S. C. W. Leghorns,
 High class fancy Pigeons
 Lop eared Rabbits,
 Guinea Pigs & White Bats

Eggs from brahmas or W. Leghorns \$2 per 10; \$3.50 per 25. To parties purchasing birds, \$1 per setting.
 JAS McLAREN, Owen Sound.

Choice Thoroughbred Prize Winning Poultry

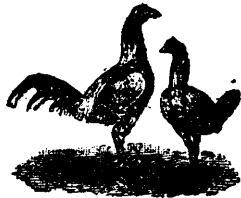
At a reduced rate this month to make room for
 PARTRIDGE COCHINS,
 SILVER WYANDOTTES,
 WHITE MINORCAS,
 and WHITE PLYMOUTH ROCKS,
 or would exchange for offer.

JOHN GRAY, Todmorden, Ont.

GAME

Bantam Fanciers

NEW FANCIERS.



Eight Black Red Cockerets—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 File 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.

H. F. DOTY;
 47 Wellington Place, Toronto

THIS SIZE AD.



3 months..... \$3 00
 6 " 5 00
 1 year. 8 00

Payable quarterly in Advance.

Muth's Honey Extractor.

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

CHAS. F. MUTH & SON.

Cor. Freeman & Central Avenues, Cincinnati

PATENTS!

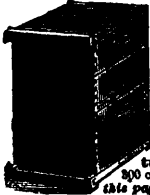
Patents, Caveats, and Trade-marks procured, Rejected Applications Revived and prosecuted. All business before the U. S. Patent Office promptly attended to for moderate fees, and no charge made unless Patent is secured. Send for "INVENTOR'S GUIDE." FRANKLIN H. HOUGH Washington, DC

BARNES' FOOT-POWER MACHINERY



Read what J. J. PARENT, Charlton, N. Y., says—"We cut with one of your Combined Machines last winter 50 chaff hives with 7 inch cap, 100 honey racks, 500 broad frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the number of beehives, 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, 544 Ruby St., Rockford, Ill. 21



BEEES 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 *Gleanings in Bee Culture* (a 11 illustrated semi-monthly), and a 44 p. illustrated catalogue of Bee-keepers' Supplies. Our A. B. C. of Bee Culture is a cyclopedia of 400 pp., 610, and 800 cuts. Price in cloth, \$1.25. Mention this paper. A. I. ROOT, Medina, O.

OWEN SOUND

IS GOING TO HAVE A

MONSTER POULTRY SHOW

—ON THE—

3rd, 4th, 5th and 6th of FEBRUARY, 1891.

Having secured the services of Mr. I. K. Felch, all breeders would do well to get their birds in shape and have them scored by the above judge, as this is his last season as a public judge.

For Prize Lists and general information apply to the Secretary-Treasurer, JAS. McLAREN.

This being their 8th Annual Show, and the Association always paying up their prizes in full, they have the prospects of a good show.

Birds sent in care of the Directors will be carefully handled while under the care of the Association.

P. A. BLACK, President. JAS. McLAREN, Secretary.

CARNOLIAN -:- QUEENS.

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

CONDENSED DIRECTORY.

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

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

MENTION THIS JOURNAL.

BIRDS, Parrots, Dogs, Ferrets, Cats, Monkey, Rabbits, Bird Eyes, Goldfish, Song Restorer, Trap Cages, Distemper and Mange Cure. Wilson's Big Bird Store, Cleveland, Ohio.

W. COLE'S Black Minorcas. I have bred these birds for 5 years and they are as good as any in Canada, United States or England. 1888 bullets 1st 2nd 3rd 4th, 94, 96, 96, 96, cockerel 95, J. Y. Bicknell, 1st 2nd Eggs for hatching \$1.25 per 13. WM. COLE, Brampton

HOLY LAND QUEENS. Home and imported raised a specialty. Bees by the pound and frames queens by the dozen. MENTION THIS JOURNAL. D. RANDENBUSH 445 Chestnut St. Reading Pa. GEO

1890 ITALIAN QUEENS from imported of home bred honey gatherers. Each 75c. at \$4.00. Order now, pay when queens arrive. W. H. LAWS, Lavaca, Sebastian Co. Ark.

FRIEND, Look here! Italian Queens for sale: one tested 45 cts. each; tested 85 cts each; one frame brood 50 cts; three-frame nuclei, with Untested queens \$2; with tested queen \$2.50. E. S. VICKERY, Hartwell, Ga.

100 COLONIES of Italian bees for sale with young queens and plenty of stores; hives hold 18 frames each sides and 2 division boards making double ends. Write for prices stating quantity required. G. A. DEADMAN Druggist etc., Brussels, Ontario.

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.

POULTRY-MEN—Do not order your winter circular or in fact any kind of printing until you have first asked us for samples and estimates. The D A JONES CO., Ltd., Beeton.

BEE MEN Should send five cent for Samples of our lithographed honey Labels. The D A Jones Co., Beeton

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

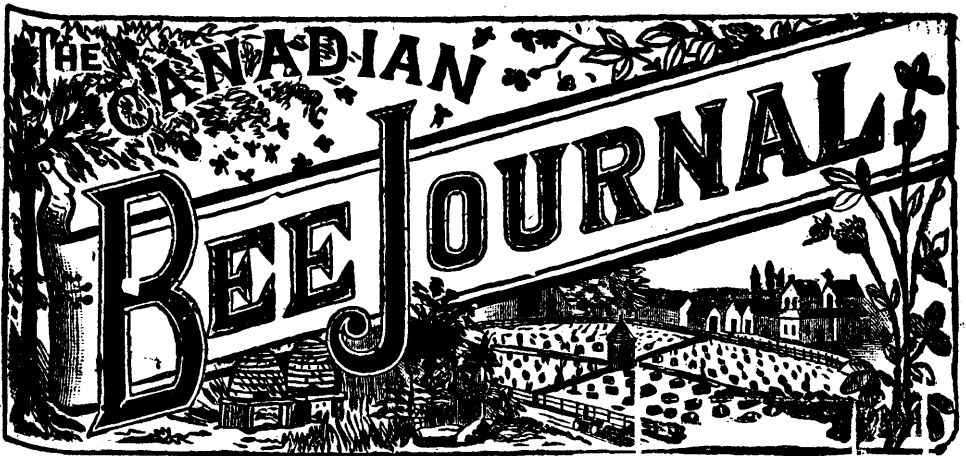
CATARRH

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

WHITE LEGHORNS

My mating this season gives me a fine lot of young Cockerels which I will sell cheap, also one two year old cock, a grand bird.

Write for prices and get the best in America.
R. H. MARSHALL DUNNVILLE



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

VOL. VI, No. 19.

BEETON, ONT., JAN. 1, 1891.

WHOLE No. 279

THE CANADIAN BEE JOURNAL

ISSUED 1ST AND 15TH OF EACH MONTH.

D. A. JONES, - - - EDITOR-IN-CHIEF.
 F. H. MACPHERSON, - - - ASSOCIATE EDITOR.

EDITORIAL.

THIS is the first day of the New Year, and as the universal custom is to "turn over a new leaf" at this time, we shall, in conformance with the general usage, promise during the coming year to give our readers even more of our time than usual. Our earnest endeavors will be to present all that is new, practical, and useful in the bee-keeping world, in a clear and concise way. We will give our readers more matter for their money, after the 1st of February, by which time we hope to have in our premises a couple of machines which will cast every line of type as it is set, and will do about three times as much work as an ordinary compositor. As the cost of composition will thus be reduced, our readers will reap the benefit by receiving a greater quantity of reading matter. The type we shall make will be smaller body, but as large a face, so that while it will be no harder to read, there will be more of it to the page. Then, too, the type will be new every week, as after the forms have been printed from, the type will be lifted out and thrown back into the

melting tank, and used again for the next paper. Then there will be no danger of mistakes in our "mailing lists," a thing now hard to prevent, without the greatest degree of watchfulness and checking. Each name and number will be cast in a solid block, and a figure cannot by any means be pulled out or "pied." Corrections can be more easily and promptly made, and names struck from the list can be lifted out without trouble. With over 5,000 names to handle, on all our lists, the saving this machine will effect in time, will be something enormous.

The "Capping" Department will be carefully edited, and the best thoughts found in our contemporaries will be gathered under this heading. If a person wants but *one* bee journal, they will be able to find the cream of all the apicultural literature right here.

Experiments begun the past season will be carried on this year, to a, if possible, successful issue, and full accounts thereof will be given in these columns. And we will try and do for you a great deal more than we promise. Will you not help us, by securing one or two new subscribers? Until the end of the present volume (April 1st), we will accept from our present subscribers to the BEE JOURNAL their own renewal, and a new name, both for a full year, for \$1.00. Every subscriber should take advantage of this specially low offer, and help us to double our list.

GENERAL.

FOR THE CANADIAN BEE JOURNAL.

State Apiculture—Artificial Comb, and
Other Things.

I HAVE received the "Second Annual Report of the Board of Managers of the Rhode Island State Apicultural School and Experiment Station," which includes the Apiarian report by Prof. Samuel Cushman who is the official apiarist of that institution. As the past season was the first for the Bee Dept, little more was done than to get fairly started. Prof. Cushman seems, however, to have made excellent use of his limited opportunities so far, and the apiarian department of the school will doubtless, under his careful and able management, tend to the advancement of apiculture in general and American bee-keeping in particular.

The United States Agricultural Colleges and Experiment Stations are ahead of ours in this one particular, but that Government as the friend of the bee-keeper is behind ours in other respects. Our Provincial Association is legally incorporated and receives an annual grant from the Legislature which enables it do excellent work in developing bee-culture. Besides that we have our Foul Brood Act and Government Inspector. These are advantages that could not be counterbalanced by any number of Apicultural Colleges or "Stations." If we cannot have both we prefer that which we already possess. Our Legislature has been generous in its dealings with us, and we shall ask more just as soon as we can do so with reason and justice.

ARTIFICIAL COMB.

Here is a chance for some enterprising bee-keeper with large organs of Hope and Constructiveness. After reading my article on "Artificial Honey and Manufactured Science" in the *Popular Science Monthly* for May last, Mr. E. P. Robbins, "Mechanical and Patent Expert" of Cincinnati, Ohio, wrote me a letter about a machine for making an artificial honey-comb, which he says "will be a success." As he gives me permission to use his letter to further his object to sell the machine I make extracts from it which will explain themselves. Mr. Robbins says: "I write to say that I prepared and now have an application for a patent for a machine-press for making artificial honey-comb, with partition with a set of open ended complete cells on each side, a few years ago for a man who took sick, lost money, and went away, and who can and will do nothing with the device. It is the only method

practicable and will be a success. I desire to sell the invention to secure my fees if I can arrange with anyone to purchase the invention."

