CAINTAIDITAINT BIRDOURWAIL

Vol. 18, No. 12.

DEC. 1910

\$1.00 Per Annum

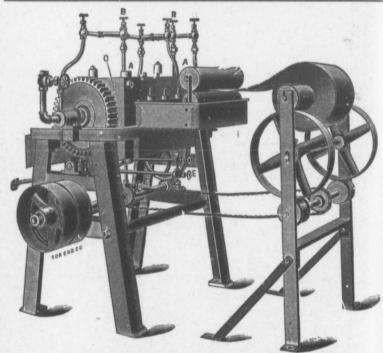
the World"—is again with us. To each and all of our readers who have travelled with us during the past year, we wish that it may be most joyous. The year with its bountiful harvest is about to pass, our day of thanksgiving for all of its blessings is past, and now we are about to close, it with feasts and rejoicings. We sincerely trust that the rejoicings may be unalloyed.

Let us enter the New Year with new hopes, new aspirations, and renewed energy, determined to play our little part like men. Let us have a larger vision, and a broader conception of the brotherhood of man; remembering that we are not merely citizens of this or that country, but rather citizens of the Lord's World, working out the Lord's great purposes. Following this thought we cannot do better than quote Dr. J. A. Macdonald's Christmas message in the Christmas Glote. It is most inspiring and is alike applicable to all people of all countries:

"Goodwill as well as peace is Canada's message. There is not only the desire for a peaceful life, but a wish for the good estate of all other nations. Canada learns at the very opening of her national career that by the law of world-life her good is bound up with the biggest good of every nation. The middle walls of separation are breaking down, national sovereignty is making way for world sovereignty—a nation within the world's greatest Empire, neighbor of the world's greatest republic. Canada links both and an others whose children come to her shores in a world league for peace and good-will."—Ed.

Comb Foundation

Made by the "Weed Patent Process"



The Weed Foundation Sheeter

FOUNDATION made by this process excells all other in strength of texture. This combined in nice, straight uniform sheets, with good cell walls and thin base, gives it its world-wide reputation for general excellence of quality. So much better than the ordinary, and costs no more—Try it-

Customers Wax made up by "Weed Patent Process"

Beeswax taken in payment of making at trade prices if desired.

The HAM & NOTT CO. Limited

BRANTFORD, ONTARIO

Successors to the Goold, Shapley & Muir Co., Limited

D

FO

Free

Noth

good
The a
a per
guara
that v
warra
factio
ceivin
We an
to all
to the
Journa
\$1.35
and to

scriber

a two y

\$2,00

The Canadian

BRANTFORD

FREE

Diamond Point

FOUNTAIN PEN

Free as a Premium

Nothing is more acceptable as a gift at any season than a good Fountain Pen. The above illustrates a pen that is fully guaranteed to us and that we can therefore warrant to give satisfaction to any one receiving it from us. We are giving it free to all new subscribers to the Canadian Bee Journal who remit us \$1.35 for one year; and to all old subscribers who send us a two year renewal for \$2,00 in advance.

The Canadian Bee Journal

BRANTFORD, CANADA

Canadian Bee Journal

Devoted to the Interests of Bee-Keepers

JAS. J. HURLEY, Editor

Published monthly by The HURLEY PRINTING CO., Brantford, Ont.

TERMS

\$1 per annum; two years, \$1.50, payable in advance. These terms apply to Canada, United States and Mexico; to all other countries, 12 cents per annum for postage.

Discontinuances—Any subscriber whose subscription has expired, wishing the paper discontinued, will please notify us by post, otherwise we will assume that its continuance is desired, and that it will be paid for. If the paper is to be stopped at the expiration of the time paid for, it should be so stated when giving the order.

Receipts for Money—The receipt of the Journal will be an acknowledgment of receipt of money to new subscribers. The receipt of renewed subscriptions will be acknowledged by posterd.

acknowledged by postcard.

How to Send Money—You can send money at our risk by P. O. Order or bank cheque or draft, and where none of these means are available, bills and postage stamps by registered letter. Money sent any other way is at your risk. We pay no exchange or express charges on money. Make all express orders, cheques or drafts payable to The Canadian Bee Journal, Brantford, Ont.

ADVERTISING

We are in no way responsible for any losses that may occur in dealing with our advertisers, yet we take every precaution to admit only reliable men in these columns.

| Rates of Advertising | Time | 1 in. 2 in. 3 in. 4 in. 1 col. page | 1 Mth. \$2.00 \$5.00 \$4.50 \$4.50 \$6.50 \$10.00 \$2 Mths 3.00 4.60 5.50 6.50 11.00 17.00 \$3 Mths 4.00 5.50 7.00 9.00 15.00 25.00 \$6 Mths . 6.00 9.00 12.00 15.00 25.00 40.00 \$75.00 \$1.00 \$

Printing for Bee-Keepers
HONEY LABELS

LETTER HEADS BILLHEADS

Write us when requiring Printing of any kind.

The HURLEY PRINTING CO., Brantford, Ont.

Clubbing List for 1910

To Old and New Subscribers: Our Clubbing List for 1910 includes the following Remarkable Offers

WE WILL SEND

The CANADIAN BEE JOURNAL

WITH

The British Bee Journal, \$1.50	For	\$2	35	
Gleanings in Bee Culture, \$1	For	1	95	
The American Bee Journal, \$1	For	1	75	
Bee-Keepers' Review, \$1	For	1	75	
Irish Bee Journal, 36c	For	1	.25	
The Herald (Montreal)	For	1	50	
Montreal Weekly Witness, \$1	For	1	75	
Montreal Daily Witness	For	3	0)	
Northern Messenger	For	1	35	
World Wide, \$1.50	For	1	85	
Family Herald and Weekly Star \$1	For	1	85	
Canadian Poultry Review, 50c	For	1	40	
The Breeders' Advocate, 50c	For	1	40	
Farmers' Advocate, 1.50	For	2	25	
Weekly Sun, \$1	For	1	75	
News (Daily) Toronto	For	2	20	
The Horseman (Chicago)	For	3	50	

Mail and Empire for \$1.50

The Canadian Bee Journal

Brantford

::

Canada

The Ca

JAS, J. HU

Vol. 18, No. 12.

The Editor has reque the front (page) this blushingly make our b of the C. B. J.

In accepting the as of this Journal, we fe some measure helping the disinterested and performing on behalf of Canada. Since we with Mr. Hurley, we large amount of time thas spent in the servi and as it seems a du share, we felt impelled tering invitation to be in the management of

Could not a better : be devised? The major bers are disfranchised their inability to atten

We do not believe, present system under tion is conducted is the iness point of view. of course is done in corpears, however, to be obtaining men willing mittee work. On look of members of the for pointed at the convention the thirteen seats are viduals of whom only members of the associative are the President the Provincial Apiarist

35

15

75

7:

25

50

75

03

35

85

85

40

40

25

75

20

50

The Canadian Bee Journal

PUBLISHED MONTHLY

JAS, J. HURLEY, EDITOF, BRANTFORD, ONTARIO, CANADA

Vol. 18, No. 12.

DECEMBER, 1910

Whole No. 550

The Editor has requested us to step to the front (page) this month, and we blushingly make our bow to the readers of the C. B. J.

* * *

In accepting the assistant editorship of this Journal, we feel that we are in some measure helping Mr. Hurley in the disinterested and useful work he is performing on behalf of the bee-keepers of Canada. Since we became acquainted with Mr. Hurley, we have realized the large amount of time that that gentleman has spent in the service of his fellows, and as it seems a duty that we could share, we felt impelled to accept the flattering invitation to become his assistant in the management of this journal.

* * *

Could not a better system of election be devised? The majority of the members are disfranchised on account of their inability to attend the convention.

* * *

We do not believe, however, that the present system under which the association is conducted is the best from a business point of view. All the real work, of course is done in committee. There appears, however, to be some difficulty in obtaining men willing to undertake committee work. On looking down the list of members of the four committees appointed at the convention, we notice that the thirteen seats are filled by six individuals of whom only three are ordinary members of the association. The other three are the President, Secretary and the Provincial Apiarist.

When writing our notes last month, we had not seen Morley Pettit's interesting paper on "The Large Exhibitions and the Bee-keepers," read by him at the O. B. K. A. In it he has the following passage, which we should like our readers to consider carefully. "I believe this association should appoint a commission to investigate the whole matter of showing honey and bees at the exhibition, and see if something cannot be done to offer more inducements to bee-keepers to put up displays at the country fairs as well as at the great exhibitions. It is true that prices are advancing to a certain extent, but no more rapidly than in other lines of goods. The matter of advertising is one which bee-keepers as a class are neglecting almost entirely. We must be aggressive in this and keep our product to the front."

* * *

It hits the nail right on the head. "We must be aggressive"—and perhaps we may be allowed to add "progressive." Certainly something should be done by the association in the matter and likewise by every individual bee-keeper.

* * *

The Doctor (Gleanings p. 748), in reference to a statement that man will never produce a non-swarming race of bees says: "Better not be too sure what man will or will not do. A few years ago some people said man would never fly, and now he is sailing in all directions. Only five per cent. of Dadant's bees swarm. Either 19/20 of his bees are non-swarmers, or else he has travelled

19/20 of the way toward a non-swarming bee." Bad logic, doctor, surely! We have an idea that to eliminate completely the swarming desire is to breed a race of bees that is lacking in fecundity. Good bee-keeping usually keeps down swarming to about 5 per cent. McEvoy manages to have even fewer than 5 per cent., but he does not, I believe claim to have bred a non-swarming race. He practices a non-swarming system.

