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VOL. IV, NO. 45

1889

JANUARY 30

PUBLISHED EXCLUSIVELY IN THE INTERESTS OF THE HONEY PRODUCER

THE CANADIAN



JOURNAL

THE FIRST \$

WEEKLY

IN THE WORLD

ONE DOLLAR PER YEAR

THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER

PUBLISHED BY
THE D.A. JONES CO LTD
BEETON ONT.

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Cook's Manual, cloth.....	\$2 25	\$2 00
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C. C. Miller.....	1 75	1 50
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by Rev. W. F. Clarke.....	1 25	1 15

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We have prepared a series of pamphlets on special subjects relating to bee-culture, containing the best thoughts of our most practical bee-keepers, which we offer at very low rates, as follows :

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- Or the whole five books, post paid, for..... .50

THE D. A. JONES Co., LD., Beeton, Ont.

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We keep in stock constantly and can send by mail post paid the following :-

- "A YEAR AMONG THE BEES," by Dr. C. C. Miller. Price, 75c.
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- QUINBY'S NEW BEEKEEPING, by L. C. Root. Price in cloth, \$1.50.
- BEE-KEEPERS' HANDY BOOK, by Henry Alley. Price in cloth, \$1.50
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- THE FIVE AND HONEY BEE, by Rev. L. L. Langstroth. Price, in cloth, \$2.00.
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- SUCCESS IN BEE CULTURE as practised and advised by James Heddon—price in paper cover, 50 cents
- BEE-KEEPERS' GUIDE OR MANUAL OF THE APPLIES, by Prof. A. J. Cook. Price, in cloth, \$1.25.
- FOUL BROOD, ITS MANAGEMENT AND CURE by L. C. Root. Price, 11c. by mail; 10c. otherwise.
- A. I. ROOT IN CARP CULTURE, by A. I. Root, in paper 50c.
- HONEY, some reasons why it should be eaten, by Allen Langley. This is in the shape of a leaflet (4 pages) for free distribution amongst prospective customers. Price, with name and address, per 1000, 3.25; per 500, \$2.00; per 250, \$1.25; per 100, 80c. With place for name and address left blank, per 1000, \$2.75; per 500, \$1.70; per 250, \$1.00; per 100, 50c.

THE D. A. JONES Co., LD., Beeton

Foot Power Machinery

Advertisement on foot power machinery. We have just arrived the sale of these machines, and we can give F.O.B. cars at 10% duty and freight (10). On application we will forward catalogue free.

THE D. A. JONES Co., LTD. Beeton, Ont

PUBLISHERS' NOTES.

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

Send us the names of three subscribers with \$3 in cash and receive as a premium one C. B. J. Binder.

Send postal card for sample of leaflet, "Honey, some reasons why it should be eaten."

The CANADIAN BEE JOURNAL will be continued to each address until otherwise ordered, and all arrears paid.

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

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

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 can supply Binders for the JOURNAL 55 cents each, post paid, with name printed on the back in Gold letters.

Subscription Price, \$1.00 per Annum Postage free for Canada and the United States; to England, Germany, etc, 10 cents per year extra; and to all countries not in the postal Union, \$1.00

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.

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Space measured by a scale of solid nonpareil of which there are twelve lines to the inch, and about nine words to each line.			
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THE CANADIAN BEE JOURNAL

AND "Gleanings," semi-monthly.....	\$1.75
"American Bee Journal," weekly.....	1.75
"American Apiculturist," monthly.....	1.75
"Bee-Keepers' Magazine," monthly.....	1.40
"Bee-Keeper's Guide," monthly.....	1.40
"Rays of Light".....	1.25
"The Bee-Hive".....	1.25
"Beekeepers' Review".....	1.40
"Beekeepers' Advance".....	1.80

TO CONTRIBUTORS

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

Contributors will find our Query Department of much value. All questions will be answered by thorough practical beekeepers. Questions solicited.

When sending in anything intended for the JOURNAL do so in sheets of paper. Both may, however be enclosed in a business envelope.

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

BEE-KEEPERS'
PRINTING.

We make a specialty of Apiarian Printing, and have unequalled facilities for Illustrated

Catalogue and Label Work.

Note these figures, which include printing.

	500	1000
Note Heads, good quality.....	\$1 15	\$1 90
" linen.....	1 25	2 00
Letter Heads, Superfine.....	1 75	2 50
" Linen.....	2 00	3 25
Envelopes, business size, No. 7,		
white.....	1 15	2 00
" Extra quality.....	1 35	2 25
Business Cards.....	1 50	2 50
Shipping Tags, 40c., 45c. and 50c. per 100.		

Our new book of labels contains nearly 100 specimens of elegant honey labels. Write for prices for any printing required.

THE CANADIAN BEE JOURNAL,

7

BEETON.

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 they will be inserted in our regular advertising columns. This column is specially intended for those who have bees or other goods for exchange for something else, and for the purpose of advertising bees, honey, etc. for sale. Cash must accompany advt.

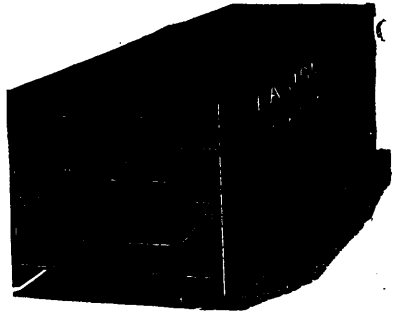
FOR Sale—1 Barnes foot power circular saw, as good as new; price \$40. Also 4 honey tanks, hold 550 lbs each \$2.50 each. Edward Lunau, Buttonville, Ont.

HONEY.—We can take all that offers in exchange for supplies, at prices found in another advertisement in this issue. THE D. A. JONES CO., Beeton, Ont.

SPLENDID OPPORTUNITY.

FOR SALE in Gulloden, County of Oxford, a comfortable Dwelling, Outbuildings and four-fifths of an acre of splendid land, planted with the choicest fruit. In connection there are 60 Hives of Italian Bees with plenty of stores to winter, and everything else for carrying on Bee-keeping. All for Six Hundred Dollars (\$600). Owner leaving, and must sell. One of the finest districts for Bee-keeping in Ontario, situate two miles from Brownsville station, Michigan Central Railroad. Come and see, or apply to

JOHN A. SAYRE,
Gulloden, Ont.



FEEDERS.

FOR PRICES SEE OUR CATALOGUE, WHICH WILL BE SENT FREE TO ANY ADDRESS.

THE D. A. JONES CO., LD.

BEETON, ONT.

THE AMERICAN APICULTURIST

Will be mailed from Oct. 1 1888 to Jan 1 1890 for 75 cts. The editor has had 30 years experience in rearing Queens and practical Bee-keeping, and now proposes to give the result of that long experience in a series of articles in the APICULTURIST. The first Article will appear in the Nov. 1888 issue. The details of a new method of rearing Queens in full colonies, without making the colony queenless, will be given to each subscriber. Send for sample copy. Address AMERICAN APICULTURIST, Wenham, Mass.

NEARLY 30 TONS OF
DADANT'S FOUNDATION
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IT IS KEPT FOR SALE BY MESSRS.

