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THE CANADIAN BEE JOURNAL

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

VOL. VI, No. 21. BEETON, ONT., JAN. 23, 1891 WHOLE No. 281

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	\$4.00	\$6.50
2 months.....	3.00	4.50	5.50	6.50	11.00
3 months.....	4.00	5.50	7.00	9.00	15.00
6 months.....	6.00	9.00	12.00	15.00	24.00
12 months.....	10.00	15.00	20.00	25.00	40.00

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 advertising something else and for the purpose of advertising bees, honey, poultry, etc., for sale. Cash must accompany advt. Five insertions without charge, \$1.

STRICTLY IN 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.

Orders and remittances are acknowledged on the wrapper as soon as possible after receipt.

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

Subscription Price, 75c per Annum. Postage free for Canada and the United States; 50c in 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 an "thing intended for the JOURNAL do not mix it up with a business communication. Use different sheets of paper. Both may, however be enclosed in the same envelope.

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

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

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

Clubbing Rates.

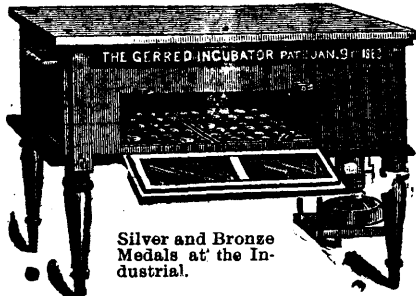
THE CANADIAN BEE JOURNAL and	
THE CANADIAN POULTRY JOURNAL	\$1 00
THE CANADIAN BEE JOURNAL and premium queen 1 00	
Both JOURNALS and premium queen.....	1 25

Job Printing.

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

J. L. CORCORAN
Stratford, Ont.

Breeder of Exhibition
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-
dustrial.

A 14231 3) (1) and 21) 293 n
cities. Send for descriptive
Circular. MENTION THIS JOURNAL

Address E. J. OTTER, Manager, Gerred Incubator
Co., 90 De Grassi street, Toronto.
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,
MENTION THIS JOURNAL. BEAMFON ONT

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 C chins—Three yards. Gold Dust strain
- Black 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 Uphan 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 Boneley 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.

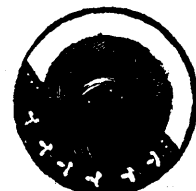
MENTION THIS JOURNAL



THOS. BARRETT,
Norfolk Poultry Yard
SHREEDER AND IMPORTER OF
Langshans,
S. G. Dorkings,
S. C. B. Leghorns,
White Cochins,
Black Hamburgs

EGGS IN SEASON \$3 per 13 or \$2 per 26, Birds for sale. ANGUS, Ont.

GOLDEN 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

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.				
24 in.	30 in.	36 in.	48 in.	72 in.
\$3 10	4 00	4 85	6 00	9 50
18 GAUGE.				
\$3 25	4 00	5 00	6 30	9 90

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

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 15 or \$3 per 3, and will give satisfaction. Brown Leghorns, Benner's strain. Black Minorcas, Abbot Bros' strain from imported stock.

Address **J. C. BENNER, Owen Sound**
Care Palson Iron Works MENTION THIS JOURNAL

ADVERTISEMENTS.

Muth's Honey Extractor.

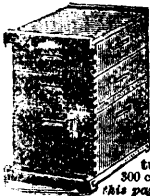
Perfection Cold Blast Smokers, Square Glass Honey Jars, etc. Send ten cents for "Practical Hints to Bee Keepers." For circulars apply
CHAS. F. MUTH & SON.
 or, Freeman & Central Avenues, Cincinnati

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

W. A. CHRYSLER,
 MANUFACTURER OF
BEE SUPPLIES.

Single and Double Walled Hives, Sections, Shipping Crates, Feeders Etc. Price-lists free.
 Box 450, CHATHAM, ONT.



BEES AND HONEY

The Doctored Strongest, Best and Cheapest BEE-HIVE for all purposes. Please everybody. Send your address to the **Largest Bee-Hive Factory in the World** for sample copy of **Cleanings in Bee Culture** (a 32 illustrated semi-monthly), and a 44 p. illustrated catalogue of **Bee-Keepers' Supplies**. Our **A B C of Bee Culture** is a cyclopaedia of 400 pp., 6x10, and 300 cuts. Price in cloth \$1.25. *(Mention this paper.)* **A. I. ROOT, Medina, O.**

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. Hicknell, Buffalo, N. Y.

For Premium Lists, etc., address

ALFRED GEDDES,

Secretary, P. O. Dept., Ottawa.

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

ALLEY, Weymouth, Mass.

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 Rocks won 1st 2nd and 3rd on pullets, and 2nd on pen at Ayr Jan. 14 to 16 1890. Eggs \$2 per setting.
 MENTION THIS JOURNAL

BIRDS, Parrots, Dogs, Ferrets, Cats, Monkeys, 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. 1889 pullets \$4.00, 94, 94, 96, 96, 96, cockerel 95, J Y Bicknell, Judge 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 given by the dozen. MENTION THIS JOURNAL.
D. RANDENBUSH 445 Chestnut St. Reading Pa.

1890 ITALIAN QUEENS from imported home bred honey gatherers. Each 75c, six \$4.00. Order now, pay when queens a rive.
W. H. LAWS, Lavana, California Co. Ark.

FRIEND. Lock here! Italian Queens for sale: untested 45 cts. each; tested 85 cts each; one frame brood 30 cts; three-frame nuclei, with Untested queen \$2; with tested queen \$2.50. **E. S. VICKERY, Hartwell, Hartwell Co. Ga.**

100 COLONIES of Italian bees for sale with young queens and plenty of stores; hives hold 18 frames chaff sides and 2 division boards making double ends. Write for prices stating quantity required. **G. A. DEADMAN Drug-list etc., Brusseis, 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.**

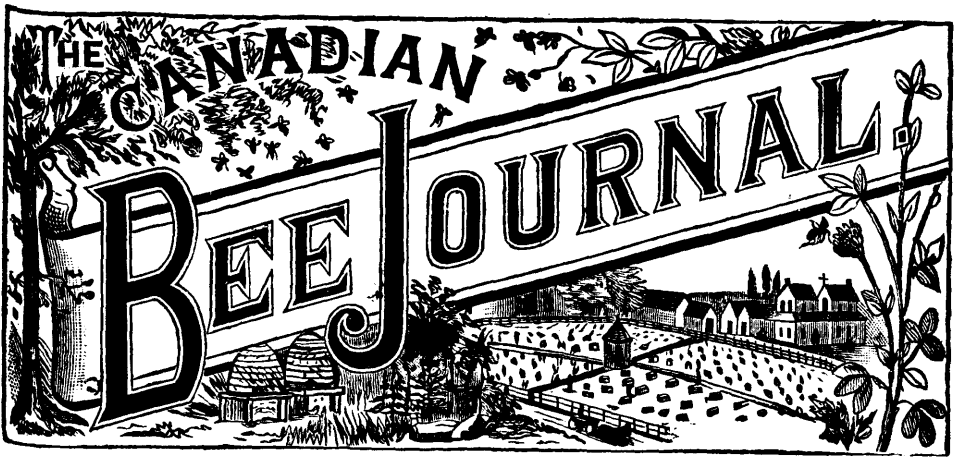
POULTRY-MEN—Do not order your winter circular or in fact any kind of printing until you have first asked us for samples and estimates. **The D A GONES CO., Ltd., Beeton.**

25 CTS. PISO'S CURE FOR THE BEST COUGH MEDICINE. SOLD BY DRUGGISTS EVERYWHERE. CONSUMPTION. 25 CTS.

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. 21.

BEETON, ONT., FEB. 1, 1891

WHOLE No. 281

THE CANADIAN BEE JOURNAL

ISSUED 1ST AND 15TH OF EACH MONTH.

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

EDITORIAL.

ILLINOIS beekeepers are stirring themselves in the matter of organizing a State Association to be incorporated under State laws, and then they want a grant. They will follow in the footsteps of the Ontario Bee-keeper's Association as it were.

The following comparison by years, will show fairly well the difference between the season of 1889 and 1890. The figures are taken from the reports of the Affiliated Societies of the Ontario Bee-keepers Association, and the area covered by the bee-keepers reporting is about the same in both cases:

	1889.	1890.
Members reporting.....	126	186
Colonies, spring count....	2,661	5,020
" fall "....	4,482	7,264
Comb honey taken, lbs....	23,475	27,849
Extracted honey taken, lbs.	113,380	120,629
Counting 1 lb. oomb honey as equal to 2 lbs. extracted, the average of extracted honey per colony, spring count, lbs...	68½	87¼
Average increase per cent. on spring count.....	68½	44½

It will be observed that the average yield of honey is over 20 lbs. per colony less in 1890, than in 1889, with an increase of 24% difference between the two years, and in favor of the latter.

The National bee-keeper's Union is doing a good work in the U. S. The one point of establishing precedents has been of immense value in deterring quick-tempered litigants from rushing into law and giving bee-keepers trouble. In these premises the manager says: "Now, if city councils or town boards are anywhere troubled by a complainant, and asked to pass an ordinance declaring bee-keeping a nuisance, and to prohibit it within the corporation limits, etc., every member, together with the mayor, the city attorney, and the one making the complaint, are all dosed with copies of the Supreme Court decision, that bee-keeping is not a nuisance *per se*, and the matter is at once dropped—killed by the decision of the Supreme Court of Arkansas!" There is no doubt but that this is one of the best ideas ever promulgated for the protection of bee-keepers, and it seems to us that it would perhaps be a wise plan if the Ontario Bee-keepers Association were to establish a "Defence Department." True, we have had but few cases where the necessity for concerted action has arisen, but it would undoubtedly add many members to the Association were it understood that their rights would be protected.