This must be cleverly arranged machine if it will do what Mr. Robbins claims for it, viz.: make a comb "complete" with full sized cells and all, being at the same time "practicable," and, withal, will be a success.

BEES "HIBERNATING" OR LIVING ON THE NORTH WIND, WHICH?

A month ago (20th of Nov.) I reported the condition I had then found two colonies in which had been deprived of stores 2nd of Sept.—one left with empty combs, the other not. They were alive and apparently well. In about a week or ten days after that the colony without combs had succumbed, while the other was smart. To-day, on examination, I find them still alive and brisk. They are standing out in the yard the same as in summer without any special protection except that the entrance is contracted and the snow surrounds the hive about half way up. Some two or three weeks ago the thermometer went several degrees below zero here. They were evidently a hardy lot, well fitted to survive, and deserve to live. One thing is certain—they have had little or nothing to eat for six or eight weeks. In age the queen will be three next June with her "usefulness gone" as I supposed, but I now feel like saving her to "propagate her kind" another year. Her progeny live when others would die.

THE FOUL BROOD ACT.

A correspondent of the C. B. J. lately referred to a "serious defect" in the Act, there being "no clause in it which prevents the exposure of honey taken from colonies afflicted with foul brood"—so he thought, not having the Act before him. Section 6 of the Act certainly does inhibit such "exposure."

ALLEN PRINGLE,

Selby, Ont., Dec, 19, '90

We surely all feel that the industry by which we thrive has received full justice at the hands of the Ontario Government, and we are sure that Mr. Pringle voices the sentiment of all bee-keepers when he says we prefer what we have received rather than what our U. S. friends have been given by the Government of their country. We have the advantage of being in a country not too large to make its Government unwieldy, and we can approach the our own head of the Government more directly and more easily than our American cousins.—We have in our

office a frame of artificial comb sent us by Eckermann & Will, of Syracuse, which they are making under the Weed patent. They sent the frame along for us to test in actual use, but it came too late to be of any use last season. We fear that Mr. Robbins is too sanguine with regard to his invention. It may be *practicable*, but that it will ever be *practical* we very much doubt.—The item to which you refer in your last paragraph, escaped our notice, or we would have corrected it at the time.

FOR THE CANADIAN BEE JOURNAL.

Foul Brood and Other Topics Discussed

DO subject pertaining to the apiary has received so much attention of late as that of the disease or ailment called "foul brood." In an experience of fifteen years as a modern apiarist, and twenty more years as a bee-keeper, I have never seen a case of foul brood. But this does not make me wholly ignorant of the nature and ranges of the aforesaid disease. The books and bee periodicals have told all that can be expressed in words on the subject, and I have had access to all of them. It seems to me that it has not occurred in a general way, to those who do have practical experience in the matter that climatic (with all this word means) causes must have something, if not everything to do with the malady. If there has ever been a case of so-called "foul brood" in Kentucky, unless I except a few cases bordering on the Ohio river, I have never been made aware of it. In fact in all the information I have been able to gather from all sources I have never known the disease to prevail where bees are *universally wintered in the open yard*. Some cases of the disease have been reported in places or localities where the climate is so moderate that bees are never wintered in crowded cellars, but such cases have always been charged to importation, and soon disappears in such locality. It may be admitted that conditions antipodal to the causes indicated by me, may produce the same results, (i e) furnish a home for the malady. But in any event, the hints deductable from the facts I have pointed out opens a wide field for investigation. Has it ever been demonstrated that the spores detected in decaying brood commenced their work of destruction on the *healthy living larvae*? If not there is room for suspicion that the larvae may perish from some other cause and afterward become a fit substance for

the survival and growth of the *fungi*. In any opinion it will be hard to demonstrate that perfectly healthy larvae fairly swimming in perfectly healthy food, free from all taint or decay, is congenial soil to nourish the growth of spores or fungi, but as Dr. Miller would say, "I don't know."

THE PROPER SPACING OF BROOD FRAMES.

A great deal of interest has been manifested of late concerning this matter. I am not sure that any fixed distance from centre to centre of the combs is necessary or even desirable. I prefer to have my combs movable so that I can exercise my best judgment when spacing them. When combs are being built by the bees I place the frames as nearly 1½ apart as is practicable, for thereby I get straighter combs, having fewer waves and kinks, whether built from starters only, or from full sheets of foundation. But after the combs are fully completed I prefer to work them 1½ inches from centre to centre in the brood nest and 1¾ apart in the extracting supers. Colonies that are worked with the brood combs as wide as 1½ inches apart from centre to centre always come through the honey season in better condition than do colonies that have the combs worked closer. This is a matter of very great importance to me. The colonies which come out of the honey season in the best condition are always my best colonies the following spring. Combs that are to go to the extractor may be worked 1½ inches apart. Such combs are heavy and plump. They are rapidly uncapped and turn out in quantity of honey with less labor than do combs closer spaced, to say nothing of obtaining the same quantity of honey with fewer combs which of course means less expense. When producing comb honey closer spacing in the brood nest is less objectionable because bees are *able* to fuss with bar and brace combs when *working* comb honey.

PERFORATED QUEEN EXCLUDERS.

There seems to be some opposition to the new device. I think the cause must come from the lack of information in a practical way. I do not use them when producing comb honey because my queens do not invade my *section* cases. But they are indispensable when *working* honey with the extractor. If you want to produce the clear article, thoroughly evaporated by the bees, you must practice the tiering up system and keep the queens in their own chambers. The presence of brood in the extracting combs is objectionable on account of its being in the wrong place, taking up room that should be filled with honey, and more, because the *stunted*

nectar in the open cells about the brood acts as a ferment to the best of honeys. I am a stickler for the finest, thickest honey that can be produced by the best management that can be brought to bear on the business. When my honey goes to a home customer, or to the city market, nothing but words of praise are ever heard spoken concerning it. The queen excluder enables the intelligent apiarist to manipulate his bees in almost any and every fashion, especially at swarming time.

DESTROYING* BEES.

These dyspeptic words have alarmed very many sentimental people besides "Uncle Gates." Just leave off these horrid words and manage your bees on the same principle that you apply to your domestic animals and you have all I have ever contended for. Brother Gates don't eat "starved animals." Certainly not, his selfishness dictates otherwise. There is a sort of refinement of cannibal cruelty in fattening a man, a brute, a bee, before you kill them. If it is a question of cruelty, the fattening process and feeling of the ribs to know when to lead the victim to the slaughter pen, is the keenest out of all cruelty. If it is a question of suffering. I know of no more merciful way to dispose of bees, if you have a surplus, than to just leave them alone. That is nature's way of disposing of them intenser of dearth. No brimstone match is necessary. A little cold, without food, brings on no dread roar of suffocation, but rather a sort of hibernation, attended with no suffering and no waking to suffer. Sometimes when walking among my hives in the winter, I am wont to say, "how many of these busy bees will live to ring out the glad hum when the elms bloom, and echo answers how may. It brings a pang to me to have to take the life of domestic animals for food or profit. But I contend when viewing the matter from Mount Consistency, that the man who can draw the knife across the throat of the fatted calf plays the part of a weeping hypocrite when he raises his hands in the attitude of an implorer of mercy when his neighbor destroys his bees for profit. Brother Gates being pressed between the ruthless jaws of consistency, attempts to show that I contradict myself in the figures \$4.12 and \$5.12. I had never noticed the discrepancy, and do not know who is to blame for it, the printer or myself. Very likely I was in fault. 82 sections, at 16 cents each, I believe makes \$5.12. Mr. Gates had the key to unlock the mistake if he wanted to do justice.

G. W. DEMAREE.

Christiansburg, Ky.

Information Wanted By No. 2.

WHAT is a snidelawer? Will Mr. Heddon please answer? Who are the "psudeo-professional men and quack Doctors," possessed of "imaginary apiaries?" Where abide those "voluminous writers" who are well educated, possessed of literary ability and who write vigorously and learnedly," From whence come those "literary apiarists with vivid imaginations who possess everything but practical talent?" that Mr. Heddon professes to know, and whose names he would have expunged from the list of contributors to bee papers. I am curious to know who these clever intellectual people are. Will Mr. H. kindly inform me. I want to know because a kindly feeling towards my fellow men always wells up in my heart about Christmas-time, which finds its expression in good advice. I know it does one good to do good, and I am anxious to bestow upon those highly favored but mis-guided men a little of this cheap commodity, and warn them not to cast their pearls before—beekeepers any more.

.

Beeswax will be cheap and dead bees plentiful next spring. That Indian away back among the nickel mines should have sold his wax when Jones sent his pack mules after it.

.

Why is the Heddon hive like those "snide lawyers, psado-professional men and quack doctors?" Because its merits are patent, but not generally appreciated.

.

"Those beardless laddies
Who think they better are informed
Than their auld (scientific) daddies"—Hasty

.

Now, Mr. Hasty, this is altogether too hard on "the boys." You were a boy yourself once and you ought not to forget your boyish conceits. You know there is no time that a man knows as much as when he is a boy. You have no business to drag Aristotle and Galilio out of their graves and stand them up before our boy beekeepers as an example. Let the honored dead rest and our boys have their sway. Don't repeat those sages "assertions concerning physical phenomena" to those who know better. What did those venerable worthies know about physics anyway? To kill a man they had to drench him with hemlock tea. They knew nothing about homeopthay or one-price sections.

The meeting of the O. B. K. A. Board held last spring to appoint an inspector of foul brood, I believe cost the Association about \$100.00. I hope the inspector for 1891 will be appointed at the meeting at St. Catharines and this expense saved.

A hundred bees are killed by paris green on potato vines for one that perishes from spraying fruit trees. The glistening dew drops on the vine leaf tempt the bees to indulge in a morning draft of death.

What kind of beings are "closed-end or partially close-framed friends?" Will Prof. Cook please classify them. See *Gleanings*, page 891.