The Editor of Gleanings writes wrathfully of a silly paragraph appearing in a recent number of Collier's Weekly respecting the alleged manufacture of comb honey. The paragraph runs as follows: "Synthetically flavored glucose makes a fair imitation of maple syrup, but it is not anywhere nearly the masterpiece that is turned out in honeyless honey in a beeless comb, so perfect that ore involuntarily exclaims "How doth the busy little manufacturer-!" Editor Root asks his readers to write letters of protest to Collier's Weekly, address, New York City.

In the British Bee Journal George Hayes communicates the results of his three-years' study of nectar-producing plants and their pollen. In introducing the subject he says: "Honey always contains more or less pollen, which is accidental to it being taken up by the bee with the nectar from the corolla of the flower, or in various other ways getting mixed with it, often to such an extent as to color the honey by its presence; and it is by these grains that with the aid of the microscope we are enabled to trace the source of the honey."

"Before we can do this we must know not only its color, but also its form in each particular flower. Furthermore we must know what changes in form the pollen-grains assume in different media, especially in the stomach of the bee and in honey." Tht Editor's article on Co-operation last month is favorably commented upon by The Canadian Co-operator, the editor of which reminds its readers "that Mr. Hurley has taken considerable interest in the distributive society at Brantford, assisting to raise capital and joining the board to help it through its vicissitudes."

WILLIAM WHITE.

* * *

We regret to announce the death of Mr. D. A. Jones, of Beeton. We understand that Mr. Jones was the founder of the Canadian Bee Journal. He has been called the father of Canadian Beekeeping. Mr. R. F. Holterman was one time one of his students. A more extended reference will appear next month.

* * *

Mr. H. H. Selwyn, Ottawa, writes us as follows: "I have read with much pleasure your issue of the C. B. J. for November, 1910, just received. I would be glad to hear further of the Co-operative committee, for it seems to me such a thing is badly needed. I, for one, would gladly become a member, as I understand it would always be a good marked for honey at the best prices, and that at the same time it would tend to eliminate the tendency of some people to undersell, which I know is common in my vicinity. The Western Grain Growers and Fruit Growers of British Columbia have, I understand, co-operation, and why not we?" We are pleased to receive Mr. Selwyn's support. Let us push this thing along.

* * *

Mr. N. E. France has given us the result of the election of officers for the National Bee-keepers Association as follows:

President—George W. York, Chicago, Ill.

Vice-President—W. D. Wright, Altamont, N. Y.

Secretary—E. B. Mich.

General Manager-Plattsville, Wis.

Three Directors to Springfield, Ill.; O. more, N. Y.; H. Aburg, Pa.

Mr. Byer writes as to Sanfoin Clover: "N re Sanfoin Clover, v October C. B. J., wa est by the writer, part of the fact that we ga yet on the farm a fe the time, friend Fixter me a package of the s tions how to cultivate say we followed out l closely as it was possi A plot about 30 feet sq for the seed, and earl sown. Mr. Fixter mus of the quality of the had an excellent "catcl which grew rapidly and late in the same summe sown without any grain crop, and to aid in co sown in drills so that could be removed better in bloom, it was indeed to look at, and we earn it would "make good" plant and for forage for doubtedly it is both, 1 was, what would it do in The plot it was sown o from the north, and was well drained naturally, of sandy loam on top, wi subsoil. It looked spendi but alas for our hopes, root and branch before April. If I remember winter we had but little may account for the trot same winter the alsike w le on Co-operation bly commented up-Co-operator, the ds its readers "that en considerable inbutive society at o raise capital and help it through its

LLIAM WHITE.

the death of nnce f Beeton. We unnes was the founder Journal. He has r of Canadian Bee-Holterman was one ents. A more exappear rext month.

m, Ottawa, writes ve read with much f the C. B. J. for received. I would er of the Co-operaseems to me such a I. for one, would er, as I understand a good marked for es, and that at the nd to eliminate the eople to undersell, non in my vicinity. Growers and Fruit lumbia have, I unand why not ed to receive Mr. Let us push this

> has given us the of officers for the Association as fol-

W. York, Chicago,

D. Wright, Alta-

Secretary-E. B. Tyrrell, Detroit, Mich. General Manager-N. E. France, Plattsville, Wis.

Three Directors to 1914-J. A. Stone, Springfield, Ill.; O. L. Hershiser, Kenmore, N. Y.; H. A. Surface, Harrisburg, Pa.

December, 1910

Mr. Byer writes as follows in reference to Sanfoin Clover: "Mr. Fixter's article re Sanfoin Clover, which appeared in October C. B. J., was read with interest by the writer, particularly so, because of the fact that we gave it a trial while yet on the farm a few years ago. At the time, friend Fixter very kindly sent me a package of the seed, with instructions how to cultivate it, and needless to say we followed out his instructions as closely as it was possible for us to do. A plot about 30 feet square was prepared for the seed, and early in May it was sown. Mr. Fixter must have been sure of the quality of the seed sent, as we had an excellent "catch" of the clover, which grew rapidly and blossomed some, late in the same summer. The seed was sown without any grain or other cover crop, and to aid in cultivation it was sown in drills so that all the weeds could be removed better. While it was in bloom, it was indeed a beautiful thing to look at, and we earnestly hoped that it would "make good" both as a honey plant and for forage for stock. Undoubtedly it is both, but the question was, what would it do in "our locality." The plot it was sown on was sheltered from the north, and was a piece of land well drained naturally, being composed of sandy loam on top, with gravelly clay subsoil. It looked spendid in November, but alas for our hopes," it killed out root and branch before the following April. If I remember correctly, that winter we had but little snow, so that may account for the trouble. Yet, the same winter the alsike wintered alright. although red clover only wintered fairly well. Ottawa is considerably north of us, and the fact that it winters there alright, suggests to my mind that it must be because of the greater snow fall they have in that section of Ontario. We certainly would not wish to discourage any one from trying the clover, and in the counties north and east of us, where the snow fall is heavy, I see no reason why it should not succeed as well as it does in Mr. Fixter's locality."



CO-OPERATION.

A well-known statesman, a few years ago, exhorted his fellow-countrymen to "think imperially." Had he suggested the idea of their thinking co-operatively his statemanship would have been of an infinitely higher order and more in parallelism with the spirit of universal progress. In our greeting printed on the front page of the current issue of the C. B. J. is contained the following quotation from Dr. J. A. Macdonald's message to Canada and Canadians: "The middle walls of separation are breaking down, national sovereignty is making way for world sovereignty. * * * Canada links both, and all others whose whose children come to her shores in a world league for peace and goodwill."

The foregoing passage is an expression of what is highest and best in the Cooperative Movement. We are, perhaps, somewhat prone to see in Co-operation merely a means of getting the highest possible price for our labor, or possibly a method of organizing industry, whereby we may eliminate wasteful elements. Do we really understand what Co-operation means? We all talk glibly about it. Every agricultural journal contains numerous references to the ways in which the system has been or may be successfully applied, but it is very seldom that we see any sort of allusion to the moving spirit of the movement. In Canada, Co-operation is an exotic, a transplanted seedling, whose home is upon the arid plains of old-world industry.

It is as an expedient that we find Cooperation welcomed in new and rich countries like ours, for we recognize in the movement certain economic principles which make for success in the more materialistic departments of the business of life. Before dealing with more practical issues, I would like to lay stress upon the importance of our remembering the living principle that animates and is essential to the system.

The old Hindoo maxim has it that: "For one man to do good to another is good for both, but for one man to do ill to another is bad for both." The divine injunction commands us to "love our neighbor." From the earliest times there appears to have been a universal acceptance of the idea (the mother idea of human thought we may call it), that it is right for man to live doing his neighbor as little har.n as possible. The history of human progress is the history of man's conscious striving to overcome the predatory tendencies of his nature.

Journals of the class to which Bee Journals belong are not the proper mediums for sermonizing, and we do not wish to dwell upon this part of the subjest longer than is necessary. We would however, earnestly ask bee-keepers, before launching their Co-operative association to consider whether it is not possible to keep before them the ideals of those thinkers and workers who have made Cooperation practicable and successful. Plato, Sir Thomas More, Bacon, Campanella, Harrington, Robert Owen--these are the men who have contributed chiefly to the volume of world-improving ideas and made Co-operation possible.

In last month's issue, Mr. Hurley gave us an eminently sane and practical article on the subject with which we are dealing, outlining a scheme for putting into effect the expressed desire of a large number of bee-keepers who advocate Cooperative methods in the marketing of their produce. We do not suppose for one moment that the scheme will meet with universal acceptance. We do feel, however, that it is necessary to have before us for discussion some definite plan.

To what extent is it possible for beekeepers to co-operate? Should the rules of the association prohibit private dealing in honey on the part of its members? Should the association accept from members only the best grades of honey, or should it take just what the members care to place with the manager? Out of these and many other equally important questions will arise much discussion and possibly no little trouble. A year or so back the C. B. J. printed several papers on the subject of grading honey, one correspondent going so far as to state that here the difficulties were so great as to make it impossible even to start an association. Unanimity at the commencement of a discussion generally betokens general ignorance or apathy. It would be indeed most unfortunate if general concurrence in any proposed plan of Co-operative action resulted from either. Our readers, therefore, will doubtless, consider it their duty to put on their "thinkingcaps" and revolve in their minds the pros and cons of the matter.

The question: "Why should bee-keepers co-operate" needs but brief consideration. It is pretty generally conceded that whilst in some parts there is an abundant crop, in others there may be a a corresponding scarcity. There is also, undoubtedly a growing tendency at the present time on the part of great commercial concerns by "combined" capital to "corner" supplies of every description, and we believe the time is coming when a definite stand need to be made against encroachments of such the aggressive concerns. Co-operation among producers is possibly the only means of encountering successfully the co-operation of the

(Continued on page 381)

OFFICERS OF O.