GENERAL.

FOR THE CANADIAN BEE JOURNAL.

Confusion Worse Confounded.

FOUL BROOD.

A LITTLE learning is said to be a "dangerous" thing, and I suppose it is about the same with science, for science is of course a species of learning. Now, it has struck me very forcibly lately, that the apiarists from Cheshire and Cowan, in England, to Corneil, Jones, McEvoy, and all the rest of us here know just about enough of the scientific origin of the propagation and cure of foul brood to render our position "dangerous." Theoretically the foul brood question is at the present time badly tangled. While this is unfortunately true, our course *practically* is, I think, quite clear. Mr. Corneil's paper on "foul brood" at our late convention, which was an able paper, and with most of which I agree, undoubtedly had a rather confusing and discouraging effect on the minds of those present who were specially interested in the foul brood question—some of them from dear experience. If Cheshire and some other authorities are right that the foul brood microbe lurks nearly everywhere—inside the bee and outside, and inside the hive and out—and that the disease may be carried even from flower to flower by the bees and communicated in that way, and carried by the wind, etc., etc. If this be all *practically* true the outlook is rather gloomy. And now comes another authority through the last number to hand of the *British Bee Journal*, who projects another black cloud above the horizon. This is Dr. Lortet, whose paper is translated from the *Revue Internationale* and given with apparent endorsement by the *B. B. J.* Dr. Lortet says the foul brood bacteria infest the digestive canal of the adult nurse bees, and that they communicate the disease to the larvae. He says the disease is always communicated to the brood in this way: that is from the diseased workers to the brood. He says the adult bees can stand the foul brood bacteria for some time without succumbing, but the larvae are speedily killed by them, as they resolve themselves into virulent granulations or spores, owing, he thinks, to the action of the albumenoids, and thus destroy the larvae. Dr. Lortet says he has been experimenting extensively and his "mind is therefore quite free from doubt" that "it is the adult bee which is first infected" with the disease and communicates it to the brood. He says "the culture and transformations of the foul brood bacterium cannot take place in the honey." Now, I am not

aware that anybody claims it can. We merely claim that the honey is the principal medium of the transmission of the disease. Dr. Lortet admits that "in diseased hives the honey and wax are always more or less infected on the surface by bacilli, virulent granulations, excrements, etc." Now, in regard to Dr. L's theory that the adult bees themselves are first diseased and then transmit it to the brood, this seems to clash with the facts. Messrs. Jones and McEvoy claim that they have been curing foul brood for years by simply removing all honey brood and comb from the diseased colonies and placing them in clean hives, without any specific treatment of the worker bees or queen whatever. They differ somewhat in their methods of accomplishing this, but the principle is the same, viz: "the removal of all the honey, comb and brood from the diseased colony. Now, it does appear to me that if Dr. L's theory is true, the worker bees, being diseased ought to transmit the disease afresh to the new brood which they proceed to raise after being transferred from the diseased combs and hive to the new and clean hive. But according to the uniform testimony before us, the disease never breaks out afresh from within after the above change has been properly made. The apparent exceptions are invariably traced to imperfect manipulation or re-introduction of the disease from without. The facts are therefore directly against Dr. L's theory, which he, however, regards not as a theory but as an actual fact, about which his mind is "quite free from doubt," he assures us. While he intimates that some adult bees "may resist the virulent stage of the malady" the bees never recover unless medicated, and finally perish of the disease "after a more or less protracted interval." Now, if this be so, those diseased adult bees which receive no medication under our plan of treatment, ought surely to start the disease in the brood again after removal, and the fact that they do not seems to me to upset this theory, for I can regard it as nothing but a theory. There is a redeeming feature about the paper under review. Dr. L has a remedy which is sure and safe. He does not propose to cure the diseased brood, but the adult bees. The remedy is *naphthol beta* in small quantities and dissolved in sugar syrup. The editors of the *B. B. J.* says that as this substance "is perfectly harmless, there is no danger in its application."

It is well that this whole subject is being so thoroughly investigated and discussed. Out of the present chaos order will ultimately come. Meanwhile let us over on this side the "big

pond" keep our heads steady and stick to the facts. As to the theories, so long as we can cure we can leave them to take care of themselves, except to explode them occasionally, as above.

ALLEN PRINGLE.

Selby, Ont., Jan. 20, '91.

WHAT I WOULD LIKE.

I WOULD like to see Dr. C. C. Miller establish a bee journal. He is the only man I know whose vestalility would enable him to dispense with paid or voluntary contributions. He could fill a page with the bottom of a beehive, or cover a column with the nozzle of a smoker.

I would like Mr. Gemmell relieved of the presence of microbes dancing through his dreams.

I would like to see a respectable editorial in every issue of a journal to which I am a subscriber.

I would like to see essays, at bee-keepers' meetings, elicit more discussion, or be wiped off their programmes.

I would like to see Allen Pringle turn his artillery upon that impudent "Api" and silence the pop guns of its Alleys.

I would like to see fewer elevated noses amongst our "Cousins" when speaking of the efforts of Canadians in apicultural advancement.

I would like to see every bee-keeper breed his own queens and thus minimize the danger of foul brood being introduced into clean apiaries.

I would like to see those who grumble at the way bee-keepers' meetings are conducted, do more while they are present to make them interesting.

I would like to see the constitution of the American Bee-keepers' Association pruned of its superfluous provisions and made effective in its workings.

I would like to see all the State and Provincial Associations affiliated with the "American" and the American in a position to offer inducements calculated to ensure this.

I would like to see our editors lay aside their flesh brushes for a while, and desist from scratching each others backs with such apparent good nature. The readers of their papers "look and laugh at a that."

I would like to learn if there is a bee-keepers' association in the United States that disbursed as much cash last year, in promoting the honey industry as the Ontario did. It would be news

to me to learn that their combined number did so.

I would like to see Dr. Mason make the largest and best honey display at the Columbian fair that has ever been made in the world. He has the best opportunity of doing so, that any man ever has had, or perhaps ever will have.

I would like to see some of the contributors to the bee journals endowed with a little more of the spirit of Robert Burns, when he says:

"I'm na body's baird. I'll be slave to na body,

I've a guid braid-sword, I'll tack duats fra na body."

I would like to see those who don't believe paris green will kill bees, when it is put upon potato plants go out the morning succeeding its application and examine the plants. If he don't find lots of dead bees doubled up and sticking with a death grip to the leaves, I will acknowledge my experience not worthy attention.

I would like our fellow bee-keepers in the United States to understand that Canada is a big country, that our people are as progressive and self reliant as we are proud of our country. That their knowledge of the extent of its honey resources are meagre at best. That their estimate has been formed from coming in contact with a few only of the many beekeepers, of but one of its many provinces.

NUMBER TWO.

FULL SHEETS VS. STARTERS OF FOUNDATION.

Speaking of his reasons for sticking to full sheets of foundation, R. L. Taylor says:

"Combs built from starters are not uniformly all worker, even under the most favorable conditions; nor are they uniformly straight, and they always lack more of filling the frames than do those built from full sheets of foundation."

A TRADE MARK FOR HONEY.

At the Michigan convention the question of a "trade mark" for honey, came up, and a committee was appointed to "look into it." Jas. Heddon, in A. B. J. says how it may be done by the "Union" in the following words:

"Any one member of the association can procure the trade mark, which will cost \$40, and then he can transfer individual rights to as many persons as he sees fit, guaranteeing each one the same protection as the person to whom it was issued."

CAPPINGS.

CUT FROM A VARIETY OF COMBS.

LOCATING A BEE HOUSE OR HONEY BUILDING.

DR. Miller says, in the *Review*, that you should "decidedly put the building at one side of the apiary.

If you do much, you'll want to drive up to it with a team." This is one of the things the doctor *does know*. If we were building again, we would try and do it so that we could drive a team close to the house on the side farthest away from the hives.

GOOD POINTS IN A BEE OR HONEY HOUSE.

The January *Review* is devoted mainly to "Buildings for the Apiary," and amongst other things the following good points come out:

"Estimate how much room you will need and then add fifty per cent. to it. You'll need it all."—**DR. MILLER.**

"If you don't want rats to undermine the cellar walls, dig a trench a foot deep under the wall, that is, the bottom of the trench will be a foot lower than the cellar bottom. Fill the trench with small stones and grout. No rat can gnaw through and no rat knows enough to dig under it."—**DR. MILLER.**

[We didn't think American rats were so stupid.—**ED.**]

"Another extremely handy feature in a building is to have the main doors quite large so as to admit the wheeling in on a barrow of the various articles to and from the house."—**RAMBLER.**

LIQUIFYING HONEY.