Dr. Miller wants to know "just how much a pound of wax costs." In Detroit it is reported to be worth 27c.; in Cincinnati it may be bought for 26c.; in Boston the market is bare; while in Beeton (its a dear hamlet anyway) it will cost him 32c. According to Mr. Dayton beeswax is worth about one-and-a-half times as much as honey. He tells us "that by experimenting I got one pound of finished comb from 1 3/5 pounds of honey from several colonies, and at one time fifty pounds were produced from 72 pounds of feed." I wonder if 50 pounds of butter can be produced from feeding 70 pounds of cornmeal to a cow. It is doubtful if it will ever be known how much honey must be consumed to enable bees to secrete a pound of wax. Wax is the product of the bee, honey is not. Honey to be converted into wax must be taken into the stomach of the bee, digested and assimilated, before the transformation is completed. The proportion of bee food available for wax making is to most people an unknown quantity. But I am poking my nose in among the "scientific daddies." Already I see the ghostly shadow of Old Aristotle looming up, which is sufficient to frighten away

NUMBER TWO.

Sectional Hives—Contraction.

MR. Heddon is laboring under a misapprehension on page 354 of the *JOURNAL* in supposing that I made any reference to him or his reversible and interchangeable hive in my late communication on page 348. No reference to any one of the "special features" of his invention was made that did not belong to the sectional hives that were invented and patented long before he was born. A great part of his misapprehension, and particularly that of the beekeeping public,

is due to his application of a few new terms to old time features of sectional hives, such as the terms "horizontally divisible, interchangeable, etc," as applied to the parts of the sectional hive. As regards these features his invention is one of terms rather than of principles in mechanical construction. Mr. H. is referred to "Quinby's Mysteries of Bee Keeping Explained," page 25, edition of 1853. The sectional patented hives are here described as consisting generally of three parts one above the other, the top part for surplus and the lower parts for brood. Here we have the horizontally divisible brood chamber made so as to be interchangeable with nothing to hinder the practice advised on page 348 but a want of knowledge and a queen excluder. Because the functions of these hives were not known in 1853 it does not follow that the principles were not there. So much for the "special features" claimed by Mr. Heddon to be secured to him by letters patent.

However, the design of his communication is to lay claim to my new system of management, for he well knows that he has no claim on the Langstroth hive that I am now using and recommending above all others. It has no "special features" that does not belong to the Simplicity hive, which may be used as a storifying sectional hive in two or more stories. In many parts of France, according to Mr. Cowan in the B. B. J., the two storey Simplicity hive would be considered quite too small! My brood chamber may be used the same, in one storey, two storeys or more, and differs from it in no essential particular except as to size. In its construction I am pleased to acknowledge that I have copied after Father Langstroth's great invention adding the "special features" of the Simplicity and Cowan bee hives that have long been in popular use. Furthermore I did not patent this copied invention as did Mr. Heddon his. See remarks to follow:—

It would be wise for him to narrow his claims down to those granted in his U. S. patent that he was unable to enlarge by re-issue. The claims sought by re-issue are those made in his book and circulars from which he quotes, and to the extent that these claims are unauthorized by his patent, they are an imposition on the beekeeping public. Mr. Heddon also claims to be the author of the 'contraction system,' and to have invented the wood-zinc queen excluder, as well as the "greatest hive on earth." To establish the latter, he in some way prevailed upon Father Langstroth, feeble with old age, to practically repudiate his own great invention, and endorse the new reversible hive as superior

to it—a strange affair, but more of this at another time.

As Mr. Heddon would now claim the new system of management, it will be necessary to give the full history of its origin, and I propose to show that his part in the matter has been very small indeed. Some time in 1881 or '82, Mr. Doolittle gave to the beekeeping world his contraction system in the production of comb honey. Not long after Mr. Jones introduced perforated zinc to American beekeepers. Here, then, was the beginning of the system that is now attracting so much attention, and which is to become the great system of comb honey production of the future. It is to be remarked that the rise and process of the system has been slow and is creditable to no one man, but is the result of years of experiment and investigation by a host of beekeepers. Though I may take less credit than I deserve in publishing for the last three years what I have called "my new system of management" I am free to acknowledge it is the outgrowth of the labor of many minds. The invention of the Heddon hive has had little or nothing to do with it, as the following will show. In 1884 there was quite an agitation in Gleanings and several other bee papers about reversible frames and hives. Mr. Heddon, following the lead of Mr. C. J. Hawes, became highly enthusiastic in the matter and proceeded to invent a reversible hive. On page 336 of Gleanings for that year he tells us when and how he got up his new reversible hive and all about it. He says: since my former article I have made several reversible hives which are now piled up in my waste room. It consists of a plain Simplicity case into which we place 8 brood frames made on the same principle as is a common open top and bottom all dovetailed section, the top and bottom bars being $\frac{3}{4}$ wide, while the end bars are $1\frac{1}{8}$, and close fitting." After a further description of this hive he had evidently copied from Mr. Hetherington, he goes on to tell how he copied from Mr. Bingham in making another hive. After making the frames a little deeper and shorter and using a bottom bar as well as a top bar, both being just alike, he clapped them together on the tight-end-fitting plan, with the loop wire and key, as invented and used by Mr. Bingham. He also made upper stories of wide frames to hold sections, which were clamped together in the same manner. But as yet he had not invented (copied) his set screws to clamp these frames. Still he had secretly tested for three years his patented hive prior to the spring of 1885. Now if he had invented the set screws why was he foolish with Mr. Bingham's loop wire and key

at this time? Mr. Heddon may try to reconcile this matter if he likes, but the reader will perceive that no explanation can ever reconcile his statements, that in the spring of 1884 he had not tested his patented hive as alleged. The purpose of thus ante-dating his invention may be to claim the contraction system which was made known by Mr. Doolittle at about that time or in 1882. Mr. Heddon may claim and claim, but until he gives us one invention, pure and simple, that he has not copied from some one else his reputation as an inventor is nil.

The article above referred to presents a strong argument for reversible hives. Mr. Heddon tells us he had "slept and dreamt and laid awake over the subject" from about the 1st of April till fifth of May in his efforts to invent a reversible hive. On the 3rd of March, 1885, he applied for a patent which was granted in September following. The patent shows that the reversible hive idea was the dominant one, the interchanging feature standing next. As neither of these features by themselves are of any consequence in the new system of management; and as no reference is made to the latter in his patent, or in his book, it is clear that at this time he knew nothing about it.

In 1883 he began the contraction of the brood nest in producing comb honey and in 1884 began the use of queen excluders which Mr. Heddon condemned after his three years of secret experience, all through the year 1885 as of "no value at all" in the production of comb honey. I used tin and wood hives and also some of Mr. Jones perforated zinc. This I cut in strips and tacked on the slatted boards I had been using the same as I had used the tin. Mr. Heddon also used the zinc in the same way, or if not then, he did in 1885. Because of this he claims to have invented the wood-zinc queen excluder, which he confesses to have never made, had never used or had never seen until he saw one on my hive at the Mich. State Fair in Sept., 1885. As the inventor, it devolved upon me to experiment and investigate, to ascertain its uses. From the first I placed great value upon it; thought of getting it patented, but finally decided to give it to beekeepers, which I did. I could and should have got it patented. Had I done so Mr. H. would now be paying a royalty, on any queen excluders he has since made and used. Instead of expressing any gratitude to me that I decided not to patent it, he went on and sought to deprive me of all credit as the original inventor. I have been thus explicit about the queen excluder as without its use the new system of management is not worth a straw. After experimenting with various depths and

styles and sizes of brood frames, I finally decided in 1886 that the 7-inch frame (I had near 40 colonies on the 7-inch closed end invertible frames at this time) gave the best results with the queen excluder in working for comb honey. I then tried a 7-inch Langstroth brood frame and it worked so well in all respects that I transferred all my bees to these frames and I have been better and better satisfied with them and the results to be obtained with the queen excluder every year since. In that year also decided that a brood chamber having a capacity of about 830 square inches of brood comb, was the most servicable and especially for swarms in working for comb honey. I had been aware that a good queen was capable of occupying about 1400 square inches of brood comb with brood before white clover bloom and as I deemed this amount of brood a great advantage I found it was to use a brood chamber, perfectly adapted to the use of the queen excluder, I would have to use two stories in the spring for breeding, and this result would have followed and the new system which has grown out of it would have been developed the same if Mr. Heddon had never invented a hive at all. Instead of further improving his hive and developing a practical system he stopped with his patented hive in 1885 and has not made an inch of progress since.

Now I desire to say further, that my interests in the new system of management have been, and are still the interests and the prosperity of American beekeepers, and though I do not expect to profit from its introduction to any great extent, except in my own apiary, it will be my pleasure to see others profit by a system that I have labored so long and so hard to develop and perfect.

DR. G. L. TINKER.

New, Phila., O.

FOR THE CANADIAN BEE JOURNAL.

Establishing An Apiary.

IN selecting a locality for an apiary we are undertaking a very important and difficult task, and a little extra outlay in money and time before finally deciding, may repay us with a very heavy percentage of interest. Let us first study the case from a geographical standpoint. I have come to the conclusion that three miles from a lake—a large lake—gives us great advantages. In spring the blossoming of flowers is retarded for some distance inland owing to the cold air from the water, and when apple blossom is in full bloom, in fact when the petals of the flowers commence to drop, they will just be commencing to open on the lake shore. Other

flowers earlier and later the same, yes, right down to golden rod in the fall. Again, the fall frosts are, nine seasons out of ten kept back through the warmth coming from the water in the fall, and when every blossom has succumbed to cold, eight or ten miles from the lake, along the lake shore they may be still untouched. It will readily be seen of what immense advantage this may prove to be during the honey season. Of course we all know the advantage of being in a country with low and high land in the vicinity; also of having light and heavy soil within reach. It not only gives us variety of pasture but lengthens the seasons also, and gives us a surer crop. In selecting an apiary I should prefer cultivated and uncultivated land in the same vicinity for the same reason. Won't we have to come down to permanency of location. We have an instance within seven miles of here, the village had no grist mill until lately, one man decided to try one and now there are three in process of erection. A person can scarcely conceive of such folly, yet it is so. With an apiary there is yet a greater danger when a beekeeper establishes an apiary, and on account of his adaptation and knowledge is able to get good results, every Dick, Tom and Harry, in the vicinity, commences to think he can do as well without knowledge and without devoting any time to his bees; and the man who has devoted his time to beekeeping, or largely so, can move to fresh fields and raise another crop of beekeepers. Now I must confess, I believe the beekeeper is open to blame for this. he refuses to sell bees, he is not candid in giving information, and his neighbors think if he tries to keep others out of the business it must pay well, better than it does. But to my subject. In establishing an apiary it should be done in such a way that one may move without very much loss, that is, if beekeeping is first in occupation, other things secondary. For a location, good to-day, may three years from now be valueless for an apiarist, and then he sells his property, perhaps at a sacrifice. In selecting a place for an apiary I do not ignore the advantages to be derived from good schools, intercourse with God's people, etc. We do not live to gather honey any more than dollars, and however strong the temptation may be, living with the aforesaid advantages are better for ourselves and families than plenty and to spare without them.