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- E. KRETCHMER, Coburg, Iowa.
- M. J. DICKASON, Hiawatha, Kans.
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- J. B. MASON & SONS, Mechanic Falls, Ma.
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- JOS. NYSEWANDEN, Des Moines, Iowa.
- G. B. LEWIS & CO., Watertown, Wis.
- PAUL L. VIALLOU, Bayou Goula, La.
- B. J. MILLER & CO., Nappanee Ind.
- J. MATTOON and W. J. STRATTON, Atwater, Goodell and Woodworth Mfg. Co., Rock Falls, Ills.
- J. A. ROBERTS, Edgar, Neb.
- OLIVER FORSTER, Mt. Vernon, Iowa.
- GEORGE E. HILTON, Freemont, Mich.
- J. M. CLARK & CO., 1409 15th St., Denver, Col.
- E. L. GOULD & Co., Brantford, Ont.

and numbers of other dealers. Write for SAMPLES FREE and Price List of Bee Supplies. We guarantee every inch of our Foundation equal to sample in every respect. Everyone who buys it is pleased with it.

CHAS. DADANT & SON,
HAMILTON, Hancock Co., ILL.



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

VOL. IV. No. 45

BEETON, ONT., JAN. 30, 1889.

WHOLE No. 201

EDITORIAL.

WHEN a man finds that he has been beaten and foiled at every point, it is always best to accept the inevitable with the best possible grace. Gentlemen, always do this.

* *

The paragraph below we clip from the last issue of *Gleanings*, and for it we make our best bow :

"Our friend D. A. Jones is now writing a series of papers on 'Practical Bee-keeping' in the CANADIAN BEE JOURNAL. The author is full of bee lore, and that of a practical kind. These papers will be read with interest, because the matter bespeaks experience."

* *

One of the foremost bee-keepers of the British Isles passed suddenly away on the 8th inst., when Mr. William Raitt, of Blairgowrie, Scotland, was summoned to his long home. Mr. Raitt was an enthusiast in his profession, a persevering student of the habits of the busy bee, and he gave his brethren much valuable information in his own and other bee periodicals; for his persistent and untiring efforts for the advancement of apiculture apiarists the world over owe him a debt of gratitude. When at the Colinderies we frequently met Mr. Raitt and afterwards spent a short but pleasant time at his home near Dundee. He was an ardent admirer of the heather, and of a box of plants given us by him but one now remains to remind us of our lamented friend. But let us not weep for him, for

he has gone to reap the reward promised to all who lead a pure life, and friend Raitt was a grand example of the real Christian.

CENTRAL FARMERS' INSTITUTE.

WE notice the remarks made in a recent issue of the *C. H. P.* with reference to the coming meeting of the Central Farmers' Institute in which it complains of the fact that delegates were not invited from the Ontario Bee-Keepers' Association the same as from the Fruit Growers' and Dairy Associations. While there was no objection to asking for representation it would have shown a better spirit and been more to the purpose to have requested it in the proper quarter, instead of making petty complaint.

The Secretary of the Institute, Mr. Thomas Shaw, Professor of Agriculture, of the Ontario Agricultural College, Guelph, would have requested delegates had he known the address of either the President or Secretary of the O. B. K. A. Not knowing these, and having been for the past month constantly on the move attending meetings of the local Farmers' Institutes throughout the country, he was unable to obtain their addresses until lately. The matter is now in the hands of the Executive Committee of the Association, and delegates will in all probability be appointed. No disrespect was intended to the Association.

FARMERS' INSTITUTES.

FERTILIZATION OF FLOWERS BY BEES.

IN a private letter to the editor, Mr. McKnight, of Owen Sound, says:—
 "In your last issue you deplore the fact that at none of the meetings of the Farmers' Institutes held thus far had the bee been represented. I enclose you the programme of meeting of the North Grey Institute held here last Monday and Tuesday, 14th and 15th, by which you will see that at least one such Institute had a representative of the 'busy' industry on the list of speakers. We had an excellent meeting, and I am persuaded that in the hour I occupied the platform I made many friends for the bee."

We are glad indeed to see that our friends in North Grey appreciate the importance of our industry. They must have felt that Mr. McKnight's paper was of value, because at their annual election of officers the following day, we notice that he was elected as a director. Bee-keeping will eventually become one of the adjuncts of good farming and every farmer will keep bees, as much for the sake of their usefulness as fertilizers. While speaking on this subject it may be worth while here to quote a paragraph from a letter lately received from one of the foremost of Canadian intelligent bee-keepers. He says:

"I am sure that if the work of the bees in the fertilization of flowers was better understood and more frequently brought before the public at such meetings (Farmers' Institutes) there would be no necessity for such organizations as that on the other side for defending suits brought against bee-keepers, as the prejudice against them would vanish as their worth became better known—that in fact all would be friends and none enemies."

OBSERVATIONS.

WHERE have I been? Why, away on holidays—this is the Christmas season you know and some of my friends have been keeping me.

Canadian grocery trade journals in giving the market price of honey invariably speak of "pure"

honey. These quotation marks convey an insinuation that the honey is not really genuine, but merely called so for trade purposes, and their use is unwarranted.

Was I afraid of Dr. Mason when he came down on me so heavily! Well no! If I couldn't read between the lines, and feel that all the while the doctor was having a real good laugh I might have been. The arguments put forth by "A Hallamshire Bee-Keeper" are so good, especially the one with reference to "no stamp for reply" that I commend them to Dr. M. Why, the good doctor writes on this very subject in last *Gleanings* and proceeds to walk into those people who forget to send a stamped envelope when they write for information that will benefit no one but themselves.

That old proverb "people who live in glass houses" is a favorite of mine. I am reminded of it when I read in the last issue of your monthly contemporary, a squib with reference to a report of the O.B.K.A. which was sent to the dailies with the names of the auditors not included in the list of officers, and all because high mightiest was one of the aforesaid auditors. He "never did an act so dishonorable," my thoughts revert to the report of the O.B.K.A. convention of last year, sent to the A. B. J. by this honorable (?) gentleman wherein no mention was made of a certain paper written by Mr. Allen Pringle, nor was any mention made of that gentleman either directly or indirectly. "Consistency thou art a jewel."

OBSERVER.

EXTRACTED.

THE question "are queens injured by transit through the mails" is answered by Friend Pratt of the Q. B. J. thusly: The only way to ship a really valuable queen is with a nucleus or one pound of bees. Never send them by mail in the common shipping cage unless you can afford to stand a loss."

Mr. Lucien French, of Dexter, Me., has kept bees for fifty years and now at 83 still follows his favorite pursuit.

The Rural Californian speaks very hopefully of the coming season. "The foundation for a good yield of honey for the year 1889 has been laid by the splendid rains that fell in November and December 1888, and so far the atmospheric conditions have been perfect. No high winds; no very cold nights; and warm days. Even the rain was what may be called a warm rain, and

coming so gently that the earth took it all in, thus insuring a good start for the sages, that give the best nectar for honey of any flowers that grow in Southern California. The bees are in very good condition generally, both as to health and stores, and where they were properly handled, will be in fine condition for the breeding season, that will likely commence the latter part of January or first of February.

A correspondent of the Massachusetts *Plover* says that when the bee starts out to gather nectar or pollen, it always visits the same genus of flowers. It makes no mistake. If the apple-blossom is first visited, all subsequent visits till a load is secured are made to apple-blossoms. By this means fertilization is secured, and nearly all chances of hybridization done away with.