How James Heddon does it, is described in the same issue of *W. Z. Hutchinson's paper* and it is possible that some of our large producers may wish to try something of the same nature after they have read the description:

"My honey house is 18x30, two stories, with an eight-foot-deep stone cellar under the entire building. In this cellar I have a stove in one end, partitioned off with a board partition, which serves the double purpose of warming up the bee repository in winter, and of melting honey. I have a coil of inch gas pipe in the top of it which runs three and one-half times around on the inside of the stove, one end running up through the floor on one side, and the other the

same on the other side of the stove, both being tightly connected with a large galvanized pan, or tank, which sets on the floor in the honey house. Over this I have a box. I can raise the lid of this box and place fourteen 58-pound cans of honey in the tank of water, and this water goes down through the pipe, 3½ times around in the stove, and back up again, in a constant, slow current. I can build a fire in the stove in the cellar, when it gets well going throw in a chunk of wood, close the stove tight, and come back the next day and find my candied honey all beautifully liquified, with no frothing, no discoloration and no change of flavor. The whole arrangement cost me about \$25 or \$30, and is worth more than that to me every season, for reliquifying honey alone."

It's an ordinary box stove isn't it, Mr. Hedden, with holes drilled in the top to let the inch pipes through?

KEEPING BROOD COMBS.

G. L. Tinker says in the *A. B. J.* that "in winter, they are better kept out-of-doors in empty hives, made secure against being blown over. Buildings which are more or less open to the weather, so that the combs may freeze, also serve well." No doubt this plan would keep moths out, but it wouldn't do to handle the hives or let any cows in the yard where the hives are kept.

EXTRACTING SURPLUS COMBS IN COLD WEATHER.

"If your surplus combs are not yet extracted, keep them in a warm room a half-day. Then the machine will as readily throw out their contents, if still liquid, as at any time during the summer."—*Farm and Home.*

It reads nice, but it isn't all gospel. We have had combs that you might keep in a warm room a week, and then you couldn't extract them. Try this plan: Take a hive-body without a bottom, and inside of this place an iron-pot (as large as will fit), filled with hot water. Have a chunk of iron, that you can put into the stove to heat, and get it red hot. Take another hive-body without a bottom, and into it set as many frames as it will hold. When the chunk of iron is real hot lift it from the fire and drop it into the pot of hot water, then quickly lift the body filled with frames over it, and cover the top with a piece of matting, or coarse canvas. Leave them about ten minutes, then see how nice they'll extract.

D. H. HIGH.—I like the *BEE JOURNAL*, can scarcely wait with patience its arrival.
Rainham, Jan. 24th, 1891.

Ontario Bee-Keepers' Association.

ANNUAL MEETING HELD AT ST. CATHARINES, Jan. 7-8, 1891.

(Continued from issue January 15.)

THE subject next taken up was

FOUL BROOD,

PAPER BY S. CORNEIL.

The subject of foul brood among bees is too extensive to be treated fully in a single paper. I shall in the first place attempt to discuss the origin of the disease, and the means by which it is spread, noticing some popular errors which have crept into the current bee literature. In order, if possible, to present this branch of the question in such a way that it may be understood correctly, I shall avail myself, as far as may be, of the work already done by some of the leading bacteriologists of the day regarding this and kindred diseases, and afterwards shall give some odds and ends which seem to be of importance with respect to the propagation, prevention, and cure of the disease, without attempting to exhaust these branches of the subject.

In cases where putrid chilled brood is followed by foul brood, the microbes present are of two different kinds, "septic" and "pathogenic." The term "septic" is applied to microbes or bacteria which generally live and multiply in decomposing organic matter and in dead bodies only. Bacterium termo, one of the most common of these microbes, is ever present in the air, water, and soil. Septic microbes are *par excellence* the microbes of putrefaction, and for their operations chilled brood in the hive would furnish a most congenial soil.

On the other hand those microbes are termed "pathogenic" which always characterize, by their presence, a special disease, epidemic or contagious, and possessing special symptoms, such as scarlet fever and small-pox, in man, splenic fever in domestic animals, and pebrine in silk-worms. Unlike the septic microbes they attach themselves as parasites to living animals, and grow and multiply within the body, or on its surface at the expense of their host. Such is bacillus alvei, the microbe of foul brood. As it has been proved by experiment that it may be own and propagated in a mixture composed of beef-tea and gelatine, and also in a culture composed of the crushed larva of bees, it is reasonable to suppose that in the temperature of the hive its germs, floating in the air, or in the water, in the case of drowned brood, may

find a lodgment and grow and multiply in dead brood, side by side with the microbes of putrefaction. Such is the opinion of Professor Cook, T. W. Cowan and others. Dead brood may thus become a factor in starting foul brood in hives which otherwise might escape, and this for the following reasons. In the first place, it has been shown by Dr. Watson Cheyne, of London, that the success of the attack of contagious germs on the cells of living tissues often depends on their number. He found for instance that where a certain number of microbes had no effect when injected into the circulatory system, twenty five times as many caused death. With some kinds, however, it was found that a single bacillus was sufficient to cause death. These effects are explained as a struggle between the growing cells of the animal tissues and the bacteria. In the struggle victory will in most cases remain with the cells, and the bacteria will disappear. The writer of the article on schizomycetes in the Encyclopaedia Britannica says "the living tissues of a healthy animal exert actions which are antagonistic to the parasitic invader." Pasteur might also be quoted in favor of this contention. In view of the foregoing we can see that after the microbes had multiplied, in the rich soil of the chilled brood, their spores might, by sheer force of numbers, have gained a foothold amongst the live brood, where before they might have failed to do so.

Again, Cheshire says "pricking a needle into a diseased larva and then touching a larva in a healthy hive with it is, five times out of six, enough to start a vigorous attack." The bees would be likely to carry more or less of the matter containing foul brood germs, on their antennae and feet to healthy larvae, and in this way spread the disease in the hive.

There is another reason why putrid chilled brood in the hive may be favorable to the attack of bacillus alvei. There is a very poisonous substance developed, as the ultimate product of the putrid fermentation of organic matter, called ptomaine, twelve millegrammes of which will kill a dog. Its effect on the cells of growing tissues is to weaken their action, and if brought into contact with the living brood, by the bees, it would increase the chances of success on the part of the attacking microbes. These are the only ways in which the putrefactive matter of chilled brood can assist the spread of foul brood.

We must guard against the error of supposing that foul brood is ever produced spontaneously as the result of putrefaction caused by septic microbes, that these microbes can successfully

attack living brood, or that they can in any way be transformed into the bacilli of foul brood.

The microbe of foul brood is no more produced spontaneously than are pine trees or elephants. The writer in the *Encyc. Brit.* before referred to says, "No case of spontaneous generation has withstood rigid investigation." Huxley, Tyndal, and others might be quoted in corroboration of this statement. As to the microbe of putrefaction successfully attacking live brood, Klein says "microbes of putrefaction cannot exist in healthy blood and tissues. Dr. Burdon Sanderson, Dr. Ferrier and Herr J. Van Fodor confirm this view of the matter.

Neither is the microbe of putrefaction ever transformed into the microbe of foul brood. The author of "Microbes, Ferments, and Moulds." (No. 57 of the International Scientific series), says "up to the present (Sept. 1885) a septic microbe has not been proved to be transformed into a truly pathogenic microbe."

Under favorable circumstances bacillus alvei increases very rapidly. Cheshire found that in his culture tubes they multiplied every twenty minutes. At this rate a single microbe would increase in twelve hours to the astounding number of over fifty-three billions, and the increase in twenty-four hours would require twenty-two figures to express it. In the hive no doubt the increase would be more rapid still. A single dead larva frequently contains a billion of spores.

It has been demonstrated that while wet, the spores or seeds of the disease are not given off from the matter containing them. It is only after the matter dries up that the spores become floating germs in the air. Similarly, in the case of scarlet fever, the danger of catching the contagion is greater when exfoliation takes place, and in the case of small-pox when the pustules are drying up.

The microbes of foul brood have been found in the tissues and intestinal canal of adult bees by Schonfeld and Hilbert in Germany, by Cowan and Cheshire in England, and by Prof. McLain in America. Schonfeld found the microbes in abundance in the rectum of bees. An American experimenter mixed two grains of bee feces from a diseased hive in a quart of syrup, one half of which he fed to a hive of healthy bees ten miles off. These bees were permitted to fly under cover only. In thirteen days the disease appeared, and in four weeks the combs were reeking with foul brood. It is easy to understand how bees may distribute the germs of the disease for miles over the fields in the vicinity of a diseased apiary, by means of their excreta discharged while on the wing and as this excreta becomes rapidly

dried, how the microbes may be caught up by the winds and distributed as dust in the air over a whole country side.

The disease may be introduced into our apiaries from distant countries by the excreta of the escort bees accompanying queens. English beekeepers say the disease was carried to them with queens from Italy, and A. J. King, late editor of the *Beekeepers Magazine*, says it was brought to an apiary in Cuba, of which he had charge, with queens purchased in Ontario.

It has been said that the microbes do not adhere to the bees themselves, but this has been proved to be a mistake. In 1871 Schonfeld washed, with distilled water, bees from a foul-broody colony and found that this water contained mouldy pieces of rotten brood.

There is a general agreement amongst those who prescribe methods of cure that in diseased hives, the combs become contaminated, and should be melted into wax. It is agreed amongst bacteriologists that the maximum temperature required to kill mature bacteria, in water, is 140°. Many kinds are killed at a lower temperature. It has been proved that the spores, as compared with the adult organisms, possess a power of resistance to heat, in the proportion of 11 to 6, that is if 140° is required to kill the fully developed bacterium, 257° will be required to kill its spores. Wax melts at 142°, a temperature most likely inadequate to kill the spores of bacillus alvei. To what extent the disease has been spread by germs contained in comb foundation, made from the wax of infected hives will never be known.