December, 1910

President—W. J. (

Second Pice-President. Joy.

ton Robinson.

Secretary-Treasurer-Parliament Buildings.

Dire

District No. 1—A.
District No. 2—A.
berland.

District No. 3-M. I

bridge.

District No. 5-Jame

District No. 6-J. 1

District No. 7—J. F ville.

District No. 8—U. I Falls. District No. 9—W.

ford.
District No. 10-D.

District No. 11—Miss ton.

District No. 12—D. Robinson.

Ontario Agricultural tit, Provincial Apiarist

Committ

Horticultural Show Secretary, with E. Grabald.

Honey Crop—Preside with W. J. Craig and Transportation—Presider, with J. D. Evan Revising—M. Pettit

Representatives to

Toronto Industrial lington; W. Couse. Ottawa—W. J. Brov London—F. J. Mille

P.

who advocate Cothe marketing of lo not suppose for scheme will meet We do feel, nce. cessary to have besome definite plan. it possible for bee-? Should the rules phibit private dealart of its members? accept from memrades of honey, or what the members manager? Out of r equally important auch discussion and ible. A year or so inted several papers ling honey, one corfar as to state that were so great as to en to start an assoat the commencegenerally betokens apathy. It would be nate if general conosed plan of Co-opd from either. Our Il doubtless, consider on their "thinking-

matter. hy should bee-keepbut brief considergenerally conceded e parts there is an hers there may be a city. There is also, ing tendency at the art of great commerombined" capital to f every description, time is coming when I to be made against croachments of such ion among producers means of encounterco-operation of the on page 381)

in their minds the

OFFICERS OF O. B. K. A., 1911.

President—W. J. Craig, Brantford. First Vice-President—D. Nolan, Newton Robinson.

Second Pice-President—J. L. Byer, Mt. Joy.

Secretary-Treasurer—P. W. Hodgetts, Parliament Buildings, Toronto.

Directors.

District No. 1—A. Dickson, Lancaster.
District No. 2—A. McLaughlin, Cumberland.

District No. 3—M. B. Holmes, Athens. District No. 4—C. F. Chisholm, Wall-bridge.

District No. 5—James Storer, Lindsay.
District No. 6—J. L. Byer, Mt. Joy.
District No. 7—J. F. Switzer, Orangeville.

District No. 8-U. H. Bowen, Niagara Falls.

District No. 9-W. J. Craig, Brantford.

District No. 10—D. Chalmers, Poole. District No. 11—Miss E. Robson, Ilderton.

District No. 12—D. Nolan, Newton Robinson.

Ontario Agricultural College, M. Pettit, Provincial Apiarist.

Committees.

Horticultural Show—President and Secretary, with E. Grainger and H. Sibbald.

Honey Crop—President and Secretary, with W. J. Craig and H. Sibbald.

Transportation—President and Secretary, with J. D. Evans.

Revising-M. Pettit and H. G. Sibbald.

Representatives to Fair Boards.

Toronto Industrial—J. D. Evans, Islington; W. Couse.

Ottawa—W. J. Brown, Chard. London—F. J. Miller.

P. W. HODGETTS.

CELLAR WINTERING.

A Valuable Report on Temperature Averaging 38 Degrees.

H. Harley Selwyn.

Dear Sir,—It has been my intention for some time past to report to you on the wintering of thirty-five colonies of bees during the season of 1909-10 at a temperature averaging 38 degrees Fahrenheit, as it might possibly be of interest to other bee-keepers who have only a small number of hives and who do not care to use artificial heat of any kind in their cellars. For this reason I enclose a record of the temperature in our cellar from November 20th, 1909, to March 27th, 1910.

Following is a brief description of the construction of the cellar to which I refer. Twelve inch cement walls 12 x 16 feet, 6 ft. 6 in. high set well into a dry sandy hillside and back being on a level with the ground and front end sufficiently high to permit of sloping steps and doorway. The latter is built out in the form of a porch with stone work and a second door placed over it during the winter months. The accompanying photograph of cellar, house and grounds will no doubt make it clearer. The house is merely a frame one for summer use only.

The ventilation system consists of two boxed vents running in from each side through small underground windows and one five inch pipe in the centre of the ceiling extending about four feet into the room above. This pipe carried off the warm, moist air, the new supply coming through the outside vents. The ceiling of the cellar was two ply of rough and dressed lumber with paper between, actually the floor of the room above, the underside of the floor joists being sheeted with paper to make a dead air space and thus preventing the striking of the frost in the room above through into the cellar

The hives were tiered up on a long table three high and well blocked off their bottoms, with felt pads the size of each hive, such as is used for harness padding, over them thus permitting of a slow, upward ventilation. The bees came through with the loss of one colony and that due, no doubt, to the death of their queen as it had a goodly supply of honey.

This is a brief outline of the wintering, which extended over a period of four months. This year they are in a new location, but under much the same conditions and I am hoping for as good results; there are, however, 75 colonies and as the animal heat will be greater so will the temperature average higher, probably about 42 degrees.

Many thanks are due to Mr. W. H. Middleton for these records as, fair weather or foul, he conscientiously visited that cellar, which was a considerable distance from his house, twice a day, to examine the thermometer suspended through the pipe in the room to the cellar. I was unable to do this myself as I was in Ottawa during the winter and the apiary is located some twelve miles out.

Kirk's Ferry Bee House.

(Middleton's Reporting.)

went into winter quarters Nov. Bees 20th; had fine fly on 11th.

Nov. 28-4 p.m.; 38 degrees; no mice. Nov. 29-10 a.m., 37 degrees; 5 p.m., 38 degrees.

Nov. 30-10 a.m., 36 degrees; 4 p.m., 37

degrees.

Dec. 1-10 a.m., 36 degrees; door shut

degrees.

Dec. 2-10 a.m., 34 degrees; 5 p.m., c. degrees. Closed door.

Dec. 3-10 a.m., 38 degrees; door opened.
5 p.m., 38 degrees; closed door for night.

Dec. 4-10 a.m., 38 degrees; mild, door Dec. 4-10 a.m., 38 degrees; mild, door open; 5 p.m., 38 degrees.
Dec. 5-10 a.m., 37 degrees; 5 p.m., 38

degrees Dec. 6-10 a.m., 38 degrees; 5 p.m., 38

degrees. Dec. 7-10 a.m., 38 degrees; 5 p.m, 37 degrees.

Dec. 8-10 a.m., 38 degrees; 5 p.m., 38 degrees. Visited personally; everything fine.

Dec. 9-No record given.
Dec. 10-Morning, 36 degrees; evening 37 degrees.

Dec. 11-Morning, 34 degrees; evening 38 degrees. Raised by stffuing one of the side vents.

Dec. 12 (Sunday)-Morning, 37 degrees: evening, 38 degrees. Bitter cold day out-

Dec. 13 (Monday)—Morning, 37 degrees; door being banked; evening, 36 degrees; cold. Dec. 14 (Tuesday)-Morning, 38 degrees.

Much snow and wind.
Dec. 15 (Wednesday)—Morning, 39 de-39 degrees. grees; evening,

Dec. 16-Morning, 38 degrees; evening, 39 degrees. Dec. 17-Morning, 37 degrees; evening, 38

degrees.
Dec. 18 (Saturday)—Morning, 37 degrees;
evening, 37 degrees. Corrected, stuffing in

side vent.

Dec. 19 (Sunday)—Morning 37 degrees;
evening, 37 degrees. Previous night below

Dec. 20, 21, 22, 23, 24, 25, 26—Very moderate weather. Mr. Middleton in the city; no records kept.
Dec. 27—4 p.m., 39 degrees.
Dec. 28—5 p.m., 38 degrees.
Dec. 29—11 a.m., 39 degrees; 5 p.m., 37

degrees.

January 4-11 a.m., 36 degrees. Jan. 5-11 a.m., 34 degrees. Very 'eld

and wind. Jan. 6-9 a.m., 36 degrees; 4 p.m., 37

degrees. Jan. 7-10 a.m., 38 degrees; 5 pn., 38

Jan. 8-7.30 a.m., 38 degrees; 4 p m. 38 degrees. Jan. 9-11 a.m., 39 degrees; 4 p.m., 38 degrees

Jan. 10-10 a.m., 38 degrees, almost 39:

5 p.m., 38 degrees. Jan. 11-10 a.m., 37 degrees; mild, did not visit again.

Jan. 12—11 a.m., 38 degrees, mild; 4.30 p.m. 38 degrees, mild. Jan. 13—9.30 a.m., 38 degrees, cold; 4.30 p.m., 38 degrees, cold; 4.30 p.m., 38 degrees, cold; 5 p.m., 37 degrees, cold; 5 p.m., 37 degrees, cold; 5 p.m.,

Jan. 14—9 a.m., 38 degrees, cold; 5 p.m., 37 degrees, cold.
Jan. 15—9.30 a.m., 37 degrees, cold; 5.15 p.m., 37 degrees, mildish.
Jan. 16—10 a.m., 36 degrees, mildish; 5 p.m., 37 degrees, mild.
Jan. 17—10 a.m., 37-38 degrees; 5 p.m., 37 degrees 37 degrees.

Jan. 18-10 a.m., 38 degrees.

Jan. 19-10 a.m., 39 degrees. Jan. 20-10 a.m., 38 degrees; 4.30 p.m., 38 degrees.

Jan. 21 and 22-In town.

Jan. 23-Very mild; did not visit. Jan. 24-10 a.m., 40 degrees; 5 p.m., 40 degrees.