A writer in *B. B. J.* wishes that the sale of virgin queens prevailed more in England, since by this plan "in-and-in" breeding would be avoided, and new blood would be introduced at a trifling expense.

Rev. C. M. Herring, President of the Maine Bee-keepers Association thus answers the query "Where lies the secret of success." His answer was: First, in the man. One might be fitted for other lines or work but for this they have no adaption. The true bee man is one of brains, heart and muscle. He comprehends the whole field quickly and adapts his efforts to the end desired. He knows a bee man who was born with all the instincts of a master. From a boy he could handle bees without gloves and without fear. In his ripe years every bee on his place seems to know and regard his secret process.

Another secret of success lies in the bee. Man and the bee are wonderful beings. When they come together the secret of success in man finds the secret of success in the bee, then the smile of prosperity will be assured.

The secret of success in the bee lies in the blood. All bees, like men, are not of equal value. As with horses, sheep, cows and swine blood will tell. Hence bees are not all alike.

About the first mistake the novice makes in starting in bee culture, is the notion that all bees are alike. He should learn that the best races crossed with the best races will insure increased vitality. Such are the bees for success.

Another secret of success lies in the hive.

A hive adapted to his climate should have thick walls, the base portion at least 1 1/2 inches of double boarding crossing the grain. He considered thick pine walls superior to chaff.

A second point in hives is to have them so constructed as to hold the bees and their stores in

close proximity. One prolific source of mortality of bees in winter was being remote from their stores. He advocates the cubic form of hive as the best for the well-being of the bees. Holding firmly to these two ideas in the structure of the hives, he had hardly known what it was to lose a swarm of bees. He could not understand why so many bees die in winter.

FOR THE CANADIAN BEE JOURNAL.

MEL SAPIT OMNIA.

SEE Dr. Mason cannot let me alone. He does not like "Observers," A. E.'s, nor such like, nor will he be talked back to.

That is always the way with big people. When I used to work in a large factory on the banks of the Thames where there were 12,000 (twelve thousands) of us men and boys, if we saw a big fellow come for employment we used to say he was too big to be of any use. That does not seem to be true of the Dr., as he has worked hard and made a really successful president during the past year. Wonder if he will come over to Paris to the exhibition and bring his knife. He will require it if he does come, and of course he must call on us in perfidious Albion! There is a bed and a knife and fork for him under the roof that covers A. E.

I have had a long talk with Mr. Blow since he returned, and heard of his travels and gleaned some of his impressions, but that is too long a subject to go into now, as my hands are pretty full of other matters at present, only as I was writing privately to the editor I thought I could not refrain from letting the Dr. know I always read what he says about

AMATEUR EXPERT.

England, Dec. 26th, 1888.

FOR THE CANADIAN BEE JOURNAL.

BEEES AND COLORS.

IN your issue of the 16th instant, A. C. Tyrell, Madison, Neb., has an article on "Bees and Colors." That bees have the power of distinguishing color there can be no question. That they are possessed of the sense of smell has also been proven. Mr. Tyrell's experience while thrashing his aromatic honey plants adds but another link to the chain of confirmatory evidence on this point. It is scent, or color, or both, that guides the bee to where food may be found. Bees work in the dark, but it is by sight she directs her course when on the wing. Without the sense of sight the color sense would be useless. Bees possess the sense of sight, the sense of touch, the sense of feeling, the sense of smell, and the ability to distinguish color. That she possesses the sense of hearing is still a moot question; but it has been pretty well established

that if she has it at all it is very defective. Not only are bees aided by their color sense in finding flowers in which nectar is stored, but this sense is so acute that they are able to distinguish between the various shades of color, and have their favorites among them. Muller says in his work entitled "Alpine Flowers" that yellow is the bee's favorite color: but Sir John Lubbock by a far more elaborate and careful series of experiments has conclusively shown that blue is distinctively their favorite color. This seems all the more strange when we reflect that Nature throughout her whole domain has endowed every organized thing with the means best adapted to the end in view. If blue be the bee's favorite color then we would expect that blue would be the prevailing color among nectar-secreting flowers, but we know this is not the case, for of all colors in the floral world blue is among the least frequently met with. White is the most prevailing color, and of white flowers a considerably larger number smell sweetly than of any other color; over 14 per cent. of them are odoriferous, while but 8 per cent. of red flowers smell sweetly. We would be led to conclude from this that white would be the favorite of the bee, but such is not the case. The reason must be left to some one better able to determine. Sir John Lubbock ventures an opinion on this subject. His opinion that all blue flowers are derived from ancestors originally green, that they have passed through stages of white or yellow and generally red before becoming blue; that the blue flowers are a highly specialized form of those originally of a different color, and that a larger proportion of blue flowers contain concealed honey than do flowers of any other color. This may be the secret of the bee's preference for blue.

R. MCKNIGHT.

Owen Sound, Jan. 18.

G. M. DEMAREE.—Laying aside all romance, and all guesses, I have found by actual observation, that the richly-colored flowers, as a rule, produce very little nectar. Our best honey-yielding flowers are decidedly *modest* in color and general appearance. I have seen bees searching among grass and weeds for tiny "bits" of flowers that the ordinary observer would pass without notice.

In my opinion, and I have not arrived at it hastily, bees rely upon their instinct and industry to find nectar, more than on any organs of sight or smell that they may possess. I am quite certain that the color of the flowers has little to do with it.

Christiansburg, Ky.

MRS. L. HARRISON.—How do bees know when there is honey in the flowers? Is it by instinct, or are they first-rate smellers? Do gay colors attract them?

During any warm day, if I melt wax, and have the door or window open, the room will soon be alive with bees, and they will even try to get down the chimney. Dear me! let the wax run over and burn, and there will be a bee-convention in short call; or melt honey, and drop some on the stove. Is this instinct or do they smell?

I have a plum-tree out there in the garden that never fails to produce a magnificent crop of blossoms, and is fragrant. Sometimes I am tempted to put honey on the blossoms to induce the bees to roam over them, but they know the flowers are no good, and will not produce plums, and there is no work for them to do. They cannot afford to spend their time enjoying the sweet fragrance, and hovering over the delicate white bloom, for pleasure only; they want profit.

If gay colors attract bees, then they ought to hold high carnival over a red clover field, for they could find both bright colors and fragrance. They are not like Oscar Wilde, for they pass great Russian sun-flowers that are over a foot in diameter, and hover over a flower so tiny as to be almost imperceptible. The great bright peonies of our grandmother's day, and bleeding-hearts of our own time, are passed by for the modest white clover.

PROF. D. H. PAMMEL.—On page 700 A. B. J. Mrs Mahala B. Chaddock takes objection to the statement that changes in color of flowers, after they have been pollinated, and the secretion of nectar has ceased, is developed for the apparent purpose of indicating to insects that their services are no longer needed, thereby saving them much waste of time in probing such flowers.

In many flowers the fertility depends upon the insects which visits them. The more frequent the visits of insects the greater the fertility. So that color as a guide is not only advantageous to insects which visit flowers, but the plant in return is capable of producing more and better seeds, thus giving it a better chance in the battle of life.

That odor is important in attracting insects is an established fact, which no one disputes. Most naturalists agree that color is an important factor in attracting insects to flowers, and that they have done much to develop the color in flowers.