Dessicated spores, like the dried seeds of plants, often refuse to imbibe water. In this state they resist the action of heat for a long time. It has been found that plant seeds, contained in fleeces of wool, imported from South America, sprouted and grew after the fleeces had been boiled for four hours. An examination showed that some of the seeds had not been wetted. Tyndal boiled his culture tubes for three, four, five, and in one case eight hours, without killing the microbes they contained. He afterwards discovered that by repeatedly boiling them for less than a minute at a time, at intervals of ten or twelve hours, he never failed to sterilize his cultures. Boiling hives and appliances may fail to disinfect them for the above reasons, unless the boiling is repeated several times.

Honey boils at 235°. If the boiling were repeated a few times any spores it might contain would no doubt be killed. Spores have been subjected to a cold of 180° below zero without being affected in the least.

The fully developed bacteria succumb to the

influence of both heat and chemicals much more readily than their spores. Dr. Kooh, now so famous in connection with the cure of consumption, says that the spores of anthrax, or splenic fever are only killed in a five per cent solution of phenol, when exposed to it for twenty four hours, but that the bacilli themselves are destroyed by a solution of one per cent. A solution of one fifth of one per cent. is the strongest that can be fed to bees. Most of the drugs recommended as remedies for foul brood will kill the mature bacteria with which they come in contact, and will prevent their multiplication, but they will not destroy the spores, when used in the greatest proportion possible among live bees and brood. When a cure is affected with drugs the different *hatches* of bacilli, so to speak, are killed by repeated applications, until there are no more spores to germinate.

A solution of corrosive sublimate, about one in one thousand, is sure death to all bacteria and spores. It is a very powerful poison, and cannot be fed to bees or used with effect as a spray, without killing the patients as well as the disease germs. One eighth of an ounce in a gallon of water may be used as a wash for the hands, smoker, and other implements. Half a molasses barrel-ful of the solution will cost less than a dollar and a half. In this solution hives may be dipped and disinfected at a trifling cost, but they must be thoroughly rinsed to remove the poison. It has been recommended that one ounce of potassium permanganate be added to every four gallons of the solution, coloring it, to prevent possible accidents, arising from mistaking the solution for water, whilst it is also a useful disinfectant.

Sulphurous acid, produced by the burning of brimstone will kill exposed bacteria, but will not kill their spores.

The method of cure, by changing the bees to a clean empty hive in the honey season, has been more generally successful than any other. It was practiced by Seydell in 1767, by Voight in 1775, by Bonner in 1789, by Della Rocca in 1790, and was given in Quinby's "Mysteries of Beekeeping" in 1865. It is contended by some that, inasmuch as the disease lurks in the honey, the bees should first be placed in a state of quietude and starved till the last particle of honey in their honey sacks is consumed. Even if it were possible to know when the last particle of honey in every bee was consumed without making a post mortem examination of each one, placing the bees in a state of quietude in which their functional activity is reduced to a minimum, is about the poorest possible way of causing a speedy consump^{tion} of the honey

carried with them from the diseased hive. Besides this there is abundant evidence to show that the vitality of bees thus treated is so reduced by want of food that the stock is found to be seriously injured for work for a considerable time. The alternative method of feeding the bees liberally during their confinement, causing them to secrete wax and build comb, is found to be more effectual in changing the contents of their honey sacs, while at the same time the bees are kept in a state of vigorous health.

The theory that the disease is most commonly communicated from hive to hive, and from one apiary to another, in honey rests on circumstantial evidence which is not conclusive to every one. Diseased hives have been robbed without the disease being carried by the robbing bees. Prof. McLain, gives apparently strong reasons for believing that the disease germs most commonly lurk in the pollen. Cheshire says "such minute bodies as bacilli, produced in inconceivable numbers in the hive, must occur in honey as an occasional contamination, but the idea that they grow in the honey is quite contrary to all evidence. They cannot grow in any fluid having an acid reaction". All experimenters find it necessary to make their cultures slightly alkaline, or else the bacteria will not grow and multiply. To settle these questions we require experiments to determine whether a large number of cultures can be freely inoculated with bacillus alvei, by the addition of honey, and of pollen, taken from diseased hives. As the settlement of these questions has an important bearing on one of the agricultural industries of the country, our Association might fairly ask the Director of the Dominion Experimental Farms, and the President of the Ontario Agricultural College, to have the investigations made in their laboratories. Ordinary beekeepers lack the time, the appliances, and above all the skill, to make such experiments for themselves. Speaking of such investigations, Tyndal says "here, as elsewhere, in these difficult enquiries the sagacity which comes in a great part from nature, the skill which comes from training, and the care which ought to root itself in the moral constitution, are all necessary to save the experimenter from error, and to lead him to truth."

S. CORNEIL.

Lindsay, January 6th, 1891.

] Meyers.—Wish to know if queens really did carry the disease.

S. Corneil.—Queens discharge fæces. The spores are in the honey, and they pass through and are discharged in the fæces. Even though all bees which

accompanied the queen were destroyed, still there *might* be danger.

Some one asked why it was that Mr. McEvoy's cure did not fail.

Mr. Corneil.—When the air is full of these spores they will light on the bees when shaken into the clean hive. Are the spores all off after four days? It doesn't seem that they are, or at least seldom. I surmise that we all know that bees are very cleanly, and when put into this clean hive to build comb, or into a state of quietude, may they not get rid of any of these foreign matters.

This discussion lasted until nearly 11 p. m. and then the subject was as fresh as possible, many not having any chance to air their opinions. It was thought to take it up at the first session next day, but time did not permit.

SECOND DAY.

FIRST SESSION—9 A. M.

The president called order, and the reports of the Affiliated Societies were then read:

REPORTS OF AFFILIATED SOCIETIES.

During the year 1890, eleven local societies affiliated with the Ontario, as against seven the previous year, but again some of them have sent in no reports, a thing much to be regretted. The Government grant will in future be withheld from all local associations that do not comply with the law in this respect. The eleven societies in affiliation are:

MIDDLESEX.—J. B. Aches, Pres.; A. W. Humphries, Parkhill, Sec.

BRUCE.—Albert E. Sherington, Pres.; Arch. Tchon, Walkerton, Sec.

OXFORD.—F. A. Gemmill, Pres.; James E. Frith, Princeton, Sec.

BRANT.—J. R. Howell, President; D. Anguish, Brantford, Sec.

NORFOLK.—John P. Ryder, President; Chas. W. Culver, Simcoe, Secretary.

HALDIMAND.—F. A. Rose, President; E. C. Campbell, Cayuga, Secretary.

LAMBTON.— President; W. E. Morrison, Alvinston, Secretary.

PERTH.—F. A. Gemmill, President; Andrew Johnston, Stratford, Secretary.

WESTERN ONTARIO.—No report.

KENT.—No report.

LISTOWELL.—No report.

The following are the particulars regarding each Association, as shown by their reports:

MIDDLESEX.

Members, 53; colonies, spring count, (49 members reporting) 1636; colonies fall count,

2429; comb honey taken, 11136 lbs; extracted honey taken, 47860 lbs. \$12.00 of grant given to local fairs; lectures, \$17.65; cash in hand, \$2.11.

BRUCE.

Members 14; colonies spring count, 289; colonies fall count, 445; comb honey taken, 100 lbs.; extracted honey taken, 11219 lbs. \$25.00 given in prizes at the Walkerton exhibition.

OXFORD.

Member 14; colonies spring count, 770; colonies fall count, 1037; comb honey taken, 7012 lbs.; extracted honey taken, 25710 lbs. \$5.00 paid for lecture; balance in hand, \$33.93.

BRANT.

Members 21; colonies spring count, 535; colonies fall count, 718; comb honey taken, 1927 lbs.; extracted honey taken, 13978 lbs. \$11.37 given to Brantford fair, \$3.37 to Harley fair.

NORFOLK.

Members 26; colonies spring count, 630; colonies fall count, 737; comb honey taken 1397 lbs.; extracted honey taken, 3005 lbs. Grant on hand yet, \$30.00

HALDIMAND.

Members 22; colonies spring count, 518; colonies fall count, 930; comb honey taken, 2912 lbs.; extracted honey taken, 22585 lbs. \$24.00 of grant distributed to the Cayuga, Jarvis, Rainham Centre, and Dunnville fairs; \$19.00 for lecture by G. B. Jones and expenses.

LAMBTON.

Members 14; colonies spring count, 351; colonies fall count, 609; comb honey taken, 1380 lbs.; extracted honey taken, 10905 lbs. \$5.00 of O. B. K. A. grant given to Brooke Fair, balance unexpended.

PERTH.

Members 17; colonies spring count, 294; colonies fall count, 389; comb honey taken, 1965 lbs.; extracted honey taken, 8527 lbs. \$8.35 for lecture and advertising; cash in hand, \$19.35.

WESTERN ONTARIO.

No report. The Secretary was instructed to ascertain the reason.

KENT.

No report. Same remarks apply.

LISTOWELL.

No report. Same remarks apply.

RECAPITULATION.

Total members (8 reporting) 186; total colonies spring count, 5020; total colonies fall count, 7264; total comb honey taken, 27849 lbs.; total extracted honey taken, 130,629 lbs.; counting the 27849 lbs. comb honey as equal to 55698 lbs. extracted honey, the total average of extracted honey is 37 1/10 lbs. per colony spring count; average increase 44% on spring count.

Moved by F. H. Macpherson, seconded by J. K. Darling, That the Secretary of this Association be instructed to

ask the secretaries of the Western, Ontario, Kent and Listowel Associations, to explain the absence of their reports, and that in the absence of a report satisfactory to the executive committee, the grant for the next year be withheld—Carried.