Jan. 25-10 a. m., 40 degrees. Jan. 26-10 a.m., 39 degrees;4 p.m., 39 degrees.

Jan. 27-4 p.m., 39 degrees. Jan. 28-5 p.m., 39 degrees. Jan. 29-9 a.m., 38 degrees; 5.p.m., 38 degrees.

Jan. 30—11 a.m., 38-39 degrees. Jan 31—9 a.m., 38 degrees; 5 p.m., 38 degrees.

Feb. 1-10 a.m., 37-38 degrees; 5 p.m., 37 Feb. 2-9.30 a.m., 38 degrees; 5 p.m., 38 Feb. 3-10 a.m., 39 degrees; 5 p.m., 39 Feb. 4-8.15 a.m., 38 39; cold outside; 5

Feb. 4-8.15 a.m., 38.39; cold collections, p.m., 39 degrees. Feb. 5-9.30 a.m., 37-38 degrees; 5 p.m., 34

Feb. 6-9 a.m., 37 deg low outside; 4,30 p.m., Feb. 6-4 p.m., 37 deg Feb. 7-10 a.m., 35-36 degrees Feb. 8-10 a.m., 36 de degrees. 9 (Wednesday)-Feb.

the day with Father; degrees; bees in good Feb. 10-10 a.m., 38-39

degrees. Feb. 11-8.30 a.m., 37 degrees Feb. 12-8.30 a.m., 37

degrees. Feb. 13—11 a.m., 37 d degrees Feb. 14-9.30 a.m., 37 degrees

Feb. 15-10 a.m., 38 det degrees egrees. Feb. 16—10 a.m., 37-38 Feb. 17—10 a.m., 37 de

degrees Feb. 18-10 a.m., 37-38 degrees

Feb. 19—10 a.m., 36-37 Feb. 20—12 noon, 37 d Feb. 21—10 a.m., 38 d Feb. 22—12 noon, 38 de

degrees Feb. 23—10 a.m., 38 de Feb. 24—11 a.m., 36-37 d

degrees Feb. 25-11 a.m., 36 de degrees Feb. 26-10 a.m., 36 de

degrees. Feb. 27—1.45 p.m., 38 (Feb. 28—10 a.m., 39 de

40 degrees. March 1-10.30 a.m., 39 March 2-10.20 a.m., 4 degrees March 3-11.30 a.m., 40 41 degrees

Bees placed on summ 27, 1910 Easter day, with

O.B.K.A. DIRECTORS'

Indexed The membership of the 321. Of this number 17 affiliated Associations and single subscriptions. T this year is 321, as con last year. The increase a circular sent out early bee-keepers in the Provi The affiliated Associati membership, is as follows Brant, 11 members; Halton, 20; Middlesex, 3 Oxford, 10: Russell, 11; ! toria, 25; York, 16; tot subs. 149.

orning, 37 degrees; vening, 36 degrees;

orning, 38 degrees.

-Morning, 39 deees. legrees; evening, 39

legrees; evening, 38 lorning, 37 degrees; rrected, stuffing in

orning 37 degrees; revious night below

25, 26-Very moderdleton in the city;

egrees. egrees. degrees; 5 p.m., 37

36 degrees. Very

degrees. Very (ld legrees; 4 p.m., 37

degrees; 5 pn. 38

degrees; 4 p m. 38

degrees; 4 p.m., 38

degrees, almost 39;

degrees; mild, did

degrees, mild; 4.30 B degrees, cold; 4.30

, dogrees, san,

egrees, cold; 5 p.m.,

7 degrees, cold; 5.15 ish.

degrees, mildish; 5

38 degrees; 5 p.m., degrees.

degrees. legrees; 4.30 p.m., 38

own.
did not visit.

degrees; 5 p.m., 40

40 degrees.
1 degrees;4 p.m., 39

degrees.

degrees; 5 p.m., 38

39 degrees. degrees; 5 p.m., 38

degrees; 5 p.m., 37 degrees; 5 p.m., 38 degrees; 5 p.m., 39 8-39; cold outside; 5

18 degrees; 5 p.m., 38

Feb. 6-9 a.m., 37 degrees; 23 degrees helow outside; 4.30 p.m., 37 degrees; 8 de-Feb. 6-4 p.m., 37 degrees Feb. 7-10 a.m., 35-36 degrees; 5 p.m., 36

December, 1910

Feb. 7-10 a.m., 35-36 degrees; 5 p.m., 36 degrees. Feb. 8-10 a.m., 36 degrees; 5 p.m., 36

degrees. Feb. 9 (Wednesday)—Went to K. F. for the day with Father; temperature 37.38 degrees; bees in good condition. (82 days in cellar).

Feb. 10-10 a.m., 38-39 degrees; 5 p.m., 38 degrees. Feb. 11-8.30 a.m., 37 degrees; 4 p.m., 37 degrees.

Feb. 12—8.30 a.m., 37 degrees; 5 p.m., 37 degrees. Feb. 13—11 a.m., 37 degrees; 5 p.m., 37 degrees. Feb. 14—9.30 a.m., 37 degrees; 5 p.m., 37 degrees. Feb. 15—10 a.m., 38 degrees; 4.30 p.m., 38

degrees.
Feb. 16—10 a.m., 37-38 degrees.
Feb. 17—10 a.m., 37 degrees; 5 p.m., 37-38 degrees.

Feb. 18-10 a.m., 37-38 degrees; 5 p.m., 37 degrees. Feb. 19-10 a.m., 36-37 degrees. Feb. 20-12 noon, 37 degrees. Feb. 21-10 a.m., 38 degrees.

Feb. 21—10 a.m., 38 degrees. Feb. 22—12 noon, 38 degrees; 5 p.m., 38 degrees. Feb. 23—10 a.m., 38 degrees.

reb. 23—10 a.m., 38 degrees. Feb. 24—11 a.m., 36-37 degrees; 5 p.m., 36-37 degrees. Feb. 25—11 a.m., 36 degrees; 5 p.m., 36 degrees. Feb. 26—10 a.m., 36 degrees; 5 p.m., 37 degrees.

degrees. Feb. 27—1.45 p.m., 38 degrees. Feb. 28—10 a.m., 39 degrees; 5 p.m., 39-40 degrees. March 1—10.30 a.m., 39 degrees.

March 2-10.20 a.m., 40 degrees; 4 p.m., 40 degrees. March 3-11.30 a.m., 40 degrees; 6.30 p.m., 41 degrees. Bees placed on summer stands March 7, 1910 Easter day, with loss of one hive.

0.B.K.A. DIRECTORS' REPORT, 1910

Indexed The membership of the Association is 321. Of this number 172 came in from affiliated Associations and the balance in single subscriptions. The membership this year is 321, as compared with 276 last year. The increase is largely due to a circular sent out early in the year to bee-keepers in the Province.

The affiliated Associations, with their membership, is as follows:

Brant, 11 members; Glengarry, 10; Halton, 20; Middlesex, 33; Norfolk, 18; Oxford, 10; Russell, 11; Simcoe, 18; Victoria, 25; York, 16; total, 172. Single lubs, 149. The foul brood inspection was again carried on during the year through the Department. The districts were reorganized and 16 inspectors in all appointed for the Province. The grant was raised to \$3,000.

A bulletin, entitled "Bee-Keeping in Ontario," was prepared by Morley Pettit, Provincial Apiarist, containing valuable information in regard to this industry, compiled from replies received in response to a circular issued in May of this year. This bulletin contains information in tabulated form and by counties, summarized directly from the statements received on such questions as:

Per cent. winter losses and causes; per cent. cellar-wintered and date of removal; per cent. outdoor-wintered, date of removal from packing, nature of winter stores; kind of summer honey plants, fall honey plants, crop prospects, etc. This bulletin was sent to all parties interested.

TREASURER'S REPORT

 Receipts—
 \$250 00

 Membership fees
 \$250 00

 Legislative grant
 450 00

 Affiliated Societies' dues
 50 00

 Entry fees, Horticultural Exhibition
 3 10

4	100	10
Expenditures—		
Bal. due Treasurer	64	26
Grants to Associations	231	80
Expenses for Convention	18	75
Committee expenses	10	00
Stationery	4	50
Periodicals	231	00
Cost of reporting	75	00
Revising report	7	00
Affiliation fee to Horticultural Ex-		
hibition	5	00
Incidentals	4	67
Balance on hand	101	12

\$753 10

P. W. HODGETTS, Treas.

PRESIDENT'S ADDRESS AT O. B. K.

As bee-keepers of Ontario we have again been favored with a fair crop of honey and of good quality, and we have received fairly satisfactory prices.

Owing to the extreme heat during part of June and July, the clover was hurt to a considerable extent in a great part of the province, and for this reason some of us did not receive the full crop that we hoped for, but in the eastern part of the province, where there was not such a good crop last year, they received it this year, so we can only say they deserve it.

As to the sale of honey, the demand seems to keep up; last year we had a call for honey from the West as never before, and it seems to have improved this year on all previous ones, as I am not aware of any one bee-keeper receiving an order of five cars of honey from one firm previous to this year, and that at good prices and practically before the honey was produced. Those of us who have only kept bees for a few years may not notice the difference in demand, but those that have been selling honey during the life time of this association, which is about thirty years, know that carload orders were unknown many years back. We must give the West credit for the wonderful increase in demand, and as the population increases there, we should prepare to supply their wants. To do this we must not forget that the quality of honey has almost all to do with creating demand. We are not boasting in saying that we are proud of the quality we can and do produce, and as to quantity per colony of bees, we seem to get as much as any other country we know of. We have found that some of our best bee-keepers have tried far away fields in bee-keeping, but one or two seasons seem to satisfy them and home they return to re-enter the arena here.