In nearly all of the brightly colored flowers pollination is affected by insects, as in mints.

larkspurs, columbines, honey-suckles, salvias, &c., but in the inconspicuous flowers of the hazel, walnut, oak, grasses and sedges, it is done by the wind.

I should wish to know why the sun-flower should have developed the large, conspicuous ray-flower surrounding the head; the vermilion-red tracts surrounding the flowers of poinsettia; the bright-red corollas of bee-balm, or the rose-purple corolla of the dragon-head, and numerous other cases which might be mentioned? Have the colors and forms of flowers been developed merely to gratify and please our senses?

The simple statement that insects are attracted "by scent and not color" has little weight. Experimentally it has been shown by Sir John Lubbock, in *Ants Bees and Wasps*, ch. x., p. 274; and by Hermann Muller, in *Versuche ueber die Farbenliebhaberei der Honig-biene*, Kosmos, No. 10, vol. xii., p. 273, that bees possess an acute color sense, readily distinguishing such colors as blue, green, orange, red, white and yellow. It does not follow from this that insects reason because colors are discerned, any more than a bee uses reason to construct its cells.

St. Louis, Mo.

For the CANADIAN BEE JOURNAL.

WHO SHOULD KEEP BEES.

WELL who should keep bees if they don't want to, or who should not keep bees if they do, its not my business to say, but we have a right to guess who will succeed in the business. The reason a man fails in any location is because only a part of his business is well understood, while he guesses at the rest. The part he guesses at is not likely to come out right. The man that don't like bees well enough to give them thorough attention, and commence at the bottom of the ladder and learn it to the top, not omitting one factor connected with their welfare, will at some point break down, or give up, or whine out of the business and give the bees a bad name. I know a man who bought a few colonies of bees, and because they died from want of attention he said he killed all the bees he saw on the flowers after that! If that man had known how little he was adapted to the business perhaps he would not have bought bees. A man has got to be a "sticker" in any business to succeed, and it generally takes about a dozen years to be master of any trade, and if you work at it ten years you have lost just that ten years, for it will be of no value to you in another trade. So one half of

your success will be gained already if you have been wise enough to choose a trade which you know you like above all others, and the other half will be gained by pluck, and plod, and sticking. It is wrong for a man to rush into the bee business for the sake of making money, not caring a fig for the bees themselves, just as though it was the trade that made the money. Such men won't succeed. It is the love for your business that brings the proper thought and care which will, if pursued long enough, bring success. Don't think of being a specialist until you learn how; calling yourself one is one thing and being one is another. If you have reached that point where your knowledge and experience have made your business a success, then you are a specialist, but for the sake of the loved ones don't throw all you have into any business which you know nothing about, especially the bee business, and call yourself a specialist. If a man has made a success of bee-keeping bad seasons have but little effect on him. He generally tides over without one thought of giving up. Of course a man has got to have something to do for a living while he is learning how to keep bees, but after he has made a success of bees he generally gives them his whole care if he likes them. Some men can have a number of irons in the fire at once without burning any of them. They seem to care but little for any one thing. If they have a number of trades it is safe to say they will bring none of them to perfection, but to get scared because there comes one or two poor seasons, and say bee-keepers ought to divide their attention with something else just when we ought to keep the coolest and have our wits about us, is very foolish. If I thought I could use any more bees to advantage I should certainly buy them now. Those who shout loudest in prosperity are generally the ones to give up quickest in adversity.

JOHN F. GATES.

Out!, Frie Co., Pa.

Baker's "Eight Years in Ceylon."

BEES IN CEYLON.

THERE are five varieties of bees in Ceylon; these are all honey-makers except the carpenter bee. This species is entirely unlike a bee in all its habits. It is a bright tinsel green color, and the size of a large walnut, but shaped like the humble-bees of England. The mouth is armed with a very powerful pair of mandibles, and with a sting even larger and more venomous than that of the hornet. These carpenter bees are exceedingly destructive, as they bore holes in beams and posts, in which they lay their eggs, and the

larvæ of which, when hatched, feed upon the timber

The honey-bees are of four very distinct varieties, each of which forms its nest on a different principle. The largest and most extensive honey maker is the "Bambera." This is nearly as large as a hornet, and it forms its nest upon the bough of a tree, from which the comb hangs like a Cheshire cheese, being about the same thickness, but five or six inches greater in diameter. The honey of this bee is not so much esteemed as that of the smaller varieties, as the flavor partakes too strongly of the particular flower which the bee has frequented; thus in different seasons the honey varies in flavor, and is sometimes so highly aperient that it must be used with much caution. This property is, of course, derived from the flower which the bee prefers at that particular season. The wax of the comb is the purest and whitest of any kind produced in Ceylon. So partial are these bees to particular blossoms that they migrate from place to place at different periods in quest of flowers which are then in bloom. This is a very wonderful and inexplicable arrangement of Nature, when it is considered that some flowers, which particularly attract these migrations, only blossom once in "seven years." This is the case at Mewera Ellia, where the "nillho" induces such a general rush of this particular bee to the district, that the jungles are swarming with them in every direction, although during the six preceding years hardly a bee of the kind is met with.

There are many varieties of the "nillho." These vary from a tender dwarf plant to the tall and heavy stem of the common "nillho," which is nearly as thick as a man's arm, and about twenty feet high. The next honey-maker is very similar in size and appearance to our hive-bee in England. This variety forms its nest in hollow trees, and in holes in rocks. Another bee, similar in appearance, but not more than half the size, suspends a most delicate comb to the twigs of a tree. This nest is no larger than an orange, but the honey of the two latter varieties is of the finest quality, and quite equal in flavor to the famed "Miel vert" of the Isle de Bourbon, although it has not the delicate green tint which is much esteemed in the latter.

The last of the Ceylon bees is the most tiny, although an equally industrious workman. He is a little smaller than our house-fly, and he builds his diminutive nest in the hollow of a tree, where the entrance to his mansion is a hole no larger than would be made by a lady's stiletto.

It would be a natural supposition that so delicate an insect would produce a honey of corresponding purity; but instead of the expected treasure we find a thick, black, and rather pungent but highly aromatic molasses. The natives, having naturally coarse tastes and strong stomachs, admire this honey beyond any other.

From Gleanings.

BEES AND NEIGHBORS.

NOT BEE-LEGISLATION, BUT EXCLUSIVE RIGHT OF TERRITORY BY PURCHASE.

THE only fair and just way for a man to get the monopoly of the bee-business in any locality is for him to pay each farmer or lot-holder within the flight of his bees a certain sum yearly, not to keep any bees on his property. If a law could be had, selling rights to any one person to keep bees in a given locality, then only the rich or well-established apiarist could secure the rights. The poor widow or cripple or broken down professional man would not dare to keep bees within a certain limit, because the Honorable Mr. Moneybags had bought the local right for a few paltry dollars. Lazarus could not keep bees within three or four miles of Dives' residence. The poor widow could not earn a mite for the Lord's treasury by keeping bees, because some Pharisee had bought the township right.

Any law giving one person advantage over another is wrong. According to the plan at the beginning of this article, the widow wishing to keep bees need not sell her right, and the law would not take away her right. Any person should have the right to keep a few bees, or as many bees as he chooses, provided his bees do not harm his neighbors or passers-by, and are not a nuisance.