BEST HONEY—WHERE OBTAINABLE.

Next came a paper by Mr. D. A. Jones, on the above subject. In this paper it was contended that the character of the soil had much to do with the quality of honey from the same source. The paper will be published, along with those which are now being embodied in the special report.

C. W. Post—Wild mustard gives a straw-colored honey.

W. Couse—Basswood honey in the state of Michigan is darker than honey from the same source in Canada.

J. B. Hall—Because of its being mixed honey.

W. Couse—They said it was basswood at any rate.

J. B. Hall—Yes, basswood *and*

J. Myers—Had never seen bees working on mustard.

F. A. Gemmill—Supposed the difference was in the character of the soil in Canada and Michigan.

RIPENING HONEY.

J. K. Darling—Put his unripe honey in tin cans and allowed it to stand, then took off the lighter honey from the top.

J. B. Hall—There should not be any light honey to take off.

D. Chalmers—Believed Mr. Jones was perfectly right, and he thought it would be a good idea if at the next convention all the bee-keepers present would furnish samples of the different kinds of honey, so that they might be compared as to color.

D. A. Jones—Put the honey into ripening cans or extractor bodies, and allowed it to evaporate, after which the honey was drawn off from the bottom of the can.

S. Corneil—Evaporating was all there was in ripening, and the rapidity with which this could be carried on was exactly in proportion to the surface over which it was spread.

A. Pringle—The temperature has much to do with it.

S. Corneil—Yes, I am assuming that the temperature is the same in both in

stances. My plan is to make large shallow tanks, 3 by 8 feet, to hold 1,000 pounds of honey. Another element to consider is the change of air above the honey; as an illustration, a sponge will sup up water until it will not take any more—so with the air in the honey house. If the walls of the tank are so high that the current of air is interfered with, the evaporation will not be so speedy.

R. McKnight.—If a tank be placed in a garden with the temperature at a proper height on a calm day, and next day the temperature is the same but it is very windy, under which conditions will the honey ripen most quickly.

S. Corneil.—On a windy day; change of atmosphere above the honey will be more constant.

R. McKnight.—Did not concur in this view.

S. Corneil.—The kind of comb has nothing whatever to do with the flavor. I have never seen them too old for me. If you put 10 combs to take 50 lbs. of honey in the hive and 20 combs to take 20 lbs. of honey in the next hive, the honey in the 20-combed hive will be much better evaporated and more quickly than in the first mentioned. The thickness of the honey does not depend so much on the time it has evaporated as it does on the atmospheric conditions under which it is secreted. As an experiment, I took a jar of honey, and on using an instrument found that it was equal to 33 $\frac{1}{2}$ density (i. e.) one-third heavier than water. This was just as the honey came from the hive, and it was ready for market at once. It was in '83 when there was no dry weather and the flow came right through August. Experiments in testing are of no value in ascertaining the density of honey. It should always be obtained by the use of an instrument specially used for that purpose, which can be obtained for a small sum. These rough guesses pester us greatly and hinder our progress.

(To be concluded next issue.)

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

Michigan State Bee-Keepers'
Association.

25TH ANNUAL CONVENTION.

(Continued from issue of January 15th.)

THE first paper at the evening session was by Mr. D. A. Jones, Beeton, on the subject:

IN WHAT DO WE PROFIT BY THE IMPORTATION OF QUEENS?

This paper appeared in full on page —, issued for January 1st.

Mr. Root would like information on the subject. They import every year queens, as their customers like a queen reared from imported mothers. The queens imported from Italy are darker than our own queens. He was against very nice looking bees.

Mr. Perry said people went a good deal by looks.

W. Z. Hutchinson said that he much doubted if there was much now to be gained by importation.

Prof. Cook thought that the dark, leather-colored Italians have done better than the light golden bees. He thought if we keep at breeding carefully we can get a desirable breed for which they will send from other countries.

Prof. Cook thought that artificial fertilization would never amount to anything. He thought we could control fertilization to an extent by getting early drones.

QUESTION.—*What are the relative merits of the dovetail corner and the square and half corners on our hives?*

Mr. Root.—The dovetail corner is stronger, and can be more easily crated and shipped.

QUESTION.—*Will brood that has been starved and partially decayed produce foul brood?*

Prof. Cook—Never.

QUESTION.—*Is the use of so much foundation profitable?*

R. L. Taylor—You can only put one sheet in a frame. I want to use full sheets in frames and sections; they make better combs, and I want combs to be permanent for 25 years. From foundation it is straighter and the frame better filled, allowing no room for drone cells. I use wires and five feet to the pound. There is I think not much wax

wasted by the use of foundation. I have noticed scales on bottom boards when needing comb, and not when they have foundation. When secreting wax they are darker, such as I have not seen when there were sheets of foundation.

Mr. Hutchinson thought he would use full sheets in sections, but starters in frames. If he could not get good combs without full sheets he would of course advise using full sheets.

Prof. Cook thought the bees, when having foundation secreted less wax.

Upon voting, 16 were in favor of full sheets in frames, and 4 of starters. 24 were in favor of full sheets in sections, and one in favor of starters in sections.

Mr. Walker would only put full sheets in outside sections; starters towards centre, if tiering up was practiced.

Mr. Hunt stated honey will candy in sections in which honey has been stored the previous season.

Mr. Holtermann endorsed the statement.

Mr. Root said he could now go home with a clear conscience and make and sell comb foundation. He did not want to sell anything not of use to customers. He thought frauds in honey plants should be looked up and exposed, mentioning one named Wilson, a seed man.

QUESTION—*Shall we use frames with wide end bars, touch half way down, or narrow?*

Mr. Taylor—Touch all the way down. Dr. Mason did not want wide side bars.

Mr. Walker preferred close end frames all the way down.

MORNING, JAN. 2.

In the absence of Prof. Cook, president Dr. Mason was appointed chairman.

BEEKEEPERS' ASSOCIATIONS.

In dealing with this subject we must take it for granted that the association is in a healthy condition, a condition of normality. The requirements for a healthy state I will specify. When an association forms and desires to prosper each member must be prepared to sacrifice self interest in the interest of its members in general, in so far as the proper workings of the association is concerned. Outside of that every member may, without injury, consult his own interests and, strange to say, I venture to assert

by so doing that course every member, without seeking it, is doing what is best for himself. What dangers have we then to guard against as members of an association? There are several. In organizing we must be anxious to put the best men in the best positions, that is, when electing an officer it should not be a question of what man do I like best, but what man will make the best officer and fulfil the duties of that office best. An office is no longer an honor when it is to be passed around like a collection box; the question of honor is secondary, and as soon as it becomes the first question the office becomes prostituted again. There are members of associations who go to conventions and (as a dry sponge which absorbs moisture) greedily absorb every new idea, but it takes a tremendous amount of squeezing to get any good ideas out of them, not because they do not have them but because the shell is made of such hard material they are afraid some one might benefit by unearthing them, of course allowance should be made for those who are too timid to rise in a gathering. An apicultural association to confer benefits must leave politics alone. It must not undertake, either to create beekeepers, or to suppress beekeeping. It must make every effort to induce actual beekeepers or those who have signified their intention to become such, to join the association. The object of this is to give him all possible benefits and put him upon the footing of an intelligent beekeeper. This will also prevent him selling honey at a much lower figure than necessary, also assist him to produce a first class honey, for which he can get the best prices, also puts him in the best position to guard against the spread of foul brood in his apiary without his knowledge.

Associations should be conducted in such a manner that no member would be able to have foul brood in his apiary without knowing it. It might be well, even when there is no law regarding the disease, to appoint a foul brood inspector who, upon the request of three or more members, would go to inspect any apiary suspected of having the disease. If admission was refused much would be gained by simply reporting the facts. Apicultural associations could do much by passing resolutions in their interests, either for submittal to government or to strengthen certain causes. Such should, however, not be done too frequently, or they lose their weight. Again apicultural associations should take in hand the guidance to the formation of prize lists. They should make every honest effort to have the prizes offered large, and to have proper judges appointed to award

such prizes. I say judges, for I do not believe in the single judge system.

Honey statistics are very good, and when the necessary funds are there to secure them complete they should be taken, but they are not a complete guide to what the demand for and price of honey should be, the amount of fruit and the scarcity or plentitude of money must be considered. While speaking on this subject let me say it is doubtful if an apicultural association will ever be the proper medium through which to sell honey. Each individual, as a rule, should be able to work to the best advantages in his own interest, and the energy of many individuals through the country will be more useful than that exacted by one or two. Beekeepers, as a rule, during the season in which honey sells best, have ample time at their disposal to devote to this matter.

Apicultural association conventions are not solely for those who are posted on everything new, those who know that honey is partially digested nectar and those who just as positively know that it is not. For those who are disgusted at the idea and those who very sensibly are pleased to know that it is, and that their own digestive organs will have that much less to perform, neither is it for those who know bees hibernate and those who don't, nor is it for those who want information upon the simplest questions in apiculture. No, it is for both, for all classes, and time should be given for each class. As a rule the simple questions are fired at a committee who may not report at all or answer yes or no. Not much wonder that we cannot draw the beginner into our midst and what wonder that we should have cause to rail at that class of bee-keepers which we cannot reach and benefit through apicultural associations.

R. F. HOLTERMANN.

A. I. Root thought conventions a grand thing. Time was when he objected to them, but he now wanted his friends to jog him up if he did not attend them.