R. F. HOLTERMANN.

Romney, Ont.

* * * If you require catalogues, circulars, note heads, envelopes, or anything in the line of job printing give us an opportunity of estimating.

Oxford Bee-Keepers Association.

THE annual meeting of the Oxford Bee-keepers' Association opened Dec. 17th, in the County Council Chamber, Woodstock, with a fair attendance. The meeting was taken up with business, the first being the reading and adoption of the minutes and financial report.

The election of officers resulted in the election of F. A. Gemmell, President; J. W. Whealy, Vice-President; J. E. Frith, Sec.-Treas.; and Messrs. M. Emigh, J. B. Hall, John Newton, Jethro Gould and W. Burkholder, Directors for 1891.

A short discussion occurred on foul brood legislation, emphasizing the important part played by this Association. It was decidedly felt that had it not been for the plans put into operation by this Society, foul brood law would still be a thing of the future. It is painfully apparent that those who set the ball rolling, have conspicuously been left in the back ground.

The afternoon session opened with a paper on Apicultural Journalism. The writer pointed out the great benefits derived from that source. Bee journals have fostered an infant occupation into one of the world's coming industries. In fact it is already upon the world's commercial arena. Canadian bee journals were not one-tenth appreciated. How is the matter to be bettered? The paper discussed the pros and cons of private and public journals; those conducted by private enterprise and those conducted by public enterprise. A healthful and, it is to be hoped, a profitable discussion followed. Martin Emigh was appointed by resolution, to bring the matter before the O. B. K. A.

Mr. Ho'termann's paper on the selection of an apiary, was then read by the Secretary. The point of interest most noticed and discussed being, first, a location within three or four miles of a large body of water. Such a locality gives a greater length of honey flow owing to the influence of the water. Second, that a position in a hilly country was very desirable, as the honey seasons were influenced materially by such localities; and third, an apiary situated in a place where there are equal proportions of cultivated and uncultivated lands affected the honey crop very materially. The paper gave some good advice on permanency of location. The writer had known instances in which bee men had to sell at a sacrifice owing to bee pastures becoming valueless. So had members of Oxford Association.

An epistolary letter to the Association from Mr. A. Pringle on the foul brood subject, point-

ed out the position the Canadian bee-keepers are in as regards the prevalence of the disease, and the determinedness with which we are endeavoring to exterminate the malady from our land. The letter was calculated to stimulate to greater energy in this direction, as is shown by a unanimous resolutions that the delegates of this Association bring the matter of legislation re imported bees and queens before the O. B. K. A. J. B. Hall and J. E. Frith were appointed delegates to the Provincial Association.

Mr. McEvoy, Foul Brood Inspector, then gave us an interesting and, in respect to the prevalence of foul brood, and astonishing account of his work the past season. Every one present felt that we are fortunate in having the present law. "It ought to have been so ten years ago," being a common and oft repeated expression. Mr. McEvoy's practical answers to many questions at the close of his address, were highly appreciated by the bee-keepers.

A vote of thanks to the contributors closed one of the most interesting and profitable meetings held by this association.

The statistical report of the Association shows that there are in winter quarters 1,037 colonies, 7,520 lbs. of comb honey, and 25,150 lbs. of extracted honey was taken taken this season. Foul brood was reported from three localities.

J. E. FRITH, Sec.

Princeton, Ont., Dec. 19, '90.

FOR THE CANADIAN BEE JOURNAL.

A Model Report.

DEAR SIR,—Bees are in their winter quarters, therefore it may not be amiss for me to send you a report of what the season has been, and how they have done. You, and many of your readers will probably say that it is my passion for inkling that makes me give a report at all, since I cannot give a better one; but I believe a person should be just as ready to report a partial failure in a poor season, as he would a success in a good one, as if only the bright side is given, reports would mislead, instead of giving information, and would fill the minds of the uninitiated with the idea, that bee-keeping was all sunshine; and besides, before laying down my pen, I may perhaps give some information that may help some other novice.

KEEP FILLED COMBS FOR SPRING FEEDING.

So much for introduction, let me now come to business. I reported last spring that I was starting with 35 colonies, but after sending in my report, I had one queenless colony which I had to put in with another one so that 34 was

the number with which I commenced the season which was rather a poor one here, as well as in most other places. I only got about 1,500 lbs. of honey nearly all extracted, or an average of 45 lbs per colony, spring count, and increased my stock to 53 colonies, all good and strong with lots of bees and plenty of good stores for winter, and a good lot of filled combs besides for feeding in the spring if necessary. I believe it would be a mistake for a bee-keeper not to have a few combs of good honey to give his bees in the spring if they need any feeding, as one can give them so much easier than syrup, and without the danger of arousing their robbing propensities, and nothing is better to stimulating brood rearing than a comb of honey, the cappings slightly scratched and broken, just enough to make it leak and run a little. I believe I would have lost a lot of my bees last spring, if it had not been for the combs of honey kept over from the previous season, as the spring was so wet and cold that they could get nothing.

EXCHANGING ROBBERING COLONIES.

Spring and fruit bloom were a total failure, so that bees had nothing to do but to rob each other, and that they would with a vengeance if they got a chance, but I took good care not to give them a chance. Once they did get started in spite of all precautions taken, but I set the hive being robbed on the stand of the one that was robbing them, and the robbers on their stand, and that stopped them at once. When clover came in bloom they worked well, and were in fine condition for a honey flow, but the weather got very hot and must have dried up the nectar in the blossoms, as honey was coming in very slowly, although the bees seemed working hard and very busy; but nearly all the honey taken was from clover, as basswood was almost a complete failure, and fall flowers the same. My bees swarmed a good deal, but I put back all second swarm, and doubled up some of the first ones, and by that means kept increase within bounds.

TESTING CARNIOLANS.

In my report last year I mentioned that I was giving Carniolans a trial, and had three colonies of them, and that I would give my opinion of their good and bad points after handling them another season. They wintered well, two of them were very gentle and easy to handle, in fact more so than any of my Italians; they were good honey gatherers and would get it if they had to steal it; they are persistent and inveterate robbers, a trait in their character that I do not like. The third colony was good to run away from, yes, and keep away from too; they were

the most vicious and bad tempered bees I ever had anything to do with. Talk of the hybrids being cross, but I would back that colony of Carniolans for pure ugliness against any hybrid, Cyprians, or Syrians, and I might almost say hornets. Their sole mission on earth seems to be to sting and act as guards for the whole apiary. They are all good comb builders, capping the combs with the whitest of wax; found them no more inclined to swarm than the Italians; but they build more queen cells. I found 22 cells in one of their hives after they had swarmed. I shall try them another season yet before discarding them, but shall not increase their number, as I believe the Italian a better all round, or general purpose bee.

LAYING WORKERS.

I had my first experience last season with laying workers. I found one colony queenless, and not having raised any queens myself on account of the backwardness of the early part of the season, I sent away for a queen; but on account of some delays she was a long time in arriving, and when I opened the hive to introduce her, I found more than half the combs filled with laying workers' eggs and brood, from one to four eggs in every cell as far as they went, and concluding that it would not be safe to introduce her to such company, I went to another colony which I knew to have an inferior queen, but imagine my surprise on opening that to find her ladyship gone and laying workers just starting to take possession of the combs, and you may believe that I thought things were coming to a pretty pass. I went to the third one, found them all right, introduced my queen and then devoted my attention to the extermination of the laying workers, which was done very quickly and easily. I use a hive with loose bottom board, and after giving them a good dose of tobacco smoke, I pick them up and set them on the top of other colonies having good queens and in a normal condition in every respect, and prepared with a few puffs of tobacco smoke there was no fighting worth mentioning; but laying workers were soon a thing of the past. There are other ways recommended for exterminating them, but I consider them more or less fussy. Some may say that in the above method the colony is lost. It does make the number one less of course, but not necessarily lost, as one will be so much stronger, that it will make up for the apiary being one less in number. I do not take any credit to myself for the above method, as I saw it recommended by Mrs. Harrison, of Peoria, Ill., and am quite willing that she should have all the credit for it.

Before concluding I may say that with regard to the wintering problem I have no fear, cellar is slightly damp, but I do not consider that any great disadvantage as long as the temperature is high enough, and always the same. With bees in good condition, as regards plenty of good stores and strong in numbers. Of course if temperature of cellar rose and fell in sympathy with the weather outside, the dampness would be almost certain death. Thermometer has stood at an average of about 44 degrees. very little above or below that point since bees were put in the cellar, and as long as temperature keeps at that, I see no reason to be afraid of any serious winter losses. For ventilation I have a pipe from within six inches of bottom of cellar, and connecting with stove pipe above to draw damp, cold or foul air from the bottom, and make room for pure and fresh air coming in; but although not afraid of the winter on my own account, I believe there will be heavy losses this winter among farmers and others who keep them on the let-alone principle, and neither take the time nor the trouble to know what condition they are in. There are a lot of people in this country keeping bees who never cut out a queen cell or return a swarm to the parent hive, and who cannot be made to believe that two colonies can be united without them killing each other, and after such a season as the last one was, bees that were allowed to follow their own sweet will, are sure to be in poor condition to stand the winter, and must in the natural order of things suffer seriously if not become a total loss. Let us not, however, rejoice over the misfortunes of others, although the losses of such will be to the advantage of the practical everyday bee-keepers, who spends his time and talents in the business, for it is the farmer and the small go-as-you-please bee-keeper who always cut the prices and spoil the market for the men who are trying to build up an honorable business, and make their bread and butter out of it; but generally speaking the farmer spends nothing on his bees, and looks at anything he gets from them as so much clear profit, and on going to market takes the first offer, and that in trade, whatever it may be, and is happy for bees work for nothing and board themselves, a sad delusion as all know who are trying to make a living by keeping them.

ALEX. BLACK.

Sonya, Dec. 24th, 1890.

You are quite right, friend Black; the point you make about sealed combs is well taken. Few of our bee-beepers imagine the value of such combs to

them; too many fancy that extracting the honey out means so much extracted honey on hand, and at the current price a pound, can reckon up how much they have made, when the fact is that if they had a portion of their crop sealed in combs, as you have done, for putting in their bees in the fall to give each one ample stores for wintering and then for spring feeding, one or two seasons would convince them of the benefit.