Just here I should like to say, no man has a right to keep bees in a town if his bees really annoy his neighbors. By annoy, I do not mean make nervous people fidgety. No one has a right to keep chickens to scratch his neighbor's garden; neither has he a right to keep bees where they will sting his neighbors children. Bees are bees, and bees will sting. Whenever my bees become a nuisance I will move them out of town. Our neighbors have rights as well as ourselves.

The same principle applies to foul brood. That disease should not be treated with anything except the furnace. It should be burned, destroyed, root and branch, upon its first appearance. We owe this to our neighbors as well as to ourselves. "Do unto others as you would have them do unto you." You would not like to have a neighbor tolerating and treating foul brood within the flight of your bees.

Last spring I selected two colonies, about equal in queens, strength, and in good condition. Over one I used a slatted honey-board and a T super. Over the other I used half-depth wide frames, with no honey-board. The one under the T super swarmed out without touching the sections. The one under the half-depth wide frames stored me fifty or sixty sections of surplus comb honey. The honey-boards seem to remove the surplus boxes too far from the brood-nest in a poor season, when honey is scarce and comes in slowly. I think the bee-space between half, depth wide frames should be the same as the sections, thus leaving no little line along the edge, to be propolized.

Once this summer my bees started booming on something. I could smell the honey ten feet or more from the hive. I supposed it was red clover. Upon investigation I found

no bees on the red clover, but found the common burdock in bloom, crowded, roaring with bees.

I fixed my bees for winter November 3rd, and wore my overcoat while doing so. I believe they have had only one day's good fly since then.

PHILO S. DILWORTH,

From the Queen-Breeders' Journal.

EARLY QUEEN REARING.

THE first step necessary toward queen-rearing is to get some young drones at least a week before the queens will hatch, for it would be in vain to get queens without some provision for their being fertilized. The rearing of early drones is not always an easy thing in this latitude, for in spite of all the coaxing I can do, it is often May 20th before any drones are seen about my apiary in late seasons. The best plan I know of to secure drones is to place a frame of drone comb in the centre of a few of my best drone-rearing colonies, in the fall, when preparing them for winter. If this drone comb is heavy with honey so much the better, for queens are more liable to use them if immediately below sealed honey than they are where no honey is in the comb. If none of the colonies having drone comb, are strong enough to use them early in the spring, some frames of hatching brood from other colonies should be given one of them as soon as it can be spared, then by a little feeding of warm syrup every night, the queen is generally coaxed to lay in them, and the bees to feed and take care of the larvæ. After the drone brood has been sealed for about a week we are ready to commence to rear our queens if pollen is plenty. It would almost seem needless to say that no one should attempt to rear queens till pollen has become abundant, even if we do have sealed drone brood before this. I never could rear queens which I would be willing to use in my apiary earlier than when pollen was plenty. The first pollen has a wonderful effect along the line of causing the bees to prepare chyme for the bees in abundance, while before they were only feeding the larvæ just enough to supply their daily wants. Good queens can not be reared unless the queen larvæ are liberally fed, and such liberal feeding is only done when pollen is being obtained from the fields. Having the capped drone brood and the pollen, remove the queen from one of the most populous colonies in the yard, and send her off to some customer who wants a queen that has been wintered over, or use her otherwise. A feeder is to be placed next the outside comb, and the colony left for

three days. During the forenoon of the third day, I prepare an old comb by fastening some ten or twelve embryo queen cells along the under side of a large hole which has been cut in it. The cells are fastened to the comb by dipping their bases into melted wax and at once setting them against the comb. These cells have been clipped from the combs as I have come across them while working with the bees, so that at all times I have a supply on hand. Just after dinner or at about one o'clock, I go to the queenless colony and take all their brood away from them, giving it to other colonies that can care for it, when two combs which are in the hive having the most honey in them, together with the most pollen, are placed up close to the feeder at one side, leaving space between the two combs for a third comb to be placed. The division board is now brought up so as to make all as snug as possible, when the hive is closed. I now go to the colony containing the best queen I have and get a little piece of comb containing 15 to 20 little larvæ which should not be over 36 hours old. This piece of comb is taken to a room in my shop which is kept a temperature of from 85 to 90 degrees unless the weather is that warm outside, for if we would have good queens they should not be chilled in any of our manipulations in getting them. Arriving at the room, the little larvæ are lifted out of the cells where they are, together with as much of the food which is in the cell as possible, by means of a goose-quill toothpick, having a curved point. Then they are carefully deposited in the embryo queen-cells which we fastened to the comb in the forenoon.

If the day is at all cool, this prepared frame is wrapped in a warmed cloth and carried to the now hopelessly queenless hive and lowered into the space left for it when taking the brood away. The bees will now be found in the greatest agitation imaginable, and will tell you by their joyful hum, upon receiving the prepared frame, how glad they are that they have something upon which to bestow their caresses.

The prepared queen food, which has been accumulating since you took the brood away, is at once liberally fed to the prepared queen larvæ. The colonies should now be fed liberally with warm syrup for the next five days.

If all of this has been done as it should be, you may expect to find as many nice sealed queen-cells, when looking for them on the fifth day from the time you gave the prepared frame, as you gave cells, lacking one or two; sometimes all; but usually one or two of the larvæ will get injured so that they will be destroyed. When ready to hatch the cells are to be given to

nuclei, or otherwise cared for, so that all are saved. When the cells are taken away, go to the colony to which you gave the most of the brood taken from this first colony used in queen-rearing, and get the frame of brood having the queen on it, taking bees and all; then take out two more frames of brood, and shake the bees off them, letting them (the bees) run into the hive, after which adjust the frames and use this colony to rear the next set of queen-cells from.

Now take the three combs and set them in the hive from which you took the cells, and hang the comb the queen is on between the two combs of brood, closing the hive. In this way colonies which rear queens are kept queenless only about twelve days, which is quite an item at this time of the year. This is the only plan that I know of by which good queens can be reared very early in the season.

G. M. DOOLITTLE.

Borodino, N. Y.

From The Bee Keepers Advance.

ALBINISM IN BEES.

ALBINOS are animals that from some cause fail to secrete the coloring matter peculiar to the species, and are consequently white.

It generally extends over the whole surface of the body, even to the hair and eyes, the eye being red, but in more instances, particularly where the animal is partly colored, or has different tints or spots, to only a part of the body, or to extinguish only one color.

Melanism is just the opposite of Albinism, and is the undue development of coloring matter in its skin and its appendages, rendering the animal black. Both of these aberrations are common to insects, as well as plants and all animals.

Among the Italian bees melanism is not very uncommon; in fact, there are few pure colonies that do not have among them workers with black tips to their abdomens and black corslets, and some of the best queens have been melanos. In most instances albinism occurs among the drones. S. W. Cole, of Tennessee, had a colony that produced all its drones perfectly white, while the workers were of the usual colors.

Albinos are generally larger than the normal size of the species, while melanos are smaller. Apiarians who have handled many queens of dark or German bees have met with ink-black specimens which were in every case small, lively queens, though her worker progeny were large gray bees with only an occasional melano.

The singular phenomenon that first called attention to the breeding of the so-called "Albino bees" were the white drones that were bred in

Mr. Cole's apiary, the progeny of a fine Italian queen, in 1872 or thereabouts. In 1874 Mr. D. A. Pike, of Maryland, noticed two distinct races—as he put it—of bees working in one of his hives, one of which were beautifully marked Italians and the other, about equal in numbers, had three beautiful yellow bands; from the last band to the end of the bee it was quite white. Clearly this was evidence that Italians are cross-bred bees. It is said that Italian bees are liable to sport when bred in this country and show the albino directly.