Jas. Heddon thought as far as dollar and cent returns were concerned, bee papers yielded a better dividend than the outlay on attending apicultural conventions. Yet when a man could afford it he should invest in both. At a convention a man could not so easily be muzzled as the editor of a paper could a correspondent.

Dr. Mason thought perhaps Holtermann had been tried by a single judge. Believed in the system.

(Holtermann privately informed the doctor he had never shown where one judge presided.)

Mr. Moore thought that at conventions quite a few could be induced to bring out ideas that would not do it on paper.

Mr. Berg had come 200 miles to a convention. Thought it would be well to have them more central.

Prof. Cook thought that if conventions were not a good thing they would have been blotted out long ago. There we see the men who write, and when we see them we feel we know more about their article.

QUESTION DRAWER.

Mr. Walker.—The majority of honey upon the Detroit market was adulterated. Thought action should be taken to enforce the law.

Mr. Root thought matters not so bad as represented. Did not know Mr. Moore. Thought Mr. Walker was posted. One should be careful. There was no name on the label.

Mr. Walker—If adulterated, the law requires name of party putting it up.

Mr. Hunt—My experience is similar to Mr. Walker's.

Mr. Heddon—Law has not helped us yet. He proposed organization and having a trade mark committee, and have bee-keepers have the honey sold in their own packages.

R. L. Taylor—The adulterator can be prosecuted if package is not labelled, though it would be difficult to stop the adulteration.

Moved by R. L. Taylor, seconded by Dr. Watson, That the question of adulteration be referred to Bee-Keepers' Union.

Jas. Heddon wintered almost entirely outside. If the winters would be like the last two winters, he would be glad if they were all out. It was these winters in which there were long cold spells that were dangerous, and we had no guarantee for the kind of winters before us. For that reason he had some bees in the cellar and some outside. In wintering outdoors, the advantages were gathering rays of heat from the sun and the bees being able to fly when the temperature was high enough. For outside packing boxes in winter, he wanted them dark red. This made the

inside of hives several degrees warmer when the sun shone. On the other hand, for summer he wanted the hives some very light color for summer. He had no use for chaff hives. They were not wanted at all. The indoor advantages were in very cold weather. He knew bees could freeze to death. Pollen food or nitrogenous food was very dangerous and did the damage. He picked five combs each for eighty-three colonies, selecting them free from pollen. He fed the bees upon these combs sugar syrup charged with tartaric acid. Eighteen or twenty colonies he allowed natural stores. Out of the eighty-three one colony died, and they had no sign of disease, but the twenty were nearly all dead—fully two-thirds—and all badly diseased. The bees were all in the same cellar, and he had raised and lowered the temperature frequently putting them to a very severe test. He did not believe in spring dwindling. If bees were healthy first of March they would not dwindle. The trouble was when they had not been well wintered.

Dr. Mason agreed with Mr. Heddon in the statement that bees did not dwindle if wintered well.

Prof. Cook asked if the average bee-keeper had not better winter outside such a winter as the present so far.

Dr. Mason—Yes.

Mr. Heddon thought bees when getting cold exercised, and would eat pollen and then get dysentery.

Prof. Cook thought they would only eat pollen when breeding.

Mr. Mason thought bees outside were less anxiety to the bee-keeper, and he could attend to other business.

QUESTION.—*In putting in full combs of honey, would you put them on outside or towards centre?*

Mr. Heddon—Not in end. Towards center.

Mr. Taylor—Put combs with least honey on one side, and gradually more bees cluster where least honey is, and gradually move over to more honey as spring approaches.

Mr. Walker—I used to put best honey towards centre—poorer outside. Bees used poor honey to spring on. I have dry cave in hill-side. A spring of water runs through cave—nearly a barrel a minute. Hives are on legs. The dead

bees run out with water; temperature 48°.

Mr. Berg favored out-door wintering. It gave best results.

Prof. Cook thought locality had much to do with it. He thought if bees would eat pollen they became diseased. Pollen did no harm if bees did not eat it.

In reply to question about stimulative feeding, it was thought best to give plenty of stores in the fall.

Mr. Heddon and others then drifted onto the question of marketing honey. The former thought one reason why honey did not sell as well as strawberries was because people knew they could get it at any time. When strawberries were ripe people piled in and said it was now or never, and everybody that could bought. He proposed that bee-keepers sell honey only two months a year. They should then announce that honey was now ripe, about October 1st. In this way the people would use more.

AFTERNOON—2 P.M.

Place of next meeting, Grand Rapids, Mich.

President—R. L. Taylor.

1st Vice-President—M. H. Hunt.

2nd Vice-Pres.—W. Z. Hutchinson.

Secretary—Geo. E. Hilton.

Treasurer—Dr. A. B. Mason.

The reports of committee on exhibits received and adopted.

Committee on Columbian Exhibit turned Dr. Mason over to the association.

Dr. Mason suggested that honey should all be exhibited in one place. Let each state have a superintendent, and then have a general superintendent over all. To get material, he advised each one that could send anything should send a list of it to committee, and this committee let the prospective exhibitor know how much of it he was to send. The exhibitor puts the price he wants for his product, and the goods were then to be sold or returned to exhibitor. A committee was to try to get money from the government to defray expenses.

It was finally decided to appoint H. D. Cutting superintendent of the state exhibit of honey for Michigan.

A committee of Prof. Cook, Messrs. Hutchinson and Hilton were appointed to see about legislation *re* the spraying of fruit trees at the wrong time of the year.

Secretary Hilton reported \$6.25 cash on hand,

A good deal of amusement was caused by Mr. Heddon proposing that Dr. Mason, the treasurer, bank the amount.

APICULTURAL JOURNALISM.

Prof. Cook spoke of the excellence of the apicultural journals. Quarrels were becoming less, and appeared to be a thing of the past. Journals should be patronized, and bee-keepers should try and encourage subscriptions.

Mr. Taylor called on Mr. Root.

Mr. Root related how he first got into the bee business. He wanted to know what could be done to improve journalism.

Mr. Hutchinson said he was pleased to see the harmony between editors of journals.

CELLAR VS. OUT DOOR WINTERING.

The intelligent bee-keeper no longer dreads the cold of winter for, the so called wintering problem was solved years ago, but, like other matter, that to observant and thoughtful persons, have become anxious, the successful wintering of bees is yet, to many, the subject that most interests them. This subject of wintering, like that of foul brood, seems to me to be worn almost, if not quite, threadbare, in the bee-journals, and still both subjects are frequently placed on the programme of beekeepers conventions.

With this view of the subject I can but feel that I can offer nothing now to most, if not all here present, and the secretary is responsible for this inflection. Had the subject assigned me been "Indoor vs. Outdoor Wintering," I should probably have had nearly every one of you on my side, for but very few beekeepers in the northern part of the United States and in Canada, who are up with the times winter their bees out of doors, at least such is my impression from what I see and hear. With some, cellar wintering has proven anything but a success; with others, and "their name is legion," it it has been a complete success. A Mr. Christiancy, of Toledo, O., who keeps from 200 to 400 colonies, said to me a few days since, "Stand by cellar wintering, its the way to winter bees." He never fails. Not every one engaged in any kind of business is successful, and bee-keeping is not, and never will be, an exception. Certain conditions must exist, and be complied with, or the outcome will not be satisfactory. Proper cellar wintering means an abundance of food, a dark, dry cellar, with a temperature of about 45°. These conditions

to be maintained from the beginning of settled, cold weather, in the fall, till the beginning of settled warm weather in the spring or early summer. With such conditions existing there would be no occasion for any one saying, as did Mr. Miller, at the recent N. A. B. K's Convention at Keokuk. "I don't know whether the greater loss in wintering out doors may not be made up by greater vigor as compared with those wintered in the cellar." Some recommend raising the temperature of the cellar as spring approaches. I would not do so unless it could be maintained when the summer colonies are placed on their summer stands. I have tried all kinds of cellars for wintering bees, and unless I can have it dry and be able to control the temperature, I believe I should prefer to leave them on the summer stands, and give them suitable protection. I believe a damp cellar at any temperature is a poor place in which to attempt to winter bees. If the generally accepted statement is true that it requires 25 to 30 pounds of honey to winter a colony outdoors and it takes from 10 to 15 pounds to winter in a cellar, there is a pretty fair profit on the side of cellar wintering, in the saving of honey alone. The saving of ten pounds of honey per colony, by cellar wintering, where the apiarist has 100 colonies, means a saving of 1000 pounds, which, at ten cents per pound, amounts to \$100, a \$ per colony. To this amount is to be added the saving of colonies which, if left on their summer stands, would have died of starvation, caused by the cold preventing the bees from reaching their stores. Strange as it may seem, there are those who are opposed to cellar wintering, but are in favor of what they call winter protection, and I was amused last winter, when this same subject was under discussion, at the Brantford convention, to hear several denounce cellar wintering, and speak so highly of winter protection on the summer stands; and I presume that I should have laughed outright had not the "dignity that doth hedge about" a presiding officer prevented me, when that wily Englishman, known as J. B. Hall, of Woodstock, Canada, said "where is the man who winters his bees out-of-doors? You all talk about out-door wintering, but when it comes right down to it, if you do not put your bees in a cellar you build a little cellar around each colony. Why not put them all into one big cellar and be done with it?" and more in the same style till he stirred up a full sized hornets nest.