Your cross Carniolans have been hybrids. Pure Carniolans have not the cross disposition you speak of, neither have they, as far as I can see, the disposition to rob. I never had pure Carniolans do it, but I have had crosses that would rob like everything. It is a very difficult matter to tell a cross between the Carniolans and the black bees except by those who have given the matter much attention, and I think that hybrids are often mistaken for the pure races. A cross between Carniolans and Italians is much better than between Carniolans and blacks. There is no doubt of what you say that the pure Carniolan is not equal to our best Italians, or what we term Italians in country, which have a slight tinge occasionally of Syrian.

There is one point which you do not mention which I think necessary, that is, to take some steps to prevent the eggs being matured into little drones. I recollect trying to see if the bees would destroy the eggs, but found them feeding and caring for them, and in a short time, if allowed, the capping over of full combs of drones, this necessitated unnecessary consumption of stores, put the combs containing the eggs in a cool cellar for 24 hours, or put in a tub of cold water, and allow to stand for a short time, after which throw the water out of the cells. This prevents the eggs from hatching and will kill any larvae in the combs, which the bees will readily remove. It is not only the honey consumed and labor lost in rearing these little drones, but it is the honey they consume afterwards. They became a hoard of consumers in the hive rather than producers, which materially effects the surplus honey crop.

What you say in reference to farmers marketing honey is true in many in-

stances, but whenever we have found them willing to take less than the regular price we have either bought it, or frequently suggested their names to some of our customers, telling them that Mr. so and so had a little very nice honey, and being willing, to take less than the market price we would advise them to get it at once. After they had sold their crop for less than it was worth, we would then tell them why we did it. If they were determined to charge less for their honey than they could get for it, at the same perfectly willing to ask and get more if possible for everything else they had to sell than it was worth, we were equally willing to oblige our friends by letting them know where they could get honey for less than its value. This method sets them to thinking, especially if they find they have lost a little, and they will try next time in almost every instance to get the highest price.

Ontario Beekeeper's Association.

ANNUAL MEETING AT ST. CATHARINES, JAN 7, 8, '91
 THE following circulars have been sent to all members of the Ontario Beekeeper's Association, by Secretary Couse, and it is to be hoped that a large number will take advantage of the reduced rates which have been granted. It is also desirable that as many as possible send along their renewal membership fee of \$1.00 per annum, so that there may be a good choice of officers for 1891. Although it cannot be officially announced, still, there will likely be the usual premium to members. We mention this in case some have been induced to become members because of these yearly premiums, though it would be painful to think that such were the first consideration. Let all turn out and have a grand meeting. All being well, both editors of the CANADIAN BEE JOURNAL will be on hand for the first session.

Dear Sir,—You are respectfully requested to be present at the annual meeting of the above association, to be held in the Court House, city St. Catharines, on January 7 and 8, 1891.

Arrangements have been made with the O. P. R. and G. T. R. for the usual reduced rates to persons attending the convention, as follows: By purchasing a full-fare single ticket to St. Catharines, and getting the agent to fill in the usual delegates certificate (all agents will supply these for the asking), you will be allowed to return home (by same route) for one-third single fare, provided that fifty or more persons

attend the convention, who have paid railway fares, and who hold these certificates. If less than fifty you will pay two-thirds single fare in returning. A certificate will be required for each line of railroad travelled over, and they must be obtained at the starting points. Without these certificates no reduction in return fare can be obtained. Buy your ticket and ask for certificate ten minutes before train is due to leave, if you would be sure of getting it. Special hotel rates have been arranged for: Welland House; \$1.50 per day; International, \$1.00 per day. Both are convenient to the Court House.

If you find it impossible to attend, you will confer a favor, by forwarding the membership fee (\$1.00) for 1891, so as to reach me by the 5th of January. It is desirable that there be as many members as possible from amongst whom to select officers for the coming year.

The prospects are for a large and interesting meeting, and you will do well to attend.

St. Catharines is distant only 11 miles from Niagara falls, and there is frequent train accommodation to and from this great natural wonder.

Trusting to have you with us, I am, yours truly,

W. COUSE, Secretary.

Streetsville, Dec. 26, 1890.

PROGRAMME—FIRST DAY.

- January 7th, 2.30 p.m.;
- Minutes of last meeting.
- Director's Report.
- Secretary's "
- Treasurer's "
- Auditor's "
- Affiliated Societies' Report.
- 7 p.m.—President's Address.
- Paper by R. McKnight,—Honey Bearing Plants.

SECOND DAY.

- 9 a.m.—Election of officers.
- Report of Foul Brood Inspector.
- Paper by D. A. Jones.—The best Honey—Where obtainable.
- 1 p.m.—Paper by Dr. A. E. Harvey—various kinds of bees and their respective values.
- Paper by C. W. Post—How to manage out-apiaries.

CLUBBING LIST.

We will club the CANADIAN BEE JOURNAL with any of the publications below at the prices quoted in the LAST column:

	COMMONED. COLUMNS.	
The Canadian Bee Journal.....	\$.75	
and American Bee Journal (w) ..	1.75	\$1.60
Gleanings in Bee Culture (s-m) ..	1.75	1.60
Beekeepers' Review (m)	1.25	1.15
Beekeepers' Guide (m)	1.25	1.15
Apiculturist (m)	1.50	1.35
Beekeepers' Advance (s)	1.25	1.15

Queries and Replies

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

Difference Between Fertile Queens and Drone Layers.

QUERY No. 284.—1. How do you tell a fertile queen from a drone-layer? (2.) What difference is there between a drone-laying queen's mode of laying eggs and that of a fertile worker? (3.) How do you tell the difference in the eggs before they hatch?—J.

G. M. DOOLITTLE, BOBODINO, N. Y.—Never had a drone laying queen in my life so an answer would be mere presumption.

R. MCKNIGHT, OWEN SOUND, ONT.—(1) Some one who knows more of drone laying queens than myself must answer these questions.

DR. A. B. MASON, AUBURNDALE, O.—(1) By her progeny, or by a microscopical examination of their eggs. (2) Have had no experience with drone laying queens.

O. O. POPPLETON, WILLIAMSTOWN, IOWA.—(1) Cannot tell by any difference in the queens. (2) None that I have ever noticed. (3) Cannot tell except with the aid of a powerful microscope.

M. EMIGH, HOLBROOK, ONT.—(1) By the work she does. (2) One is liable to fill a cell half full of eggs, while the other usually lays but one egg in each cell. (3) By the way they are placed in the cell.

H. D. CUTTING, CLINTON, MICH.—(1) From the brood when hatched. (2) A fertile worker places the eggs on the side of the cell, while a drone laying queen puts them on the bottom. (3) I don't believe I can.

B. LOSSEE, COBURG, ONT.—(1) Couldn't tell the difference. (2) Queens laying drone eggs only, lay them regularly; fertile workers irregularly. (3) Fertile workers mis-place them; queens lay them regularly and all queens look alike.

DR. C. C. MILLER, MARENGO, ILL.—(1) You can't tell them apart till their brood is capped over. (2) A laying worker lays irregularly, perhaps several eggs in a cell and prefers drone cells. (3) You can't, unless by the irregular laying.

S. CORNELL, LINDSAY, ONT.—(1) By her progeny. (2) I have had very little experience with fertile workers. Both place the eggs in

cells irregularly, in different positions and often several eggs in the same cell. I do not know of any characteristic difference between the modes of laying eggs.

PROF. A. J. COOK, LANSING, MICH.—It were better to ask, how do you tell an impregnated queen from one not impregnated? The eggs from the latter will produce only drones. Can only be done by the aid of the microscope, and is quite too difficult then to be of practical value even with the expert microscopist not to say the common bee-keeper.

H. COUSE, CHELTENHAM, ONT.—(1) Fertile queens are generally much larger than drone layers, the latter being not fully developed, the abdomen being more tapering. (2) Fertile workers place their eggs here and there and a number in a cell, while the drone laying queen places her's more uniform. (3) Have not observed any difference.

S. T. PETTIT, BELMONT, ONT.—(1) So far as my observation goes I can tell for a certainty by their progeny. The extremity of the abdomen of a drone layer is comparatively large, while the other parts of the abdomen seem slack, small or poorly filled. Some queens that lay mostly drones are extremely large. (2) Don't know. (3) Cannot tell.

A. PRINGLE, SELBY, ONT.—The fertile queen is distinguished from the virgin by fullness and enlargement of the abdomen, by slower movements, and a greater degree of self-possession. (2) The distribution of the eggs by a fertile worker is less regular in the cells. (3) Whether microscopic examination would reveal any perceptible difference deponent saith not.

J. E. POND, NORTH ATTLEBORO', MASS.—I have never been able to see any difference in the whole matter involved in this question, except so far as results are concerned. Some claim to find a slight difference in size; in the way and manner the queen deposits her eggs, and the position of the eggs in their cells. I have not been able to find any difference of the kind great enough to be appreciable to my eyes. I would pay a handsome bonus to any one who will give an answer to the above containing a sure and certain method of determining the matter involved.

DR. DUNCAN, EMBRO.—(1) A fertile queen lays her eggs more regular, one in a cell where a drone layer often lays more than one in a cell; the latter is smaller in the abdomen and not so easily found as a fertile queen. (2) If a drone layer from old age, she lays quite regular, one in a cell; if a young unfertilized queen there is sometimes more than one in a cell. A fertile worker lays sometimes two or three in a cell, and scatters them promiscuously in and around the sides of the cells. (3) No apparent difference in the eggs only in the order in which they are deposited, and the capping is elevated and converse in all drones before they emerge from the cells.

P. H. ELWOOD, STARKVILLE, N. Y.—(1) By their work usually. Sometimes there is a dif-

ference. (2) I don't know. (3) I don't tell the difference. I have never seen a fertile worker, although I have been looking for one for half a score of years. In several thousand swarms made queenless by our method of raising honey I have observed no eggs laid except by queens. In breaking out queen cells when queenless for a week very many stocks will raise queens from the unsealed larvæ. Such queens are good enough to lead off swarms and to make considerable trouble at home. They preserve so much of the queenly appearance that the experienced eye need never confound them with workers. In cool weather the same state of affairs may occasionally present itself after being queenless for eight days.