The Honey Production of the Province.

From the yearly reports we receive, we can make a fair estimate; and to say that 5,000,000 pounds were produced would be somewhere near the mark. This at first sight may seem an immense amount of honey, but if we supplied each person in our province with one pound, we would not have enough to give an equal amount to each person in the other provinces where honey is not produced to any great extent.

To What Extent Can Consumption Be Created?

As bee-keepers, we all know that our own families as a rule prefer honey to fruit or any other table delicacy (providing it is good honey), and we may fairly claim that each one of us consumes 20 pounds; if we would prepare to supply each person in Canada with one-fourth of this, or 5 pounds each, we would to-day require a production of 40,000,000 pounds of honey, as to-day's paper gives our population at 8,000,000.

Owing to the home demand for horey being so great, we have neglected the development of the foreign trade. In conversation with Mr. C. C. James, Deputy Minister of Agriculture a few days ago, he informed me that he had not found Canadian honey used and named as such in the hotels in Lordon, England, but had found Swiss, Belgian, Hungarian, Californian and other foreign honeys, so it appears to us that there is a channel open to us now as never before to introduce our honey on the English and foreign markets. We all know that the Provincial Government has introduced Ontario fruit on the English market this season through their commissioner (who is ours), and have been exceptionally successful in the venture, and that with perishable goods. Surely we as bee-keepers can fairly ask for some attention in the same line as the fruit growers, and I would suggest that this matter be brought before the

Department of Agricuask their assistance this matter.

We need not fear ture if we can have Agriculture at our b troduced in this we standing such as no could give it. We be send honey excelled b and only this should

What Is the Greate Advancement of To-c

We believe it is the handling a great num bees divided into seve ated two or more mil manner we have advar past ten years and it reasonable to look for in the next ten.

What is the Greatest Advancen

Foul brood, surely. to a considerable exte our duty is to try an that handle or attemp know what the diseas cure it. To accomplis time and energy of our whether they hold posi or not. We believe Brood Inspectors are service in spreading s in bee-keeping all over we can only say "let the be appointed to the pos them."

Our Provincial Apian lished at the Ontario A at Guelph where he has bee-keeping as never be use him in the way we periment for us. Any gestions we make will consideration and it w us to make them as pra To illustrate: It would not be at the content of the conte

on of the Province, ports we receive, we tate; and to say that re produced would he mark. This at an immense amount upplied each person one pound, we would ive an equal amount the other provinces reduced to any great

in Consumption Be

all know that our

ile prefer honey to table delicacy (prooney), and we may one of us consumes ould prepare to sup-Canada with one-5 pounds each, we e a production of honey, as to-day's ilation at 8,000,000. e demand for honey have neglected the foreign trade. In Mr. C. C. James, Agriculture a few ed me that he had honey used and ne hotels in Lordon, ound Swiss, Belgian, ian and other forappears to us that open to us now as oduce our honey on eign markets. We all ovincial Government rio fruit on the Engason through their is ours), and have uccessful in the venh perishable goods. epers can fairly ask in the same line as and I would suggest

brought before the

Department of Agriculture, and that we ask their assistance and co-operation in this matter.

We need not fear to go into the venture if we can have the Department of Agriculture at our backs, as honey introduced in this way would have a standing such as no private individual could give it. We believe that we could send honey excelled by no other country and only this should we send.

What Is the Greatest Feature in the Advancement of our Industry To-day

We believe it is the expert bee-keepers handling a great number of colonies of bees divided into several apiaries, separated two or more miles apart. In this manner we have advanced greatly in the past ten years and it would only seem reasonable to look for something similar in the next ten.

What is the Greatest Detriment to Our Advancement?

Foul brood, surely. We still have it to a considerable extent and we believe our duty is to try and have all those that handle or attempt to handle bees know what the disease is and how to cure it. To accomplish this will take time and energy of our best bee-keepers, whether they hold positions as Inspectors or not. We believe that the Foul Brood Inspectors are doing an excellent service in spreading general knowledge in bee-keeping all over the Province and we can only say "let the best men possible be appointed to the positions and more of them."

Our Provincial Apiarist is now established at the Ontario Agricultural College at Guelph where he has facilities to assist bee-keeping as never before, and we may use him in the way we think best to experiment for us. Any reasonable suggestions we make will receive careful consideration and it would be wise for us to make them as practical as possible. To illustrate: It would not do us as much

good to tell us that we produced 58 lbs. of honey per colony as if he could tell us how to produce 68 lbs. with the same labor and expense.

Our Membership Has Increased to a Considerable Extent.

Our affiliated societies are the same number as last year. There should be a society in almost every one or two counties so the bee-keepers could have the advantage of having expert lecturers sent to lecture at their meetings.

The Horticultural Exhibition is one of the Institutions that is helping us, as in this we can show our produce to the consumer. I think we may well take up the idea of making county exhibits in the same manner as the fruit grovers are doing.

Our Programme.

We adopted a somewhat new plan in getting it up by asking each Director to suggest topics so that there would be something to suit the different parts of the Province.

Do Our Conventions Help Us in a Practical Way.

We may not notice very much during the days we are at the convention what it is, but there is some feature each year that we are benefited by, and we must not forget that what knowledge we have to-day of bee-keeping was given to us by many of those that are not with us to-day. There was a feature last year in our convention of a practical demonstration on raising queens by Mr. Clark, of New York State. From the discussion and practical work we have had on this subject, we are glad to tell Mr. Clark that he has not been forgotten. What about Mr. House? Well, he knows full well that he has done us a lot of good, and to show his unselfishness, it would take very little to have him come over the border with us. We have room for him with many other people that are coming from the South.

Buckwheat Honey.

We are yearly producing more and from the position I was in last summer as Seed Inspector in the County of Peel, I learned why such is the case. There are several weeds, such as Twitch Grases, Sow Thistle, Bladder Campion, Canadian Thistle, to kill which, that farmers are cultivating their lands as long as possible in spring, and then sowing buckwheat to smother weeds and have a crop of grain as well. Until the weeds are got under control we may look for more buckwheat honey and we must also take care of a market for it. Toronto is not anxious for buckwheat honey in the same way as Montreal. It is evident that we have been supplying them with good white honey, as the market here is still growing.

The Crop Report Committee will make some reference to their work.

Selling by Sample.

When we sell by sample do we give an equal quality of goods? If we do not, we should, as there is nothing will give us a bad name so quickly. In talking this matter over with one of the largest purchasing houses in Toronto a few days ago, I asked him if they were disappointed by bee-keepers not giving a quality up to sample. He said that he had found bee-keepers good business men and that he had not been disappointed in the the quality of honey furnished.

A SUCCESSFUL COUNTY ASSOCIA-

(E. T. Bainard, at O.B.K.A.)

As the successful bee-keeper looks after the individual wants of each colony of bees, so should the successful County or District Bee-Keepers' Association look after and interest its individual members in the advancement of the work of the Association. When a bee-keeper joins the Middlesex Association, which only costs him 75c per year, we give him the choice of three bee journals, and as we are affiliated with the Ontario Association, our members may join for an additional 50c and receive the Canadian Bee Journal and all reports. This literature is a stimulatant to the new member, like honey is to a starving colony of bees.

We change the officers each year, working in new blood; those that have the welfare of the society at heart, and, of course, the successful bee-keepers have naturally more influence in this work. We hold at least two meetings per year, advertising them well in the local newspapers. By this means we can reach the bee-keeper—if we can call him a bee-keeper—who takes no bee journal.

In looking up the back history of our County Association, I notice about 22 years ago they first affiliated with the Ontario Association. Mr. R. F. Holtermann, being at this meeting, explained the benefits of affiliation. Three years ago we asked the Inland Revenue Department that an inspector be sent out. This was done, and every large centre in the Dominion was visited and samples of honey taken and analyzed. The report showed very little adulteration in the Province of Ontario. The tendency of this is to increase the sales of honey and increase the confidence of buyers in Ontario honey.

When we, along with other county associations, asked the Department of Agriculture for more assistance in fighting foul brood, we were very fortunate in having an inspector appointed for the London district who takes an interest in our Association. He advises the small, the large and the many other classes of bee-keepers whom he visits in his rounds of inspection to attend our meetings, and he generally practices what he preaches by attending himself and giving us information on foul brood matters.

THE DISPOSAL

(W. A. Chrysler, a

I suggested the abo on our program with the it be given to someone experience in that line had, so that I and oth treat cappings more experience in the profit saleable shape the hopotained from cappings

We have capping mel to separate honey fr while the uncapping of progress. The cappin moved (not having tin tain large quantities of tain that although the l as palatable, it is chan color to a certain exter not overheated. All he with cappings or comb, flavor and the color t smoke, and probably stances, such as travel, give it. Overheating h many times as being the ing the honey and aff From my experience 1 satisfied that the honey in color and changed in overheated.

Unless cappings can pressed cold, we may al ping honey necessarily t ate from our other hone; merits.

I find that cappings, a drained of all honey tha them still contains a lan honey, the value of whi effort to secure it in saleable condition.

While taking off honey however, to avoid smokii than is necessary, as smo used to excess, will affect oins the Middlesex

costs him 75c per

choice of three bee

are affiliated with

on, our members

tional 50c and re-

e Journal and all

e is a stimulatant

like honey is to a

rs each year, work-

ose that have the

at heart, and, of

bee-keepers have

nce in this work.

meetings per year,

in the local news-

s we can reach the

1 call him a bee-

back history of our

I notice about 22

affiliated with the

Mr. R. F. Holter-

meeting, explained

tion. Three years

nland Revenue De-

pector be sent out.

very large centre in

ited and samples of

lyzed. The report

dulteration in the

The tendency of

sales of honey and

e of buyers in On-

ith other county as-

Department of Agri-

sistance in fighting

very fortunate in

appointed for the

takes an interest in

advises the small,

any other classes of

visits in his rounds

d our meetings, and

s what he preaches

and giving us in-

ood matters.

bee journal.