I have had colonies consume less than five pounds of stores while in the cellar, from Nov. to April, but last year one colony consumed 81

pounds of stores in the cellar and then starved, a fair amount of pollen being left, but not a drop of honey. It seems hardly worth while to even mention the matter of expense for putting the bees into the cellar in the fall and taking them out in the spring, but this objection has been made by but comparatively few. Few intelligent beekeepers now winter their bees on their summer stands without some kind of protection, but no kind of protection that is worthy the name can be furnished as cheaply as the bees can be put in and taken out of a cellar or special repository, and those who winter without any kind of protection do so at greater expense than comes from any other method of wintering.

A. B. MARON.

A lengthy and interesting discussion followed, after which the question drawer was opened, upon the disposal of which an adjournment was made, quite a few members remaining for some time to discuss apicultural questions.

There was a marked absence of beekeepers' supplies; no hives were exhibited, and only a few sections and section foundation. Quite a quantity of honey was shown, amongst it fireweed honey, the quality of which was excellent.

Spraying Fruit Trees.

To clear up a misunderstanding which we felt existed, regarding the statement made by Mr. Shantz, at the Ontario Convention at St. Catharines, with reference to the time when spraying should be done, we publish the following note received from Mr. Beadle. It will be remembered that Mr. Shantz said that Mr. Beadle had stated "that the proper time to spray was *just before fruit bloom.*" Mr. Beadles' remarks apparently did not refer to spraying with Paris green to destroy insects, but to prevent apple scab. The letter explains itself:—

F. H. MACPHERSON, Esq.

Dear Sir,—Just returned home. I find yours of the 15th inst. I did say that in spraying with Eau Celeste for the apple scab fungus it is important to spray *before* the flowers open, and again as soon as the flowers have *fallen*, and to repeat once in three weeks in rainy weather, or once in four weeks in dry weather, until some five or six sprayings have been made.

D. W. BEADLE.
St. Catharines, Jan'y 28, 1891.

THE CANADIAN BEE JOURNAL

ISSUED 1ST AND 15TH OF EACH MONTH.

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

BEETON, ONTARIO, FEBRUARY 1, 1891.

We are glad to notice that, notwithstanding the increase in the subscription price of the *Review*, the number of subscriptions received for December, 1890 was twice as great as for the same month the preceding year.

The *Bee World* is the name of another, published at Waynesburg, Pa., by W. S. Vandruff. This one contains the same number of pages as the *Beekeeper*, but minus the cover, though the price is the same and it is to be published monthly.

We have just bought 50,000 feet of beautiful basswood from one man, which we will dry carefully. Section orders are coming in already, and we will sell far more than ever before. The prospects all point to a good season, and we all hope that the honey crop of the coming season, will surpass even that of 1885.

Commendations from those who are able to judge are always acceptable, and for the very nice notice which *Gleanings* gives us it has our thanks. Here it is:—

"The Cappings department of THE CANADIAN BEE JOURNAL is interesting and well edited. It gives the best thoughts of bee-keepers, no matter where uttered, with substantial credit, not only of the writer, but of the bee-journal as well."

In our last issue mention of the new bee journals was omitted for want of space. The first of these which we received was the *American Beekeeper*, published at Jamestown, N. Y., by the W. T. Falconer M'fg Co. It is a 16-page monthly with cover; the price is 50 cents per annum. Typographically it is neat, and the subject matter is good.

It always takes about two days to get the C. B. J. folded, and very often this keeps us late in mailing. But we are doing away with the necessity of folding by hand, and it is possible that this issue of the BEE JOURNAL will be folded on our new folding machine, which will run by steam, and will fold the Journal at the rate of 1,500 per hour. We can then do in less than half a day what now takes us four or five times that length of time, and we hope thus to be able to get out every issue on time.

The January number of the *Canadian Horticulturist* has been on our desk for some time, but the notice intended for it was crowded out of our issue of the 15th. The frontispiece is a lithographic sketch of a porch covered by magnificent climbing roses. It is full of good things for the fruit grower and gardener. Note the advertisement in this issue,

We have just completed and sent to W. A. Chrysler, Chatham, a 16 page pricelist, in which he offers many goods of our make. To those of our customers living in south western Canada, and who can effect a saving in freight, by ordering from Mr. Chrysler, we may say that he will furnish anything in our list at the same prices as if ordered direct from Beeton. We have always found him straight-forward and honorable in all his dealings, and we can recommend him to the purchasing public.

HOW TO MANAGE BEES,

"How to Manage Bees;" or Bee Culture for the Masses, By W. S. Vandruff, Waynesburg, Pa., 175 pages; price \$1.00.

Although this has been in print for over a year, a copy has only recently come into our possession; the delay being caused through the miscarriage of the first copy mailed us. The author relates his experience in the pursuit in his twelve years of labor among the "busy bees," and for many points which were out of his line, he has drawn largely on Cook's Manual and Root's A B C, to rather too great an extent to give the book an originality which all books should possess in the matter furnished by the author, but to his honor be it said, he has given full and proper credit.

COWAN'S NEW BOOK.

"The Honey Bee"—Its Natural History, Anatomy, and Physiology, Thomas William Cowan, Editor *British Bee Journal*.

The book described above, we have received at the hands of its author, Mr. Thos. Wm. Cowan, whose visit to Canada in 1887 will be remembered by all readers of THE JOURNAL at that time. Those who were present at Toronto when Mr. Cowan had on exhibition his excellent microscope under which he exhibited a large variety of slides showing the different parts of the honey bee, will understand that the work of the preparation of a book covering the anatomy and physiology of the honey-bee was in the right hands, remembering the great pains at which Mr. Cowan must have been in the preparation of the slides, which would of course be used in his book, which is illustrated with 72 figures and 136 illustrations. The work which its preparation must have entailed on the author, must

have been prodigious, and the high encomiums which are being heaped upon the author will, to some extent, repay him for his labor. It merits a large sale, and we feel sure that it will meet with the approval of all practical and scientific bee-keepers. We hope to see the book in the hands of many Canadian bee-keepers before long. Price 75 cents.

The following recommendation regarding the impartiality with which THE CANADIAN BEE JOURNAL is conducted, has a peculiar significance at the present moment, and fits in pleasantly. Coming from a gentleman who is totally disinterested, and one capable of judging, we cannot but feel proud of and appreciate his utterances, and he has our sincerest thanks.

"Some editors are not always impartial. I don't say intentionally so, but it is human nature to look out for one's own interests. It may be we fear using an article because some person of influence or some friend may be shown in error by it. Or we may use an article from such a person or give them more license in writing that which is personal, because we do not wish to offend them. This, as I said, is natural, but to say nothing about right, is not wise. If editors had been more broad and liberal we should not now have so many bee journals it seems to me. To the credit of THE CANADIAN BEE JOURNAL I would say that in this respect, as far as I can see, it has always been impartial and has shown no fear or favor. Articles are used on their merits, and all writers and hives have an equal chance, if the firm does sell special patterns. Though the C. B. J. has been rather slim in contents at times, on the whole, as it has been managed, I would have given up all other bee journals before I would that. Why? Well, I am pretty certain that if a really good article or idea comes out in the *Review*, *Gleanings*, *Guide* or *Api*, it will also appear very soon in the C. B. J. I feel more sure of getting the current news and do not fear that some things will be withheld or passed unnoticed for reasons best known to the editor,

We shall only add that we have never withheld any article because it was contrary to our ideas, nor do we think it right or honorable to do so, under the circumstances in which we, as well as all the other supply dealing editors, are placed.

VICK'S FLORAL GUIDE.

No lover of a fine plant or garden can afford to be without a copy. It is an elegant book of over one hundred pages 8½x10½ inches, beautiful colored illustrations of Sunrise Amaranthus, Hydrangea and Potatoes. Instructions for planting, cultivation, etc. Full list of everything that can be desired in the way of Vegetable and Flower Seeds, Plants, Bulbs, etc. Also full particulars regarding the cash prizes of \$1,000, and \$200. The novelties have been tested and found worthy of cultivation. We hope it will be our good luck to see the Nellie Lewis Carnation and taste the Grand Rapids Lettuce. It costs nothing be-

cause the 10 cents you send for it can be deducted from the first order forwarded. We advise our friends to secure a copy of James Vick, Seedsman, Rochester, N. Y.

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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 to Feb. 1st, the discount will be 6 per cent. ; to March 1st 4 per cent.

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

Beeton, Ont.

* * * Subscribers who fail to receive their copies of the JOURNAL promptly, will kindly advise us. Missing numbers are always replaced, where possible.

ADVERTISEMENTS.

EXCHANGE AND MART

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

BEES

FOR SAME.—Linden Honey, extra fine and white, well ripened honey, put up in cases of two 60 lb. cans at \$13.00 per case. Sample sent for 5 cents. W. E. MORRISON, Alvinston, Ont.

EXTRACTED HONEY.—For Sale, 2000 pounds, fine quality, \$6 per 60 lb. can enclosed in wood. Smaller packages of 7, 15 and 30 lbs. also for sale. E. & G. W. BARBER, Hartford, Ont.

2,500 LBS. HONEY for sale, good quality, light color, from 10c per lb. down to 8c., according to quantity. Also about 300 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.

BEESWAX WANTED

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 outdoors. 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.

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

MENTION THIS JOURNAL

READ WHAT THE

Michigan Agricultural College says in Bulletin No. 57 of March, 1890, of TIM'E'S NEW SEEDLING POTATOES. The prices, etc., I will add, and are my quotations.