There have been instances other than the two I have mentioned showing well defined albinism in bees. S. Valentine, of Hagarstown Md., who is an experienced queen breeder and a strictly reliable man, claims that he possessed an Italian colony that bred bees colored white except the usual yellow bands. He continued to breed from his peculiarly marked white and yellow bees with a view to render permanent a strain superior in all desirable points, including fancy. His efforts and aim were a success in producing a strain of a quiet nature and most as harmless as stingless bees, compared with Cyprians. I obtained Albino queens of Mr. Valentine eight years ago that produced uniform progeny. I have read of other strains of Albino bees but know nothing about their peculiarities.

C. J. ROBINSON.

Richford, N. Y.

Prairie Farmer.

THE BEE MOTH.

THE moths of this insect (*Galleria cerana*) are about three-fourths of an inch long, with wings that expand about one and one-fourth inches. The color is a dusky-gray, the fore-wings sprinkled with purple-brown. They harmonize so well in color with the old boards that they are very readily passed unobserved. Females are generally larger than males. The tongue is quite short, but the palpi, two of the mouth parts, are prolonged into a kind of snout, which is often mistaken for the tongue.

The female, by means of her telescopic ovipositor, easily places her small, white globular eggs underneath or about the entrance to the hive. Soon the eggs hatch, producing dirty-looking larvæ, ash-gray above and yellow-white beneath, and having brown heads. As soon as they hatch, the worms commence to spin silken tubes for their protection, enlarging the tubes as they increase in size. The worms feed on wax, cutting their way right through the comb and destroying young bees in their course. Their

SUNDRY SELECTIONS.

presence in the comb may be detected by the silk tubes straggling and branching over its surface, or better still, by the bottom board being covered with particles of the comb or bee-bread mingled with the black powdery excrement of the worm. The larvæ attain their full growth in about three or four weeks, having reached a length of about one inch, and ready to spin their tough white silken cocoons. The black excrement of the worm is mixed with the silk in the weaving. Cocoons are hidden in some corner or crevice, or under some ledge in the hive, and in due time the moth emerges.

Generally speaking, there are two broods of moth in the year, the first in May and June; the second, and most numerous, in August; though Prof. Cook, of Michigan University, says: "I have seen these moths in every month from May to September, and as I have proved by actual observation that they may pass from the moth in less than six weeks, I think under favorable conditions there may be even three broods in a year."

It is probable that the winter may be passed in any one of the various stages of the insect. Both larvæ and pupæ have been exposed to freezing temperature without harm to them. Prof. Cook quotes his friend Judge Andrews as saying that no bees, black or Italian, will be troubled with these insects, so long as the combs are covered with bees. When the silken tubes are found, pick them out and crush out the larvæ; kill all the moths found sitting about the outside of the hives. In day time they can be taken quite easily, and, and as each female is capable of laying about three hundred eggs, the crush of two or three moths a day is quite an item in getting rid of the pest.

The bee has quite a long list of insect and other enemies, but none are compared with the bee moth, either in antiquity or mischief. It was known to Europeans more than two hundred years ago, but to American bee-keepers less than one hundred years.

JOHN MARTIN.

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COOK'S MANUAL—NEW EDITION.

We have now in stock ready to go by return mail the latest edition of Prof. Cook's Manual. The price this time is \$1.50, postpaid, but the increase in price is most fully compensated for in the increased quantity of matter and the better quality of the work.

THOMAS C. HINDSON.—I am not keeping many bees yet. I find the JOURNAL very useful and enclose renewal of my subscription. In the fall of 1887 I placed eleven colonies in clamps packed in sawdust, but lost three in the spring through robbing. I had one increase and took in all 400 pounds of extracted honey from this hive. The remainder made sufficient to winter.

Brookholm, Jan. 23rd, 1889.

ARTHUR MURPHY.—The weather is very mild thus far. (Chestnut). My bees are packed outside in chaff-hives well protected on all sides, front only open. I began last season with four colonies and had no increase. I had also to feed back more sugar than I took honey. I hope the coming season will make up for the last two dull years. Under any circumstances I cannot do without the JOURNAL.

Bluevale, Jan. 15th, 1889.

BYRON WALKER, of Capac, had 12,000 pounds of honey as the product of his apiaries in 1888, and says he had only half a crop at that. Last summer he went to Helena, Ark., bought 100 colonies of bees, and arranged them in good shape to secure honey. After securing 3,000 lbs. he sent the bees to Capac, where he set them at work again and got 8,000 pounds. At the close of the season he had 280 colonies. His success this year encourages him to try this scheme again the coming season.

HEAD WORK.

In these days of scientific discovery and brain development the head and hand must work in concert—each be ready with its part—to attain and to achieve the best results. This is more true of bee-culture than of most pursuits which are largely mechanical—a routine of manipulation. The laborer, the mechanic, the artisan, have their regular round of work—a monotony, sameness, and roundness, requiring little deviation from a fixed routine. Not so the apiarist—whether amateur or professional. He soon finds that neither the "rule of thumb" nor the "rule of three" will do. New experiences and new phenomena will persist in coming up before him in the bee-yard. To deal with these his eye must be alert to observe, and his head attuned to think. Winter is the time to commence getting the head in gear. During the short days make the hives and fixtures, and during the long evenings read bee-literature and digest it. And as with physical digestion the nutrient material is separated from the waste, so in mental the wheat must be separated from the chaff of bee-lore. To be able to do this, the habit of careful reading, of comparison, of reflection, of analysis, must be formed.—(ALLAN PRINGLE in *Canadian Live Stock and Farm Journal*.)

Attention is called to the list of books in this number. In this connection we might say that we can supply you with any standard book on the market and at lower rates than the stores. Write for prices on the works required.

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No matter what kind of printing you want, it can be done at this office. Visiting cards, bill heads, envelopes, pamphlets, note-heads, anything. Write for figures.

DETROIT HONEY MARKET.

Best white comb in one pound sections 16 and 18 cts. Supply not large but equal to the demand. Beeswax 22 and 23 cents.

M. H. HUNT.

Bell Branch, near Detroit.

SPECIAL BOOK NOTICE.

We have a number of books which have been superseded by more recent editions, which we will sell at very low prices. In some instances they may be a trifle worn or abraded. We have:

	REGULAR PRICE.	OUR PRICE.
I British Bee-keepers' Guide Book, T. W. Cowan, edition 1886—good as new.....	50	35
I Bee-keepers' Guide, Prof. A. J. Cook, edition 1882.....	1 25	50
6 Bee-keepers' Guide, Prof. A. J. Cook, edition 1884.....	1 25	85
I A.B.C., A. I. Root, edition 1883—a good deal worn....	1 25	50
I A.B.C., A. I. Root, edition 1883—good as new.....	1 25	75
I A.B.C., A. I. Root, edition 1886.....	1 25	75

First come, first served. Now, don't all speak at once.

CANADIAN BEE JOURNAL.



PREMIUM OFFER.

We feel that the system of offering inducements to NEW subscribers to the exclusion of the OLD, is unfair so that the offer which we make below will include everybody who remits us \$1.00 to pay for the CANADIAN BEE JOURNAL one year in advance.