G. W. DEMAREE, CHRISTIANSBURG, KY.—(1) There is no way to distinguish a drone (egg) laying queen from her fertile sister except by her progeny. I have had two or three queens that laid none but male producing eggs that were simply superb queens as to size, form, color and majestic carriage and deportment. I kept one of these queens that had every opportunity to mate when of the proper age, during the summer, and part of the fall months, keeping up her working force by supplying her with young workers from other colonies, and with all this trial she produced only male progeny. (2) These queens perform their work just as do the fertile queens. (3) With such queens as I have described you must wait till the brood is capped to distinguish the sex. Once in a great while a young fertile queen will lay a few drone eggs at the start and do awkward work like a laying worker, but come alright afterward.

BY THE EDITOR.—The fertile queen is usually plumper, not so slim in the body; her movements are more queen-like, not so nervous and excitable and is accompanied by the usual retinue of workers, who feed and care for her, giving her the usual attention, which is very frequently partially, and sometimes wholly absent in unfertile queens. The drone-laying queen deposits her eggs more regular than a fertile worker, but not so regular or in as perfect a circle as the fertile queen, but her body being longer than the worker, she deposits her eggs in the bottom of the cell, while with the fertile worker some drop in the bottom, while others stick around the edge. The drone-laying queen usually deposits one egg in a cell, while a fertile worker will often deposit from four to eight,—sometimes more, sometimes less,—and they are scattered about. By this difference they will usually be detected; the eggs, also, are slightly smaller, some of them can be seen turning a darker color, and drying up, as many of them do not hatch.

CAPPINGS.

CUT FROM A VARIETY OF COMBS.

IMPORTING BEES.

HAVE just noticed what Prof Cook says in Gleanings with reference to a grant from the U. S. government to assist them in the importation of new races of bees, and I quote the first paragraph of his letter: "You are aware that we have received great advantage from the discovery and importation of bees into America. Possibly there are bees in Africa, India, Ceylon, Philippine Islands, etc., that are superior to our present bees—even to Italians, Syrians or Carriolans. We should at least know whether there are such bees, and should have a chance to test them. I have had some communication with government officials, and I believe that, if beekeepers will move in the matter, we can secure such bees, and at no expense to the beekeepers, and at slight expense to the government. It is certainly an enterprise worthy a trial." I have heard that there are large varieties of bees to be found in the Philippine Islands, Papua and Timor, which could perhaps be turned to some account, but if they are anything like *Apis Dorsata* I do not know what benefit will accrue from their importation. It may not be generally known that the habits of *Apis Dorsata* are widely different from the races which we now have in this country. The queens of *Apis Dorsata* leave their abode to meet the drone at sundown and later. Why they fly out at this time we can only conjecture, but it is supposed that it is because of the danger of destruction from their enemies, as birds, etc. I am satisfied that their habits in this respect are as fixed as the laws of the "Medes and Persians,"—that there can never be any prospect of obtaining a cross between them and any of our present races.

While I shall not dictate as to the course the U. S. government shall pursue in this matter, yet I cannot hold out any hope of any experiment they may try turning out successfully.

FLOUR FOR UNITING COLONIES.

English beekeepers are "away up" over the use of flour as a pacifier. It will do it all right enough, but if the bees become wet in any way the flour sticks to them and becomes a dough. After it dries and hardens it is very difficult to remove, and bees so smeared will often be found in front of the hive dead. So long as the bees are kept dry there will be no serious objection to it. Cold water sprayed on them will prevent fighting. It is well understood that wet bees will never fight.

GOLDEN RULES FOR BEGINNERS.

A Scottish beekeeper gives fifteen golden rules which he has found to be just about right. With two exceptions (3 and 15) I am not going to find fault with them:—

1. Always begin bee-keeping on a small scale, and try to make it pay.
2. Don't buy cheap and nasty hives, or invest money in foreign bees.
3. Don't despise a good straw skep with a super of sections to fit.

4. Don't open your hives except when it is absolutely necessary to do so.
5. Always have an eye on your bees but do not stand in their way.
6. Make perfectly sure that your hives are damp-proof and stable.
7. Always err on the side of giving too much rather than too little stores.
8. No autumn stimulation, and only in spring if desirable.
9. Never put on supers (especially sections) unless hive is crowded with bees.
10. Don't bother doctoring wasted bees, or saving a mere handful.
11. Handle bees confidently and quickly, but no longer than necessary.
12. With bee-goods as with clothing the best is the cheapest in the end.
13. Don't begin beekeeping in 1890, and give it up for good in 1891.
14. Don't expect to get a good thing for a 'mere song'; it's mere nonsense.
15. Don't be itching to send the editor 'specimens,' especially of foul brood.

In What do We Profit by the Importation of Queens.

THE subject which you have given me is one upon which there will be very many different opinions, but I believe that I have given the matter more study and have experimented more largely with it than any other beekeeper of the present day. Perhaps I may also say that I have spent more money on it than I shall ever be likely to do again. It is true that the importation of queens has done much to stimulate and improve apiculture, but I am not convinced that even at this date there are any better bees to be found in the world than those we at present have. The breeding of bees of a superior quality receives more attention in America, (when I say America I include Canada) than elsewhere. The varied climates, the abundance of flora of varied qualities, all tend to assist us in this land, because these play no small part in the production of the races. Of course, without care and skill on the part of the apiarist in his selections for breeding all these will avail but little. The friendly strife among beekeepers to produce bees of the best quality is sure to have a beneficial effect. The crossing of the various races has been of considerable importance in bringing our bees up to the present high standard. I am convinced, after extensive experiments, that no pure race of bees is, or has been imported, that has all the good qualities required and no fixed or

pure race possesses the same qualities and dispositions in every respect throughout. If their habits and dispositions are thoroughly studied and inquired into, we find them varying after the same manner as the human race. As there are no two persons alike, neither are there two colonies alike, and I may add there are no two queens alike. The fact that they may be of a certain color, or that they may possess a certain number of bands is no guarantee of their value in dollars and cents. Because a certain number of men are white it does not follow that they are equally intelligent, industrious and successful, as their dispositions and habits differ. So with the different colonies of bees, although they may all be of the same race. Therefore, because queens may duplicate themselves in color and markings in breeding this does not show their exact value. If we can have these peculiar markings and all the other good qualities as well, so much the better, but let us have above all things, quality first, as it is with the colonies I have just spoken of, so it is with the importation of queens. Their appearance may be just the same but the experienced importer who tests his queens thoroughly will always find some that are scarcely worth anything, while others produce colonies of great value. In and in breeding should be prevented as far as possible, and by selecting from our very best colonies we are liable to secure the best results. I do not mean to say that no benefit will be derived from the importation of queens, because there are many beekeepers in Europe and in the East who are thoroughly capable of testing the queens which they produce, and as they find that they have obtained superior queens, these will, of course, assist us. My principle opposition is to the importation of queens without regard to quality. The superior stock which we have at the present day has been produced by this careful method. Are beekeepers less intelligent than the breeders of other stock? Of course we have not the same opportunities of isolating and of selecting and it requires more skill and care in the breeding, but if we are careful to carry out all that does lay in our power in this direction we can in the near future become exporters instead of import-

THE CANADIAN BEE JOURNAL

ISSUED 1ST AND 15TH OF EACH MONTH.

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

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

BEETON, ONTARIO, JANUARY 1, 1891.

Mr. Samuel Cushman has taken editorial charge of Apiarian Department of *Farm and Home*, and he is assisted by J. H. Martin, Allen Pringle, and a number of other leading beekeepers.

We hope to see a goodly turn-out of New York State beekeeper's at our St. Catharines meeting on the 7th and 8th inst. This invitation is unofficial, but we know that the members of the Ontario Beekeepers Association will be ready to welcome all of their American brethren who can find the time to be present.

The *Review* comes to us for December with a nice cover, and considerably improved otherwise. It is now 24 pages and the cover, and the price has been raised to \$1.00 per year. We congratulate W. Z. on his enterprise, and we hope that all his fond anticipations may be realized. The *Review* and CANADIAN BEE JOURNAL, when clubbed together will hereafter be \$1.45.

Our catalogue for 1891 will be ready, and mailed to our thousands of customers before the next number of the BEE JOURNAL is issued. Some radical changes will be found in it, among these being a considerable reduction in the prices of sections, extractors, etc. Some new lines have been added, and altogether we present about as complete a catalogue as one can imagine.

The Detroit convention, now going on, will be fully reported in the next issue of the CANADIAN BEE JOURNAL, by Mr. R. F. Holtermann, who will be present in our behalf. We regret our inability to be there, but we cannot get away from business long enough to take both Detroit and St. Catharines, and the latter has claims upon us which cannot be overlooked. We shall be sorry if the having of these two conventions so close together detracts from our St. Catharines meeting, and we trust such will not be the case.

We frequently discuss in our own minds the justice of noticing the scores, of price lists, catalogues, etc., of supply dealers who

ers. I observe that influence is likely to be brought to bear on the U. S. government for the purpose of getting an appropriation sufficient to enable American beekeepers to search and test races other than those at present within their possession. I hope that something better may be found, but I have no faith in the bees which may be found in Africa. If the Cyprians are cross the bees of the country just named are much crosser. I have been subjected to some pretty bad stinging in my life, but I shall never forget the attack which was made on me in the Khedive's garden at Alexandria. These were black bees and not quite so large as the bee called by the same name in America, but they could sting and they would follow a person and keep up the fight as long as there were any of them left. I should be very sorry to have any such breed in my apiaries. As for *apis dorsata* it might be brought here and tested, but I do not believe it could be crossed with our present races. It may not be generally known that they have fixed and peculiar habits, which renders crossing impossible; one of these is that the queens go out to mate about sunset and it is not an unusual thing to have the queen and drones return by twilight. I have more hope of success with bees brought from a milder climate; the Philippine Islands might give us something better, and there is also a group of Islands lying north and east of Australia, where we might find something of value. The hotter the climate the more irritable the bees in that country, without having corresponding advantages; and it is because of this I anticipate that bees from the Islands I have mentioned would be of a milder disposition and would be more apt to meet with our views.

D. A. JONES.

Beeton, Dec. 29th, 1890.

* * * Please send us the names of your neighbors who keep bees, that we may forward copies of the BEE JOURNAL to them. A postal card and five minutes time will do it.