TIMPE'S No. 1.—Round, flat, red. This variety was also critically tested against SCAB. Where untreated no scab was found. Stock limited. Only sold by the lb. Per lb., 75c.

TIMPE'S No. 2.—Long, round. Eyes few small, shallow. Color nearly white. Flesh white. Medium early. Yield per acre 340 bushels. A VERY handsome and VALUABLE VARIETY. Stock small, only sold by the pound. Price, 75c.

TIMPE'S No. 4.—Rather long, round. Eyes few, very large, shallow. Yellowish pink. Flesh white. Early. Yield per acre, 400 bushels. Quality good. A fine looking potato, and by far the MOST PRODUCTIVE of the EARLY varieties. Leaves medium green plants 16 to 18 inches high, with a spread of 3 to 3½ feet. VIGOROUS. Per lb., 85c.; 2 lbs., \$1.00—post paid.

In conclusion the College then adds: **TIMPE'S SEEDLINGS** have been grown here for four years, and have **SHOWN THEMSELVES** to be **VERY PROMISING** varieties, **WORTHY OF GENERAL INTRODUCTION.** 1 lb. of each variety, post paid, \$2.00, or 2 lbs. No. 4 and 1 lb. of each of Nos. 1 and 2, prepaid, \$2.25. Give your Express office address.

Also, wishing to introduce my production, and my inquiry demanding my attention later, I must prepare to get these potatoes ready to ship by April 1st, I make the following **SPECIAL OFFER** to the **FIRST** person ordering to the amount of \$1.00 or over, from **EACH STATE or PROVINCE**, I will give a **TESTED QUEEN FREE** of my **PREMIUM STOCK**, or return your money sent free. To all others I will add several packets of my Choice Garden Seeds (who **ORDER AT ONCE**). Remember I am giving one full colony and 11 three-frame Nuclei for Largest Yields, 3 three-frame Nuclei for Largest Potatoes, and 3 three-frame Nuclei for Best Names offered. Distributed on each variety. Further particulars, in my new catalogue (now ready), mailed for stamp. Canadian currency and stamps at par, but would prefer express money orders. Be quick, and get a queen free, or your money returned. Remember I cannot do this to all, but to the first orders.

ADDRESS AT ONCE,

JACOB T. TIMPE,
GRAND LODGE, MICHIGAN.

POULTRY

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

IMPORTED INDIAN GAME—Poultry Pigeons, Rabbits, Ferrets, Guinea Pigs, Shetland Ponies, Maltese Cats, Dogs, Garden Seeds and Flowers. Send for my Circular. Address' Col. J. Lefel, Springfield, Ohio.

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

FOR SALE—Mammoth Light and dark Brahmas, Partridge Cochins, Silver Grey and white Dorkings bred from imported stock Eggs for hatching in season. Come and judge for yourselves. JOSEPH KINSEY, Doon, Ontario.

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—My entire stock of Black Minorcas 13, Pullets; and 2 Cockerels. Guarantee every Pullet to score from 94 to 96½; one Cockerel will score 95. he took 1st at Toronto Exhibition. Pullets are all laying. \$25 will buy the lot. W. COLE, Brampton.

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 aken at once. Also a pair of lopeared rabbits. JOHN COLE, 151 Hughson st. Hamilton.

FOR SALE—1 Light Brahma Cock and hen (year olds) 1 Dark Brahma hen, 10 pr. L. B. chicks, single, pairs or trios, winners at Milton and Bowmanville, all score over 90 points; Partridge Cochins, Silver Grey Dorking Cockerels and Pullets. Cheap if taken now before breeding commences, JOHN COLE, 151 Hughson st., Hamilton.

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 95½ as Cockerel two years old. Will sell single birds, pairs or trios, all A 1 birds. JOHN PLETSCH, Box 26, Shakespear, Ont.

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 \$8. Score card furnished. Our partridge chicks won all prizes offered but one W. & A. Wright, Richmond Hill

FOR SALE—White Rocks S. L. Wyandottes, Buff, Pekin Bant eggs, after March 15th, '91. I bred the highest scoring trio of W. P. R. in America this year, cockerel 96, pullets 97, 96½; one G. L. Wy cock for sale score 93. Butterfield, price \$4; see awards at Dunville show. Eggs \$2.50 per 13, \$4 per 25; circulars free. S. M. CLEMO, Box 113, Dunnville, 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, two Aslesbury Ducks, two Pekin Drakes, Wilson Bone Hill, Webster Clover Cutter, Hot water Incubator, 50 exhibition coops, S. W. EDSALL, Selkirk Ont.

CARNOLIAN :- QUEENS.

I expect to continue breeding of Cholro Carniolan 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.

ADVERTISEMENTS.

OWEN SOUND

— IS GOING TO HAVE A —

MONSTER

POULTRY SHOW

ON

Feb. 3, 4, 5 & 6, 1891,

**A Special Prize for the Greatest Number of Entries
WILL BE GIVEN.**

Having secured the services of **MR. I. K. FELCH**, all baeeders 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 informanion 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, PRES.,

JAS. McLAREN, SEC.

CONSUMPTION SURELY CURED

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

AGENTS WANTED !

In every part of Ontario to send in club lists of members of the Ont. F. G. A., including a bound copy of the reports of both the Fruit Growers and the Entomological Society, the Canadian Horticulturist for one year, and the choice of a tree or a plant for testing, all for \$1.

SPECIAL INDUCEMENTS

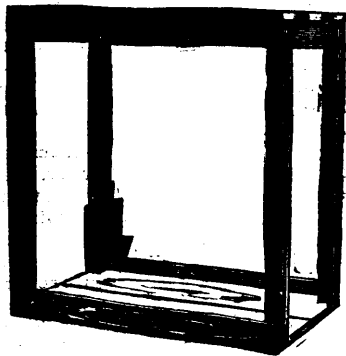
Anyone sending in a list of subscribers may have choice of—1. 20 cents in cash for each new subscriber, or two renewals, 2. One selection from premium list for each new subscriber, or for two renewals. One beautiful bound volume of Journal to 5 new subscribers, or for a club of 5 names or over for one address, the agent may select one for each name (or two renewals), from following list of larger trees and vines, to be sent by express, prepaid.

- | | |
|---|---|
| 9. Princess Louise Apple tree, 5 to 6 ft. | 12. Duetzia Crenata, 8 ft high. |
| 10. Yellow Transparent " " " | 13. Niagara Grape Vine, 2 years, 1st class. |
| 11. Catalpa Speciosa " " " | 14. Mills Grape Vine. " " |
| 15. Saunders new Black Currant. | |

(These must go by express and in lots of not less than 5 to one address.)

WRITE FOR SAMPLES & OUTFIT AT ONCE, NOW IS THE TIME

The Canadian Horticulturist, GRIMSBY.



SHIPPING - COOPS

For Exhibition and Sale Purposes.

Save money in express charges by buying light, we made coops—weigh only 5 1/4 lbs.

We keep in stock one size only, 30 in. x 13 in. x 20 in for pairs or light trios.

PRICES MADE UP.

	Each	10	25	100
Skeletons, only,	30c.	\$2.75	\$6.2	\$22.50
With Canvas,	40c.	3.75	8.55	30.00

PRICE IN FLAT.

	50c.	2.50	5.00	15.00
Skeletons, only,				
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.

— TRY —

Christie's Improved Feeder

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

	1 qt.	2 qt.
Each, by mail,	\$.50	\$.60
Per doz.,	4.00	4.80

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

Niagara River and Grand River POULTRY 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. 30th for imported birds. Buff Leghorns are all the rage. Send for prices. I have some fine BLACK LEGHORNS for sale.

A. W. GARDNER
Box 1298, 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.

Autoerat strain of Light Brahmas, Single Comb Barred Plymouth Rocks, White Plymouth Rocks, Black Minorcas and Buff Pekin Bantams. Eggs, \$3.00 per 13, \$ 5.00 per 26. BOX 13, DUNE PARK, ONT.

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.,

ADVERTISEMENTS.

WILL. A. LANE,

Turnerville, --- --- Ont.

—BREEDER OF HIGHEST TYPE—

BRONZE TURKEYS

Write for prices of young birds in the fall.

FOR TRUE BLUE

:- CARNIOLANS :-

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

J. B. MASON
MECHANIC FALLS, ME.

The **BEE-KEEPERS' REVIEW** has been enlarged, a cover added and the price raised to \$1.00. Never mind if you have seen copies of former

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issues, send for a copy of the last number, sent free, read it, admire it, and then subscribe. Address **W. Z. Hutchinson, Flint, Mich**

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

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, 186 WEST ADELAIDE STREET, TORONTO.**

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
½.....	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 shipping honey in bulk, the 60 pound tin, encased in wood, is the longest and best article be obtained for the purpose. The prices are:

point 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 vable from having his name on each package, and this series of honey labels are deserv-popular, being handsome, bright and attractive. Directions for liquifying are given d a blank in which the vendor's name is to 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	95	55	13
Printing name and address, first 100.....	90	55	13
Each subsequent 100 up to 500.....			30
Printing name and address, per 500.....			12
" " " " " " " " 1000.....			75
" " " " " " " " " " " "			1 25

Shipping Crates for Sections.

Sample crates, glass included, made up holding 12 or 24 sections 3¼x3¼ or 4¼x4¼ 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.....	3¼x4¼x8
12 " " " " " " " " " " " "	4¼x4¼x8
24 " " " " " " " " " " " "	3¼x4¼x8
24 " " " " " " " " " " " "	4¼x4¼x8

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