THE DISPOSAL OF CAPPINGS.

December, 1910

(W. A. Chrysler, at O. B. K. A. Convention).

I suggested the above subject be put on our program with the expectation that it be given to someone who has had more experience in that line than what I have had, so that I and others could learn to treat cappings more easily, or with less labor, and yet profit by securing in a saleable shape the honey that can be obtained from cappings.

We have capping melters, that are used to separate honey from the cappings, while the uncapping of the combs is in progress. The cappings when first removed (not having time to drain), contain large quantities of honey. I maintain that although the honey may be just as palatable, it is changed in flavor and color to a certain extent, although it be not overheated. All honey when melted with cappings or comb, will take on the flavor and the color that wax, smoker smoke, and probably other minor substances, such as travel, stain, etc., will give it. Overheating has been suggested many times as being the cause of darkening the honey and affecting its flavor. From my experience I am thoroughly satisfied that the honey will be darkened in color and changed in flavor even if not overheated.

Unless cappings can be in some way pressed cold, we may always expect capping honey necessarily to be kept separate from our other honey, and sold on its merits.

I find that cappings, after having been drained of all honey that will drain from them still contains a large percentage of honey, the value of which will repay an effort to secure it in a palatable and saleable condition.

While taking off honey, it is advisable, however, to avoid smoking the bees more than is necessary, as smoker smoke, when used to excess, will affect the flavor and

the color, especially the cappings or honey exposed on the surface of the combs.

In my honey house, I have an uncapping tank about six feet long, about 18 inches wide, and about the same depth, made of seven-eights inch lumber, and lined on the inside with tin, in which I have four wire-cloth baskets, about 17 inches square, and about 12 inches deep, which have lugs to hang them suspended in this tank, and have handles for removing when realy to melt up. I can uncap in any place that is most convenient along the aforesaid tank, and when the wire cloth basket is full, can slide it along out of the way to still drain and replace with an empty one.

The cappings when sufficiently drained are melted over steam coils, or in a vessel placed in hot water, with an opening to allow the wax to separate from the honey. The chief difficulty I have found is to separate the wax and the impurities from the honey successfully, and with the desired amount of labor. I have, while attending this convention, seen displayed here, by the Provincial Apiarist, Mr. Pettit, an apparatus that I feel certain will obviate and remove the above difficulties, and may also be used in connection with the wax press, when rendering wax from all combs.

BEE-KEEPING FOR YOUNG MEN

(Homer Burke, at O.B.K.A. Convention)

The young man of to-day has a great many advantages towards success over the men who have been keeping bees during past years. The older bee-keeper has been experimenting for years, and we young men reap the benefit of their labors. We benefit also by getting new ideas every year at the different conventions, by hearing various plans discussed and different methods of work given.

When the older men started (many with the old-fashioned box hives), they



GATINEAU VALLET wyn, Showin

had not these advantages. Each had to search out the best method for himself, and many in their experimenting paid dearly for the lessons learned; while row, by the improved hives and by being able to control the swarming, the young man in the business to-day can handle more than four times the amount of bees with less labor than he could have done in past years. Many of us know that the bee-keeping business is just in its infancy, owing to the rapid increase in the demand for honey. Never until the past few years has either the Government or the general public recognized what an important business bee-keeping is beginning to be throughout our country. Especially the Government is waking up to the fact that bee-keeping is one of the most promising industries of the future, and worthy of its aid in stamping out all bee diseases. The young man, under the new methods, will not now be so easily

contented with running one, but will want to expand out by running several yards, as it is a well-known fact that the honey is in the country, and it remains for us to increase our yards and have enough bees to collect it. If we are running for extracted honey, we must have plenty of combs, at least three supers for each stock, and never extract any honey whatever until it has been well ripened by the bees. By letting our honey get well ripened we will not only have a choice article, but we will soon find a ready market for the same, and those who buy once will want more, and thus we will not only create a larger demand for our honey, but we will also secure better prices. One of the main things to secure a good crop of honey is to have all colonies up in strong condition at the time the honey flow starts In order to do this I know from my own experience that young queens raised the year before will in nearly all cases

build up a than the raise our have in o some new I will her obtained 320 coloni the 1st of from 15 brood cha pounds of of sugar t that had about 30 had plents fed any that all b winter ali as strong from the the honey had both

over with



U VALLEY wyn, Showing Cellar.

build up a great deal faster in the spring but will than the older queens. We must also ng several raise our queens from the test stock we t that the have in our yards, and occasionally add it remains and have some new blood, which is very important. I will here give a few facts as to results e are runobtained by fall feeding in my yard of must have 320 colonies during the fall of 1909. On ree supers the 1st of October 280 colonies contained ktract any from 15 to 30 pounds of honey in the been well brood chamber, and were each fed 20 etting our pounds of sugar syrup, mixed two pounds Il not only of sugar to one of water; and 20 colonies will soon that had practically no honey were fed same, and about 30 pounds, while the remaining 20 more, and had plenty of natural stores and were not e a larger ve will also fed any syrup. Now the results were f the main that all but one stock came through the winter alive, and apparently one seemed of honey is as strong as the other when removed rong condiflow starts. from the cellar, but at the beginning of w from my the honey flow 90 per cent. of those that had both honey and syrup were boiling neens raised ly all cases over with bees and needed supers, while only 60 per cent. of those that had all honey and no syrup were ready for supers, and only 25 per cent. of those that had syrup only were ready for supers. Now, in my opinion, I believe there is no better winter stores than sugar syrup, but when it comes to brood-rearing it is not in it with the natural stores; and, therefore, in the future, I want each colony to go into winter quarters with from 20 to 30 pounds of honey and about 15 to 25 pounds of sugar syrup, as the old bees seem to have more vitality and bring on the first batch of brood better after being wintered on the syrup than they do if they have had honey alone for winter.

I know of no business that will give the young man as good returns as a good large apiary, but he should not run it as a side line with other business. If he has time to spare and wants more to do, let him keep more bees

THE USE OF BEE-ESCAPES.

Indexed

In preparing bees for winter, every bee-keeper who gets a crop of buckwheat honey and leaves good sealed stores for winter knows what a job it is to shake bees from the combs that two extracting ten-frame supers contain. The honey has to be warmed to extract, whether beeescapes are used or not. This fall I concluded to try bee-escape honey boards, and let me say right here to beginners, you can do the job in half the time, with no robbing, when it would be almost impossible to work in a yard of 150 colonies the old way by shaking all of the bees off the combs. With the bee-escape you lift off the two supers, after having been freed from bees, pick out six of the heaviest combs sealed right to the bottom bar, carry the other twelve into the honey house and tier them up. The fire gets the bee house very warm while I am carrying my honey in. Now I go to the hives beside which the six good sealed combs of honey were left, covered tight in one super. I life off my bee-escape, shake the bees off of the combs, and replace with the sealed ones. I just shake seven combs. If I were to do it the old way, I would shake the other twelve. I just snatch them off and carry to the bee house about as quick as it takes to tell it, and there is no robbing. I would have tried escapes before, but I saw them condemned by not only practical beekeepers, but by some of our most extensive bee-keepers; but let me say right here that where one man works alone, the bee-escape is a great advantage in robbing time, when the honey has to be warmed up to extract. I do not use them to take off the earlier honey.

Don't you think, Friend Storer (page 309, C.B.J.) one can overdo the thing by leaving too much honey in a ten-frame hive for a colony of bees to winter and feed upon during spring? I have never left over six good sealed combs, and

never lost a single colony from starvation. Where a person feeds up without going through the brood chamber it is difficult to tell how much a colony really needs, but I have often had to take out sealed combs to allow the queen room to lay, during spring breeding time.

Crop Report

I extracted from 101 colonies, spring count, 3,350 lbs. of clover; from 56 colonies, spring count, 934 lbs. clover; and from 153 colonies I extracted 6,000 lbs. of buckwheat honey, besides leaving plenty of sealed stores for winter.

J. E. FARR.

OFF TO THE WEST

I beg to say that, as I have disposed of all of my bees, fixtures, etc., to Mr. Frank Vallery of Bellwood. I shall have to ask you to discontinue sending me the C.B.J. Mr. Vallery may become a subscriber. He is a first-class man in every respect. No apiarist in Canada can afford to do without the C.B.J. I am sorry to part company with both the bees and your Journal. As I have only one son, who has gone West, scripping 640 acres of beautiful prairie land, I was induced to homestead 160 acres close to him in Saskatchewan. I shall have to go West for three years to prove it up. Wishing you every success with your valuable paper, and regretting parting company with so many bright, intelligent and esteemed bee-keepers, I ever remain, yours with profound respect.

JOHN H. REED.

Mimosa, Ont.

[We regret very much to loose you, Mr. Reed. We sincerely trust that the venture of yourself and your son in the west will prove successful, and that you may before long introduce bee-keeping in your neighborhood. Bee-keeping is bound to have a future in the West, and possibly you are destined to be one of its pioneers. You have our best wishes.—Ed.]

CO-OPERATIVE S

Indexe W. J. J

I was at the Bee-ke Toronto last month quent address on the as you have asked f matter, I beg leave before the bee-keeper lows:

I believe co-operate the price of honey which have not as y bee-keepers can disposonce and get their meable them to work to than having to write try for a market and consignments, which when you have to freight on a small question.