It is generally admitted that the introduction of Virgin queens into the apiary will receive a great deal more attention in the future than it has heretofore, and it is our purpose to offer a first-class Virgin Queen (value 60 cents), to everyone who remits us the sum of \$1.00 for a new or renewal subscription to the CANADIAN BEE JOURNAL. On and after the date of this circular we will register the name of each subscriber sending us that amount, and as soon as it will be possible to rear queens in the Spring of 1889, we shall begin filling the orders in the same rotation as received. We will probably send out many hundreds, and it therefore will be well to send in your subscription at once, if you wish to receive your queen early in the season. Registered letters at our risk, American currency and stamps accepted at par. Use the enclosed envelope.

SPECIAL ATTRACTIONS FOR 1889.

We purpose adding to the other valuable information which will appear throughout the year, a series of papers on "Practical Bee-Keeping," by D. A. JONES, with exhaustive reviews by ALLEN PRINGLE. The papers began with the issue of Nov. 14, and will be continued right through the whole of the year 1889. Every subject pertaining to the business of bee-keeping will come in for special treatment, and nothing will be left unexplained, so far as our knowledge of the question goes. All the good things which have been tried and found to be thoroughly practical will be plainly and properly set forth in such way as will be easy of comprehension by the merest tyro in bee-keeping. Our main object is to so talk of things that the amateur may not become muddled, and give up, despairing ever to learn. And there will as well be lots of "meat" for the older bee-keeper. We hope to receive many new subscriptions, and that all renewals will be sent in promptly.

THE D. A. JONES Co.,

BERTON, ONT.

P. S.—To all new subscribers we will send the back numbers from Nov. 14, to Jan. 1 free, and old subscriptions will not expire till Jan. 1, 1890.

SUPPLY DISCOUNT NOTICE.

As is our usual custom we now offer discounts for fall and winter orders. We desire it to be understood that we do this principally to avoid the crowding in the rush at springtime. We can always fill the orders to better advantage and take more pain when we are not crowded. This of itself is a good thing for the customer, and when to this is added the discount which we allow off catalogue prices, it will be well worth buying. Up to February 1st, 1889, our discounts will be as follows:

8 PER CENT.

Hives, Sections, Honey Extractors, Honey Boards, Section Frames, Section Cases, Frame Nailers, Wire for Frames & Rests, Smokers, Hive Clamps, Honey Knives, Wax Extractors, Bee Tents, Comb-carrying Buckets, Comb Baskets, Bee Guards, Ripening Cans, Uncapping arrangements, Bee Veils, Queen Nurseries, Labels, Anatomical Charts.

4 PER CENT.

Nails, Perforated Metal, Comb Foundation, Force Pumps, Feeders, Rubber Gloves, Introducing Cages, Tins, Shipping Crates, Honey Glasses, Scales, Dextrine, Wire Cloth, Mosquito Bar.

All other goods in our Catalogue are subject to the prices found therein. For February the Discounts will be 7 per cent. and 3½ per cent. respectively; for March 6 per cent. and 3 per cent.; no discount after April 1st. These prices of course are for cash with order. We have a big stock of almost everything on hand, and can ship at short notice. Catalogue free on application.

USEFUL GOODS.

The following is a partial list of small wares, tools and stationery, which we carry in stock. Additions are constantly being made. We buy in very large quantities, and are therefore able to quote rock bottom prices. There is always something in these lines you want and they can be enclosed with other goods or sent by mail. The amount of postage is marked opposite each article, except those excluded from the mail.

5 CENT ARTICLES.

Postage.	Per 10 lots.	Per 25 lots.
3	Awls, brad, three assorted without handles.....\$	75 \$1 00
1	Blotting paper, 10 sheets note size.....	40 88
3	Bag for school books.....	45 1 05
2	Brush, round, for paint, paste or varnish.....	40 95
1	Chisel handle.....	45 1 10
3	Cravons, colored drawing.....	45 1 00
1	Eraser combined ink and pencil	45
1	Letter openers, nickle plated, very handy.....	40
1	Memo books, 32 pages, stiff cover.....	40 90
1	Note paper, 1 quire, extra quality, ruled or plain.....	40 80
2	Pad 100 sheets scribbling paper	45
1	Pass books 3 "Railroad" 16 p. paper cover.....	45 1 00
1	Pass books, 2 Steamboat 32 p.p.	45 1 00
1	Penholders 2, cherry, swell.....	40
1	Ruler, hardwood, flat, graduated to $\frac{1}{2}$, bevelled.....	45 1 05
1	Ruler, for school children, three for 5c.....	40 90
2	Scribbling books, 200 pages....	40 90
	Tacks, cut, 2 papers 1, 2 or 3 oz.	45

8 CENT ARTICLES.

	Butter stamps 3 or 4 inches...\$	75 \$1 75
	File, 3 corner, 3 or 4 inches....	75 1 75
	Ink-well, glass, safety, cannot spill.....	65
	Mucilage, good sized bottle....	70
	Oil cans, zinc.....	65
1	Pencil, automatic indelible.....	75 1 75
6	1 doz. Lead Pencils, No. 852, very good.....	75
1	Time books for week or month.	75

10 CENT GOODS.

	Bill fyies, harpshape.....\$	90 2 10
2	Book of 50 blank receipts with stub.....	85 2 00
2	Book of 50 blank notes.....	85 2 00
2	Brush, flat, for paint, paste or varnish.....	80 1 90
3	Butter spades 9c. each.....	80 1 90
2	Boxwood pocket 1 foot rule....	90 2 10
	Chisel, firmer $\frac{1}{2}$ inch.....	90

Postage.

	Per 10 lots.	Per 25 lots.
2	Clips for holding letters, etc....	90 2 00
	Due bills, 100 in book with stub	85 1 80
2	Envelopes, 3 packages, white, good, business.....	95
2	Files, 3 cornered, 5 inch.....	90 2 10
3	Lead pencils, 1 doz. plain cedar Fabers 581.....	90
2	Lead pencils 3 red and blue....	90
2	Note heads, pads of 100 sheets..	90
	Paint brush, No. 7.....	90
2	Pocket note book, 3x5 in., 125 pages, stiff cover with band grand value.....	90
1	Rubber bands, five, large.....	80
1	Ruler, brass edged, flat, hardwood, bevelled, graduated to $\frac{1}{2}$ inch.....	95 2 25
4	School bag, medium size.....	90 2 10
	Tacks, cut, #3 packages, 4 oz.....	90

13 CENT ARTICLES.

2	Belt punches, Nos. 2, 3, 4, and 5	1 25 \$3 00
	File, 6 inches long, flat.....	1 25 2 90
	" 5 " " round.....	1 25 2 90
	Shoe knives, 4 inch blade.....	1 20 2 75

15 CENT ARTICLES.

	Chisel, firmer, $\frac{1}{2}$ and $\frac{3}{4}$ in.....	1 45
12	Dextrine, $\frac{1}{4}$ lb. pkge. for pasting	1 30
	Glue, 1 lb. ordinary.....	1 30
	Hammer, iron, adze eye.....	1 45
3	Lead pencils, 1 doz., good quality, Faber's 971.....	1 45
5	Note paper, 5 quires, 3 lbs., extra value.....	1 40 3 35
	Paint brush, No. 5.....	1 40
6	Rubber bands in gross boxes. For queen nursery.....	1 30
4	Rule, 2 foot, a splendid line....	1 40 3 40
	Screw driver, 5 inch, round bit, hardwood handle.....	1 40
2	Statement heads in pads of 100	1 20
	Tack hammer magnetic.....	1 40 3 30
12	Papeterie, 24 sheets fine note paper and 24 square envelopes in neat box.....	1 40 3 35