* * * Secretaries of local associations are requested to forward us, at the earliest possible moment, the dates of their meetings; and when the convention is over, a full report of the proceedings.

advertisers in our columns. It doesn't seem fair that we should give them even the little three-line advertisement, when we know it is only for the sake of getting a free advertising that these circulars are sent us. Again, if we decide not to give the regular notice, we may perhaps be open to the charge of partiality—some folks will say that we are selfish because we run a supply business ourselves, and we don't want the other dealers to become known, for fear they will take some of our trade away from us. It costs us money to advertise, and we fail to see very well, how we can be expected to advertise other people for nothing. It would be the height of partiality for us to advertise one man for nothing and then charge another man regular advertising rates. With these latter so low, there is no reason why any one should want free notices, and following in the wake of the *American Bee Journal* we shall have to decide that only pricelists and catalogues of those who advertise in our journal, or who have their catalogues printed at this office shall have them noticed under the heading "Circulars received."

THE SEVENTH ANNUAL EXHIBITION
—OF THE—
EASTERN ONTARIO
Poultry & Pet Stock Association
Will be held in the
CITY OF OTTAWA,
—ON—
FEBRUARY the 3rd, 4th, 5th and 6th, 1891.
JUDGE—J. Y. Icknell, Buffalo, N. Y.
For Premium Lists, etc., address
ALFRED GEDDES,
Secretary, P. O. Dept., Ottawa.

Discounts for Winter Orders

Following our usual practice, we offer the following *very liberal* discounts off orders sent in accompanied by the cash before the date specified. If you will figure out this discount you will see that our offer is an extremely advantageous

one for the purchaser, amounting to a great deal more than a good interest—to say nothing of the benefit of having your goods when you want them. We will, in a week or two more have a capacity for fully twice as much goods as formerly, and we will be able to turn them out better.

DISCOUNTS.

These discounts apply to everything in our pricelist, excepting foundation, honey tins, glass, scales, and wire nails. Up to January 1st, '91, the discount will be 10 per cent. : to Feb. 1st 8 per cent. ; to March 1st 5 per cent.

THE D. A. JONES CO. (LTD),
Beeton, Ont.

Poultry Netting & Fencing.

We can now furnish the best Poultry Netting at the following low prices for 2 in. mesh No. 19 wire, in the various widths, in full roll lots (150 feet to roll):

	19 GAUGE.	7 1/2 in.
n.	30 n.	36 in.
\$8 10	4 0	4 85
	18 GAUGE.	48 in.
		6 90
		5
		9 90

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

D. A. JONES CO. LD.
BEETON, ONT

TABLE OF CONTENTS.

Apiculture, State.....	370
Apiary, Establishing an	375
Association, Oxford Beekeepers'	376
" Ontario " 	379
Bees Hibernating.....	370
Breed Frames, Proper spacing of.....	371
Bees, Importing.....	361
Comb, Artificial.....	370
Contraction of Brood Chamber	378
Carniolans.....	377
Destroying Bees.....	378
Drone-Layers, Difference between fertile workers	366
Foul Brood	371
Fertile Workers and Drone Layers.....	360
Golden Rules for bee-keepers.....	361
Information wanted by No 2	373
Queen excluders, Perforated.....	371
Queries and Replies.....	360
Queries, In what do we profit by the importation	
of.....	362
Report, a Model.....	376
Robbing Colonies, Exchanging.....	377
Sectional Hives	372
Spring Feeding, keep allied combs for.....	376
Wintering Colonies by using Flour.....	361
Workers, Laying.....	377

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.C., Branch Office, 126 WEST ADELAIDE STREET, TORONTO.

EXCHANGE AND MART

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

BEEES

WANTED.—A 1 Extracted and Comb Honey. State how put up, if ready for shipment, quantity and lowest cash price per pound, delivered. EDMUND J. BERRY, Brome Corners, Que.

GOING TO MANITOBA—79 colonies, chaff hives, 6 frames 1 1/2 x 10 deep, 59 empty hives, 600 frames of comb, empty frames, extractor bands, etc., \$500 cash, here. Also brooder plant for 600 chickens, heater large enough for 2000 chickens. \$60 cash here. POSTMASTER, Cumminsville, Ont.

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

2,500 LBS. HONEY for sale, good quality, high-color, from 10c per lb. down to 8c., according to quantity. Also about 800 lbs. comb honey, quality first-class, for which I would like an offer. GEO. WOOD, Monticello P. O., Dufferin Co., Ont.

MENTION this Journal if you are writing about anything advertised in its columns.

POULTRY

A FEW Silver Laced Wyandotte Cockerels for sale from American prize winning birds. Eg hatching in season. W. J. O'NEIL, Paris, On

TO EXCHANGE—A Brass BFlat cornet worth \$15, Also a snare drum worth \$8, for pure Italian bees or queens or beekeeper's supplies. E. W. HOWES, M. D., Chatham. N. Y.

FOR SALE—The whole of my choice stock of fowls including White Plymouth Rocks, Golden and Silver Wyandottes, Partridge Cochins, and White Minorcas, cheap. John Grey, Todmorden, Ont.

FOR SALE or EXCHANGE—A 1 fancy pigeons in Jacobines, Barbs, Swallows, and Owls; also show, cages and a fret saw. Waat White Plymouth Rocks, Buff Cochins or Febright Bantams. Must be good. H. N Hughes, Box 97 Barrie, Ont.

FOR SALE—W. F. Black Spanish, 3 cockerels and 1 Pullet, all A. No. 1 birds. I have about \$25 worth of Bees and Poultry Journals and Books all as good as new. I will exchange for gun or rifle. Correspondence solicited. G. N. SHEERES, Clarksburg, Ont.

FOR SALE—A very choice pair of Exhibition White Plymouth chicks, Empire strain, cockerel weighing 9 pounds, pullet 7 1/2 pounds. These are the finest pair of W. F. R. chicks I have ever seen and are in fine trim, pullets laying. Price \$10 worth double the money. John Grey, Todmorden, Ont.

FOR SALE—White Rocks S. L. Wyandottes, Buff, Pekin Bant eggs after March 15th, \$1. I bred the highest scoring trio of W. P. R. in America this year, cockerel 96, pullets 97, 96 1/2; one G. L. Wy cock for sale score 93. Butterfield, price \$4; see awards at Dunville show. Eggs \$3.50 per 13, \$4 per 96; circulars free. S. M. OLEMO, Box 113, Dunnville, Ont.

FOR SALE—Very cheap, a fine White Minorca cock 3 cockerels' hens and pullets; Silver Wyandotte hens, pullets and cockerels; two pair of extra fine Partridge Cochins, trio of White Plymouth Rocks, the above birds are very fine and fit for the show room. Would exchange for ducks, geese or turkeys or offers. John Grey, Todmorden, Ont.

GRAND clearing sale of Breeding Pens, Light Brahmas, Dark Brahmas, Buff Cochins, P. Rocks, White Leghorns, Langshangs and B. R. Games; also three grand S. B. Polish Cockerels, two L. Brahma Cocks, two P. Rock Cocks, two P. Rock Cockerels, two Langshang Cocks, one Dark Brahma Cock, one B. Minorca Cock, two B. A. Bantams, trio Aslebury Ducks, two Pekin Drakes, Wilson Bone Hill, Webster Clover Caster, Hot water Incubator, 80 exhibition coops, S. W. ADSAID, Selkirk Ont.

FOR SALE—A few Fine Buff Cochins Cockerels' hens and Pullets, cheap to make room, Write quick and procure the best. Address C. D. FLEMING, Chatham

FOR SALE—A few very fine, early hatched, well grown Light Brahmas, Cockerels from \$3 to \$5 each, and pairs from \$5 to \$7. All O. K. stock. These are bargains. W. C. G. PETERS, Angus, Ont.

FOR SALE—My entire stock of Black Minorcas, 13 Pullets, 25 Cockerels. Guarantee every Pullet to score from 94 to 96 1/2; one Cockerel will score 95, he took 1st at Toronto Exhibition. Pullets are all laying. \$25 will buy the lot. W. COLE, Brampton.

FOR SALL—Thirty Mammoth Bronze Turkeys bred from stock imported this season. Mammoth Light and Dark Cochins, Silver Grey and White Dorkings, bred from imported stock. Come and judge for yourselves. JOSEPH KINSEY, Doon, Ont.

FOR SALE—4 Light Brahma Cocks and Hens, (yearlings), 25 Cockerels and Pullets; a lot of Pekin Ducks in pairs and trios, Brown and White Leghorns, old and young, cheap if taken at once. Also a pair of leopared rabbits. JOHN COLE, 151 Hughson st. Hamilton,

FOR SALE—Breeding Pen Partridge Cochins, Cockerel and three Pullets; cockerel scored 91, pullets averaged over 90 by Jarvis, won first at Brampton last week. Pullets beautifully pencilled. Price only \$5. Score card furnished. Our partridge chicks won all prizes offered but one W. & A. Wright, Richmond Hill

GREAT CHANGE.—A pen of Black Javas, Cook, three Hens, the same I exhibited at Toronto. Five dollars buys them. Cock and six Houdan Hens all first-class, for eight dollars. A few Pullets and Cockerels for sale. A. HOBBS, Bowmanville.

BLACK LEGHORNS—cock and three hens—scored at Owen Sound, 1890. J. Y. Bicknell, judge: cockerel 93, hen 94, hen 93 1/2, pullet 95 1/2. Took all the premiums and specials at the Industrial, 1890. Hen first, cock V. H. C. Price, \$12. E. J. Otter, 90 De Grassi street, Toronto.

R. C. W. LEGHORNS—two trios—scored at Owen Sound, 1890, J. Y. Bicknell, judge: cockerel 93, pullet 94, pullet 93 1/2, hen 93 1/2. Was first on pullet and second on hen. The other cock I have never had scored, but he is good. Price per trio, \$5. E. J. Otter 90 De Grassi street, Toronto.

FOR SALE—A number of White, Black and Brown Leghorn, Cockerels, also Black Minorca Cockerels and also Pullets of each kind. One White Leghorn Cock scored 95 1/2 as Cockerel two years old. Will sell single birds, pairs or trios, all A 1 birds. JOHN PLETCH, Box 26, Shakespear, Ont.

AS I only intend in the future to breed Dark Brahmas and Bantams I will sell my Blk. Leghorns and Rose Comb White Leghorns cheap. See lists below with scores, &c. Parties wanting new blood in Dark Brahmas out of my grand imported cock and mates should write for prices. A few for sale now. E. J. Otter, 90 De Grassi street, Toronto.