Now in reading ov offer some grand su think should be taker committee. In formi change I would sugg should be put as low all bee-keepers could small man with 15 or and share in the prof tion on equal conditio producers. The Hone be able to set the pri in a position to advis they should get for th of honey. For insta honey, well ripened, at No. 3 at 9c, and sc grade. These figures (trusting they will be serve to illustrate a p

Now, to finance the would advance the m the work; the honey through the banks as sary, and the produc money. As you say, year, after capital had interest and cost of m

feeds up without

d chamber it is

h a colony really

had to take out

he queen room to

colonies, spring

ver: from 56 col-

lbs, clover; and

acted 6,000 lbs. of

les leaving plenty

J. E. FARR.

ding time.

CO-OPERATIVE SALE OF HONEY

M. J. Johnston.

I was at the Bee-keepers' Convention in Toronto last month and heard your eloquent address on the above subject, and as you have asked for discussion on the matter, I beg leave to place my views before the bee-keepers of Ontario as follows:

I believe co-operation will standardize the price of honey and reach markets which have not as yet been found; also bee-keepers can dispose of their honey at once and get their money, which will enable them to work to better advantage, than having to write all over the country for a market and send it out in small consignments, which takes the profit off when you have to pay cartage and freight on a small quantity.

Now in reading over your plans, you offer some grand suggestions, which 1 think should be taken up at once by the committee. In forming the Honey Exchange I would suggest that the shares should be put as low as possible, so that all bee-keepers could join it, even the small man with 15 or 20 colonies of bees, and share in the profits of the organization on equal conditions with the largest producers. The Honey Exchange would be able to set the price of honey and be in a position to advise bee-keepers what they should get for their different grades of honey. For instance, No. 1 white honey, well ripened, at 11c; No. 2 at 10c; No. 3 at 9c, and so on, according to grade. These figures are only imaginary (trusting they will be realized), but they serve to illustrate a plan to work from.

Now, to finance the same, the banks would advance the money to carry out the work; the honey could be shipped through the banks as security, if necessary, and the producer could get his money. As you say, at the end of the year, after capital had been given its fair interest and cost of management all met,

the remainder of the profits could be struck and each bee-keeper paid a small dividend or percentage on the honey he has sent to the Exchange, and each would be paid in direct proportion. I would not look on the interest on shares seriously for a couple of years until the organization was properly working. I fully believe the shares should be limited, and one-man-one-vote should be the rule, irrespective of the number of shares he may hold.

Now, I think the Exchange should be controlled by a board of directors, who would be in sympathy with the plan of organization, and who would use their best judgment to make it a success and keep it free from personal gain. If the Exchange could organize to handle 1911 honey it would meet a longfelt want, and as a producer I am willing and ready to take shares in it.

Cannington, Ont.

SUCCESSFUL ORCHARDING

That Canadian farmers are anxious to know just how the advice tendered so freely by experts pans out commercially in practice, is indicated by the wide-spread interest manifested in the results of "The Farmer's Advocate" demonstration orchard, near London, Ont.

In 1909 this three-acre orchard, handled according to up-to-date methods, yielded three hundred dollars clear profit, besides one hundred dollars rent, and every other item of expense. Two hundred dollars' worth of fruit was the most that had ever been sold from it before.

This year, in spite of an extraordinary combination of adverse circumstances, in the form of late spring frosts and hail, and an early autumn freeze, which destroyed fifty dollars' worth of Spies, all but \$14.88 of the hundred dollars' rent has been made up.

So complete was the failure on unsprayed trees that many neighboring far-

WEST

ter.

I have disposed of res, etc., to Mr. rood. I shall have ne sending me the ay become a sublass man in every n Canada can af-C.B.J. I am sorry both the bees and ave only one son, cripping 640 acres 1. I was induced to ose to him in Sasve to go West for up. Wishing you ur valuable paper, company with so nt and esteemed main, yours with

)HN H. REED.

h to loose you, Mr.
rust that the venour son in the west
and that you may
bee-keeping in your
beping is bound to
West, and possibly
one of its pioneers.
shes.—Ed.]

mers, who had never been without fruit for their own use before, went to "The Farmer's Advocate" orchard in the fall to buy their winter supply of apples.

Full details of the experiments in this and several other orchards since taken on are given in the 1910 Christmas number of "The Farmer's Advocate and Home Magazine," just off the press.

Many other interesting articles, practical, reminiscent, humorous and sentimental, abound in this superlative annual, which will be readily voted, we doubt not, the most enjoyable holiday issue that has ever been turned off the presses of any agricultural journal in Canada, if not in the world. In its illustrations, letterpress and make-up this issue is a work of A Canadian summer landscape scene, reproduced in tricolor process, reflects the universal charm of meadow, tree and stream. Among the outstanding articles are: "Canada, a Nation"; "Draft-horse Opportunities"; "Beef From Birth to Block"; Yesterday, To-day and To-morrow of Canadian Cheesemaking"; "The Tale of the Pioneers"; "Aviation as Applied in Agriculture." In the Home Magazine is a splendid article, "An Ideal of Motherhood," by a favorite contributor, Mrs. Tucker-Wilcox; "A Christmas Clearing House," by Peter McArthur: "Commercialism and Personal Culture," by The Spartan, and a delightful story by the celebrated Prince Edward Island writer, Miss L. M. Montgomery, author of "Anne of Green Gables." The whole book sparkles with apt quotations and gems of verse.

Subscribers to "The Farmer's Advocate" receive this number instead of a regular issue. By others it may be obtained for 50c a copy. It is well worth buying to read, and an exceptionally fine present for a friend. Address the William Weld Co., London, Ont. \$2.25 will secure "The Farmer's Advocate" and "Canadian Bee Journal" for one year.

A METHOD OF OUTSIDE FEEDING.

In your October issue, pp. 308 309, you have a short paper on spring feeding, by Mr. Storer. He mentions a system of "feeding outside in iron feeders, with floats." Unfortunately, this, though sounding a very simple plan, is not sufficiently explanatory to enable me to ry it. Will you or Mr. Storer give the readed particulars in an early issue?

I have been looking into this question of feeding lately, and consulted several catalogues, Canadian and others. Abbot Bros. of England speak very highly of "the improved Canadian Feeder." Can you tell me who makes this. I cannot find it in any other catalogue. A number of slats of wood are fixed in a frame, which is placed in a tin-lined box.

WM. PETERS.

Okanagan Landing, B.C.

We know nothing of this feeder. We have consulted the Ham & Nott Co., and have been informed that this is an old-fashioned feeder. They promised to write you direct upon the matter. We asked Mr. Storer to supply the information you desire. The following is his reply:

"In reply to yours of 28th November, re outside feeding in early spring, the feeders I use are 12 inches wide, 15 inches long, 21/2 inches deep. Ends and sides are turned up square. The floats are made of 1/4 in. x11/4 in. x141/2 in. long, then two pieces 111/2 inches long, same size, are nailed across the long bars, the long bars to have a space of at least 1/2 inch between The plain or straight side has a small nail or carpet tack driven into each corner, and allowed to project 1/4 inch, so that the bees can walk under the float when they are cleaning up. Care must be taken to have the floats put together so that it will follow he syrup to the bottom when the bees are being fed. Should it stick up there will be a lot of drowned bees. This feeder holds about 15 lbs."

JAS. STORER.

PROPOSED ME

Clip All Queensfrom approved color will be strong natu ing several combs fr or six days before move queen and onting in hive with or drawn combs. Ten back on old stand; three, giving each of putting one on stabeen during ten day

About swarming seven days. Go thr as soon as cells at bees on foundation put brood over the current year's raisi honey in supers to cluder. As we have out flow, prime swa off another in about time goldenrod com

Here is where I fe will be within two n gardens, and we hav pose I will have to to get me there in

[Your plan looks will have to exercise making increase by a We do not think you after swarms. Give until the late flow is pleased to receive criplan. "Manitoba" with information possi

STATISTICAL IN THE VALUI

(From Journal Ag raine, Translated Gates, Massachuset

Gates, Massachuset lege. Reprinted ringischer Bienen-Z 8, pp. 187, August

SIDE FEEDING.

s, pp. 308 309, you spring feeding, by tions a system of ron feeders, with ly, this, though a plan, is not suffienable me to try corer give the rederly issue?

into this question I consulted several and others. Abbot ak very highly of ian Feeder." Can see this. I cannot talogue. A number fixed in a frame, tin-lined box.

WM. PETERS. B.C.

of this feeder. We am & Nott Co., and that this is an old-by promised to write matter. We asked the information you is his reply:

of 28th November, n early spring, the nches wide, 15 inches

Ends and sides are he floats are made of ong, then two pieces me size, are nailed s, the long bars to east 1/2 inch between ht side has a small driven into each corproject 1/4 inch, so walk under the float ning up. Care must e floats put together he syrup to the botare being fed. Should I be a lot of drowned olds about 15 lbs." JAS. STORER.

PROPOSED METHOD FOR OUT-APIARIES

December, 1910

Clip All Queens—Make all increase from approved colonies, which, of course, will be strong naturally, in addition giving several combs from other colonies five or six days before removing queen. Remove queen and one comb of brood, putting in hive with one comb of honey and drawn combs. Ten days later put queen back on old stand; divide old colony into three, giving each one or two ripe cells, putting one on stand where queen had been during ten days.

About swarming time visit yard every seven days. Go through all colonies, and as soon as cells are started, shake all bees on foundation or drawn comb and put brood over the nuclei with queen of current year's raising, and giving the honey in supers to shaken bees over excluder. As we have a slow, long-drawnout flow, prime swarms will often throw off another in about six weeks, about the time goldenrod commences to bloom.