18 CENT ARTICLES.

	Bit, best make, $\frac{1}{2}$, $\frac{3}{4}$, 1.....	1 65 4 00
	Glue, LePage's liquid, with brush	1 65
	Oilers, automatic.....	1

20 CENT ARTICLES.

Postage.	Per 10 lots.	Per 25 lots.
Bit, best make, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$..	1 90	4 50
Brass traps.....	1 85	4 50
Brushes, flat, 2nd quality, $1\frac{1}{2}$ in. paste or varnish.....	1 80	4 25
Chisel, firmer, inch.....	1 90	
Ebony ruler, bevelled for book-keeper.....	1 90	4 50
File, 8 inch, flat, round or 3 corner.....	1 90	
Glue, 1 lb. light, broken.....	1 75	
8 Lead pencils, 1 doz. 201 good value, rubber tipped.....	1 80	
Paint brush, No. 3.....		
12 Papeterie, "Jubilee" containing 24 sheets, ivory notes, 24 square envelopes.....	1 80	
6 Pens, gross box "292 school"....	1 80	
1 Pocket memg book, indexed....	1 90	
Screw-driver, steel, 6 inch rd bit	1 90	
Square, iron, grad. to $\frac{1}{2}$ one side	1 90	
Thermometer.....		

25 CENT ARTICLES.

6 Cards, 50, ladies or gents' visit- ing. Piries' super ivory... 2 00	4 50
2 Duplicate order books, with black leaf..... 2 00	4 50
File, 10 inch, flat..... 2 25	
8 Lead pencils, 1 doz. Faber's H, H. B., B. or B. B..... 2 30	
Paint brush No 1..... 2 30	
Rule, 2 foot, boxwood..... 2 30	
Tape Lines, "Universal," 3 ft.. 2 30	

30 CENT ARTICLES.

8 Bills payable and receivable... 2 85	6 90
Bits, best make, $\frac{10}{16}$, $\frac{3}{8}$, $\frac{1}{2}$ 2 85	6 90
250 Envelopes, Ladies', square.	
5 Foolscap, 2 quires, extra quality 2 80	
4 " legal, in pads of 100 sheets..... 2 75	6 00
Inkwell, square, glass, bevelled edges..... 2 75	

35 CENT ARTICLES.

Bit, best make, inch..... 3 40	8 20
Hammer, steel face, for light work..... 3 30	
Square, grad. to $\frac{1}{16}$ both sides 3 30	

40 CENT ARTICLES.

Foolscap, 5 quires, good quality 3 75	
Hammer, No. 50, steel head, adze eye..... 3 60	
Pens, gross box, 'Bank of Eng.' 3 80	
" " Blackstone or J. 3 80	
Ruler, 2 foot, boxwood, brass bound..... 3 60	

50 CENT ARTICLES.

Binders, CANADIAN BEE JOURNAL 4 80	
Blank books—	
Day book, 200 p. p. good paper, well bound..... 4 25	
Cash " " " 4 25	

Postage.

Per 10 lots. Per 25 lots.

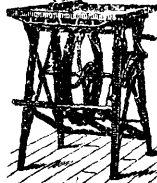
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Minute " " " 4 25	
Complete set, Cash, Day and Ledger, \$1.25.....	
200 page Day Book, canvas cover good paper, exceptionally low	
Carpenter's brace, pat. grip, 8 in 4 85	12 00
Envelopes, good, business size, 250 in box..... 4 00	
250 Envelopes, Ladies' square, very goods..... 4 00	
Hand saws, 18 and 20 in., best make..... 4 50	
Hammer, No. 51, steel head, adze eye..... 4 50	
Hammer, smaller, frame nail'g 4 50	

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Each

Automatic Fountain Pen, the finest thing out; holds enough ink to last a week; always ready; can use any style of pen that suits you, and can change it as often as you wish—a marvel of cheapness—by mail, post paid, each..... 75

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10 inch cut.....	5 75
12 " ".....	6 25
14 " ".....	6 50
16 " ".....	7 25

We ship these direct from the factory at above figures.

Letter books, with index, bound in canvas, 500 pages.....	1 10
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Plane, iron block.....	75
" wood smoothing.....	80
Post cards printed to order, 50 \$1, 100 Square, steel, grad. both sides, usual price, \$1.75.....	1 40
Soldering outfit, consisting of soldering iron, scraper, bar of powdered resin.....	75

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4 PER CENT.

Nails, Perforated Metal, Comb Foundation, Force Pumps, Feeders, Rubber Gloves, Introducing Cages, Tins, Shipping Crates, Honey Glasses, Sealers, Dextrine, Wire Cloth, Mosquito Bar.

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1-LB. GLASS JARS. SCREW TOP.



We are just advised of shipment from the factory of the first instalment of 50 gross of the above. They are put up in barrels and hogsheads, (the latter for our own local use), and to save breaking bulk when shipping, we append below a table, of the qualities of which the shipment consists, together with the prices per

barrel. In estimating the price, we have calculated the same as for full gross lots, an allowance of 20 cents being made for each barrel and packing (they cost us 35 cents).

No. of Barrels.	No. of Doz.	Prices.
1	8½	\$ 6 25
1	8½	6 45
4	9½	6 75
5	9½	6 95
4	9½	7 15
3	10	7 35
3	10½	7 55
2	10½	7 75
1	11½	8 45

ADVANCE IN NAILS.

Owing to a rise in the prices of nails, we are forced to advance our prices somewhat, as will be seen by the following list. All orders will be filled only at these prices.

PRICES OF WIRE NAILS.

Length of Nails.	No. in Pound	Size Wire	Price of 1 Pound	Price of 10 lbs.
½ & ½ inch	7200	21	22	2 00
¾ inch....	5000	20	17	1 60
⅞ inch ...	3880	10	17	1 60
1 inch....	2069	18	12	1 05
1½ inch...	1247	17	11	1 00
1¾ inch...	761	16	10	90
2 inch....	350	14	9	80
2½ inch...	214	13	9	75
3 inch....	137	12	8	70

PRICES OF BOX OR HIVE NAILS.

	Per lb.	Per 10 lbs.	Per 100 lbs.
1½ inch.....	7	65	6 00
2 inch.....	6½	60	5 50
2½ inch.....	6	55	5 25
3 inch.....	6	55	5 25

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—AND—

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We will with pleasure send you a sample copy of our **SEMI-MONTHLY GLEANINGS IN BEE-CULTURE**, with a descriptive Price-list of the latest improvements in Hives, Honey Extractors, Com Foundation, Section Honey Boxes, all books and journals; and every thing pertaining to bee-culture. Nothing patented. Simply send your address on a postal card, written post paid.
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These are of manilla and made to hold the 4 1/2 x 4 1/2 sections. When the comb honey labels A or B are used (as in illustration) an attractive and highly saleable package results. Price without tape handles, each 1 cent; 100, \$1.00; 1000, \$9.00.

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5000 30 00
10,000 37 50

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