SOME very fine Scotch Collie Pups, from one of I.K. Felsch's, Bitches cheap; also Light and Dark Brahmas, Plymouth Rocks, Houdans, Langshans, Cochins, Black Spanish, Leghorns, Wyandottes, Hamburgs, Black Red Game Bantams, Ducks, Geese, etc. I won 66 firsts, 97 second prizes at shows this fall, A. G. H. Luxton, Hamilton P. O., Ont.

FOR SALE or exchange—Three grand White Minorca Cockerels, a year old cock, and some splendid Pullets for sale cheap. Have won everywhere shown. Would exchange for some good Black Minorca hens or pullets. White and Black Minorca Eggs in season, \$3 per 13, \$5 per 26. Write for particulars. THOS. A. DUFF, 81 Fuller st. Toronto, Ont.

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, Wrenham, Mass.

ADVERTISEMENTS.

ORGANIZED 1874.

INCORPORATED 1876.

POULTRY ASSOCIATION
OF ONTARIO

17th ANNUAL • EXHIBITION 17th
AT BOWMANVILLE, CAN.
JAN. 5, 6, 7, 8 & 9, 1891

ENTRIES CLOSE JANUARY 3RD.

J. J. MASON, Pres.

J. M. HERN, Sec'y.

The oldest—holding the Largest Number of Annual Exhibitions of any Association in America. Experienced Officers. Liberal Premiums. Four Judges. The Government Grant enables us to hold one of the most successful exhibitions in America. For Premium Lists, etc., address the Secretary.



W. C. G. PETER,

IMPORTER AND BREEDER OF

WYANDOTTES

Rose Comb Brown, and White Leghorns,

Sing'e Comb White and Brown Leghorns, L' Brahmas, Plymouth Rocks, Pile Games, B. B. R. and S. D. W. Game Bantams.

EGGS \$3 PER SITTING, OR 2 SITTINGS FOR \$5.

Send for Circular.

ST GEORGE POULTRY YARDS,

ANGUS, ONT.

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. D., 186 West Adelaide St., Toronto, Ont.

BEESWAX WANTED W. A. CHRYSLER,

MANUFACTURER OF

BEE SUPPLIES.

We will pay 30 cts cash or 35 cts in trade for good pure Beeswax delivered at Stratford (sediment deducted, if any).

The best packed hives made for wintering bees out doors. 60 lb. tins neatly boxed. Shipping Crates for Comb Honey or anything required by Beekeepers.

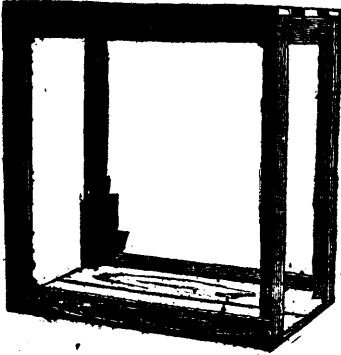
A few colonies of Hybred Bees for Sale at \$5.00 per colony. Send for prices, Address,

J. & E. H. MYERS,
Box 94, Stratford, Ont

MENTION THIS JOURNAL,

Single and Double Walled Hives, Sections, Shipping Crates, Feeders Etc. Price-lists from

Box 450, CHATHAM, ONT.



SHIPPING - COOPS

For Exhibition and Sale Purposes.

Save money in express charges by buying light, we made coops—weigh only 5½ lbs.

We keep in stock one size only, 20 in. x 18 in. x 20 in for pairs or light trios.

PRICES MADE UP.

Wire mesh, only,	Each	10	25	100
With Canvas,	50c.	\$2.75	\$6.2	\$22.50
	40c.	3.75	8.05	30.00

PRICE IN FLAT.

Wire mesh, only,	50c.	2.50	5.00	18.00
Name and address printed on canvas 5c. each extra,				\$3.00 per 100.

For Exhibition purposes, where coops are not furnished by the Fair Associations, strips are supplied, which are tacked on one side of coop, at 4c. per coop.

OTHER SIZES.

We make coops in any size desired, and shall, at all times, be prepared to quote prices. In asking for estimates please give size and number wanted.

DRINKING FOUNTAINS.

For shipping and exhibition coops, to hold one pint water. Price,

Each	10	25	100
	15c.	\$1.40	\$5.25
			\$12.00

The water cannot slop out or become dirty. Larger sizes made to order. Ask for Prices.



MAKE YOUR HENS

Earn their living by scratching for it.

— R Y —

Christie's Improved Feeder

It gives the fowl constant exercise and saves you the trouble of feeding them—they feed them selves automatically.

Each, by mail,	1 qt.	2 qt.
For adv.,	\$.50	\$.60
	40c	4.80

The D. A. JONES CO., Ltd.
BEETON, ONT.

Niagara River and Grand River PULTRY YARD.

Mammoth Lt. Brahmas & Barred P. Rocks.

STILL to the Front, always winning first place in the sharpest competition, beating the birds that won at Toronto, London, Barrie, Detroit, Brampton, Markham. So buy your eggs and stock from where the prize winners spring from. Eggs from our prize winners \$2.50 per 13, \$4 per 26. Send for our Club circular..

AKERLY & CLARK.
DUNNVILLE

ATTENTION FANCIERS !

I shall soon import from England a large number of

BUFF LEGHORNS

—AND—

Indian Games.

Orders received until Nov. 20th for imported birds. Buff Leghorns are all the rage. Send for prices. I have some fine BLACK LEGHORNS for sale.

A. W. G. RDINER,
Box 1293, Springfield, Mass.

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 \$

WM. MOORE,

MENTION THIS JOURNAL Box 462 LONDON, ONT

GLEN VILLA POULTRY YARDS

A. R. MCKINLAY

IMPORTER AND BREEDER OF

HIGH-CLASS POULTRY.

Autocrat strain of Light Brahmas, White Cochins White Plymouth Rocks, Single and Pea-comb Barred Plymouth Rocks, W. F. Black Spanish, Black Minorcas and Buff Pekin Bantams. Eggs, \$3.00 per 13, & 5.00 per 26. BOX 18, DEER PARK, ONT.

BROWN LEGHORNS AND BLACK MINORCAS.

Will sell a few sittings of Eggs from my grand breeding pens this spring. My Brown Leghorns are second to none in Canada. At the Owen Sound Show I won every first and second prize given, winning eight first and second prizes, making a clean sweep. I have kept the honors at Owen Sound for 5 years in succession on Brown Leghorns. My Minorcas are grand birds. In looking over the prize lists this winter I find I had the highest scoring Minorcas in Canada (93 to 98). Eggs from each variety at \$2 per 13 or \$3 per 30 and will give satisfaction. Brown Leghorns, Bonner's strain. Black Minorcas, Abbot Bros' strain from imported stock.

Address
J. C. BERRER, Owen Sound
Care Polson Iron Works MENTION THIS JOURNAL

ADVERTISEMENTS.

WILL. A. LANE,

Tarnerville, --- --- Ont.

—BREEDER OF HIGHEST TYPE—

BRONZE TURKEYS

Write for prices of young birds in the fall.

CARNIOLAN - QUEENS,

From Pure and Gentle Mother's will be bred the remainder of the season at

SPECIAL PRICES.

Send for Special Circular to

JOHN ANDREWS,

July 25th, 1890. Patten's Mills, Wash Co., N.Y.

FOR TRUE BLUE

-:- CARNIOLANS -:-

See our advertisement in Aug. 1 No., of this paper.

J. B. MASON
MECHANIC FALLS, ME.

THE "REVIEW."

SOME OF THE TOPICS IT HAS DISCUSSED.
 "The Production of Comb Honey," was the special topic of the April number.
 "How to Raise Extracted Honey," was discussed in the May issue.
 "Comforts and Conveniences for the Apiary," were named and described in June.
 "From the Hive to the Honey Market," was the topic of the July issue.
 "Marketing," will be the Special topic of the August number.
 The "Review" is published monthly, at 50 cts. a year. Send for samples (free) and see if you can afford to be without it.
 Address **See-Keepers' Review,**
W. Z. HUTCHINSON, Ed. & Prop. Flint, Mich

MARKETING DEPARTMENT.

Honey Tins.

We can ship with reasonable promptness all orders for honey tins, at the following prices:

No lbs.	Per 1000	Per 500	Per 100	Less each
10.....	\$100 00	\$55 00	\$11 50	.12
.....	65 00	34 00	7 00	.07½
.....	50 00	26 00	5 50	.06
.....	30 00	16 00	3 25	.03½
.....	26 00	13 50	2 75	.03
.....	12 50	6 50	1 40	.01½
.....	7 50	4 00	1 00	.01

Pressed screw tops and screw caps for the above tins:

No. lbs.	Per 100	Per 50	Per 100
5 and 2½	\$23 00	\$12 50	\$2 75
1 and ½	15 00	8 00	1 75

Most of the leading beekeepers admit that for tipping honey in bulk, the 60 pound tin, encased in wood, is the longest and best article be obtained for the purpose. The prices are:
 pound Tins, encased in wood, each... \$ 50
 " " " " " per 10.. 4 80
 " " " " " per 25.. 11 25
 " " " " " per 100.. 42 00

Lithographed Honey Labels.

Every honey producer knows the advantages obtainable from having his name on each package, and this series of honey labels are desirable, being handsome, bright and attractive. Directions for liquifying are given on a blank in which the vendor's name is to be printed. They are varnished, and a damp

sponge will remove all dirt. Samples of all our labels sent for 5 cts.

	Per 1000	Per 500	Per 100
5 pound labels.....	\$8 00	\$4 25	\$.85
2½ " ".....	5 00	2 75	.60
1 " ".....	3 50	2 00	.45
½ " ".....	1 75	1 15	.25
¼ " ".....	1 7	1 15	.25
Labels for tops of tins	90	55	.13
Printing name, and address, first 100.....			.30
Each subsequent 100 up to 500.....			.12
Printing name and address, per 500.....			.75
" " " " " 1000.....			1 25

Shipping Crates for Sections.

Sample crates, glass included, made up holding 12 or 24 sections 3½x3½ or 4½x4½ each.....	\$ 20
Per 10.....	1 70
IN FLAT HOLDING 12 SECTIONS.	
Without glass, per 10.....	\$1 00
" " " 25.....	2 25
" " " 100.....	8 00
IN FLAT HOLDING 24 SECTIONS.	
Without glass, per 10.....	\$ 1 50
" " " 25.....	3 25
" " " 100.....	12 00
We keep in stock crates that hold	
12 Sections.....	3½x4½
12 " ".....	4½x4½
24 " ".....	3½x4½
24 " ".....	4½x4½

The D. A. JONES Co. Ltd., Beeton, Ont.