Here is where I feel weak, but as they will be within two miles, and in farmers' gardens, and we have the 'phone, I suppose I will have to trust to my ponies to get me there in time.

"MANITOBA."

[Your plan looks very good, but you will have to exercise great caution when making increase by such forced methods. We do not think you need worry about after swarms. Give them plenty of room until the late flow is over. We would be pleased to receive criticisms of the above plan. "Manitoba" would like to get all the information possible.—Ed.]

STATISTICAL INFORMATION ON THE VALUE OF BEES

(From Journal Agricole d'Alsace-Lorraine. Translated by Dr. Burton N. Gates, Massachusetts Agricultural College. Reprinted in the Elsass-Lothringischer Bienen-Züchter, Vol. 38, No.

8, pp. 187, August, 1910.)

According to the census of domestic animals for 1907, there were in Alsace-Lorraine 86,580 colonies of bees. This affords interesting data on the rôle of bees in the fertilization of flowers, and shows the great importance of apiculture among agricultural pursuits. If each of these 86,580 colonies sent out daily 10,000 bees, it would aggregate 865,800,000; if each of these bees made four trips a day, it would amount to 3,463,200,000 trips daily; in a hundred days (the average number of days for forage in a year), there would be made 346,320,000,-000 trips, a seasons's work, which might be expressed 346,320 million. Let it be supposed that each bee, before returning to the hive, visits 50 flowers, which is a minimum number, the bees in Alsace-Lorraine alone would visit annually 17,-316 thousand millions. But suppose that one out of ten, or that five out of the fifty flowers visited by each bee are fertilized through the bee's agency, 1,781,-600 flowers would be fertilized. Then assume that the gain brought about by the thousands of visits amounts to one pfennig (about a quarter of a cent), an obviously moderate valuation, the bees in Alsace-Lorraine would produce, one year with another, a gain of 346,320,000 pfennig, or 3,463,200 marks (about \$865,-800). Each colony has, then, an annual value of 40 marks (about \$10), on account with the culture of trees and plants. These figures should attract the attention of whosoever is interested in the extension of the public welfare.

WE ARE ENCOURAGED

Please find enclosed postoffice order in payment of my subscription to the Canadian Bee Journal. I am very much pleased with your Journal, and hope that you will be able to keep it up to the high standard it has attained under your management. Wishing you continued success.

(REV.) THOS. J. SPRATT.

DISTRIBUTION OF SEED GRAIN AND POTATOES

From the Central Experimental Farm. Ottawa, 1910-1911.

By instruction of the Hon. Minister of Agriculture, a distribution is being made this season of samples of superior sorts of grain and potatoes to Canadian farmers for the improvement of seed. The stock for distribution has been secured mainly from the Experimental Farms at Indian Head, Sask., Brandon, Man., and Ottawa, Ont. The samples consist of oats, spring wheat, barley, field peas, Indian corn (for ensilage only) and potatoes. The quantity of oats sent is 4 pounds, and of wheat or barley 5 pounds, sufficient in each case to sow one twentieth of an acre. The samples of Indian corn, peas and potatoes weigh 3 lbs. each. A quantity of each of the following varieties has been secured for this distribution-

Oats - Banner, Abundance, Danish Island, Wide-Awake, Thousand Dollar, Improved Ligowo-all white varieties.

Wheat-Red varieties: Marquis and Early Red Fife (early beardless sorts of high baking strength), Red Fife (beardless). Preston and Huron (early, bearded). White varieties: White Fife (beardless), Bobs (early, beardless).

Barley-Six-rowed: Mensury and Manchurian (a selection from Mensury). Tworowed: Standwell and Invincible.

Field Peas-Arthur and Golden Vine. Indian Corn (for ensilage)-Early Angel of Midnight, Compton's sorts: Early and Longfellow. Later varieties: Selected Leaming, Early Mastodon, and White Cap Yellow Dent.

Potatoes-Early varieties, Rochester Rose and Irish Cobbler. Medium to late varieties: Gold Coin, Carman No. 1, and Money Maker. The later varieties are, as a rule, more productive than the earlier kinds.

Only one sample can be sent to each applicant, hence if an individual receives a sample of oats he cannot also receive one of wheat, barley, peas, Indian corn or potatoes. Applications on printed card or sheets, or lists of names from one individual, or applications for more than one sample for one household, cannot be entertained. The samples will be sent free of charge through the mail.

Applications should be addressed to the Dominion Cerealist, Experimental Farm, Ottawa, and may be sent in any time from the first of December to the 15th of February, after which the lists will be closed, so that the samples asked for may be sent out in good time. Applicants should mention the varieties they prefer, with a second sort as an alternative. Applications will be filled in the order they are received, so long as the supply of seed lasts. Farmers are advised to apply early to avoid possible disappointment. Those applying for Indian corn or potatoes should bear in mind that the corn is not usually distributed until April, and that potatoes cannot be mailed until danger from frost in transit is over. No postage is required on mail addressed to the Experimental Farm, Cttawa.

WM. SAUNDERS. Director of Experimental Farms.

The Woman's Page of The Toronto News is one of the charms of that great Metropolitan newspaper. Some of the most capable women journalists in Canada are members of The News staff and contribute regularly to this department. The Inquirers' Corner, in which answers are given daily to all sorts of questions, is a feature of this page. The NEWS also makes a special feature of its fashion plates and provides a daily menu, which has proved an invaluable suggestion in the homes of thousands of the readers of this paper. The Women's Department covers all the Social News of Canada

and the News of the particularly strong f day issue is mainta of Furbelows and crowded with value shopping and where be most esonomical done.

In addition to this exclusive Telegraphic ental and Imperial. scope.

We have just con ment whereby we can Bee Journal and Th This is a splendid cl

CONSOLIDATED E SPECTION OF

Under Province of (Act Prepared by Provincial Apia Agricultural Gueli

Indexed

The first work of th ist in taking charge (apiaries was to get p Inspector's reports pre the department of A reports dating back to sent to the office of partment at the On College, and filed acco tions of the apiaries townships. The 1910 district inspectors ser ment of Agriculure fr were forwarded to thi with the previous rej way. The work of s thousands of reports ter, but the value of tl be seen. By this syste find the record of all t

be sent to each dividual receives mot also receive is, Indian corn or on printed card mes from one ins for more than sehold, cannot be oles will be sent

the mail.

be addressed to st, Experimental y be sent in any December to the r which the lists the samples asked a good time. Apthe varieties they sort as an alternall be filled in the Ed, so long as the Farmers are addressed.

to avoid possible e applying for Inhould bear in mind usually distributed it potatoes cannot ager from frost in postage is required the Experimental

M. SAUNDERS, xperimental Farms.

e of The Toronto harms of that great Some of the per. journalists in Can-The News staff and to this department. r, in which answers ll sorts of questions, age. The NEWS also ture of its fashion a daily menu, which duable suggestion in nds of the readers of Nomen's Department al News of Canada and the News of the Women's World. A particularly strong feature in its Saturday issue is maintained under the title of Furbelows and Fancies, which is crowded with valuable suggestions on shopping and where your shopping could be most esonomically and effectively done.

In addition to this The NEWS carries exclusive Telegraphic services, Continental and Imperial, and world-wide in scope.

We have just completed an arrangement whereby we can offer The Canadian Bee Journal and The NEWS for \$2.20 This is a splendid clubbing offer.

CONSOLIDATED REPORT OF IN-SPECTION OF APIARIES FOR 1910.

Under Province of Ontario Foul Brood
Act Prepared by Morley Pettit,
Provincial Apiarist, Ontario
Agricultural College,
Guelph.

The first work of the Provincial Apiarist in taking charge of the inspection of apiaries was to get possession of all the Inspector's reports previously received by the department of Agriculture. These reports dating back to the year 1905 were sent to the office of the Apiculture Department at the Ontario Agricultural College, and filed according to the locations of the apiaries by counties and townships. The 1910 reports which the district inspectors sent to the Department of Agriculure from week to week, were forwarded to this office and filed with the previous reports in the same way. The work of sorting out these thousands of reports was no small matter, but the value of the result can easily be seen. By this system it is possible to find the record of all the inspection work that has been done in any township or county.

The first practical use that was made of this system was in March, 1910, when a list was made out of all apiaries where disease had been reported in recent years. This list was used as a mailing list for sending a circular letter, which was calculated to supplement the work of the local inspectors. The following is a copy of the letter sent to the owners of diseased apiaries:

March 14,1910.

"Dear Sir,—I understand from our Inspector's reports that you have had within recent years foul brood in your apiary. If this is the case, you should be particularly careful to prevent robbing during the warm days between now and summer. All hives where bees have died must be taken in doors away from all possible robbing. It is not enough to close them, because robbers will often gain an entrance when least expected. All entrances of live colonies should be made quite small, especially where the bees are weak in numbers.

"Use every precaution and watchfulness to prevent robbing. Do not under any circumstances leave combs of honey out for the bees to clean up. Any honey you have is likely to contain germs which would scatter disease in your healthy colonies. On account of prevalence of disease in unexpected places throughout the province, it is never wise to feed honey to bees, and where disease is known to exist, it is the worst of folly.

"I hope you understand fully the symptoms and cure of Foul Brood. If so you can be your own doctor, as the Inspector's time is fully occupied with these who do not understand the disease. If not, drop me a card and a bulletin with description and full instructions will be sent.

"The Apiculture Department has been established at the Ontario Agricultural College for the benefit of Ontario Bee-

Keepers, and we want is help you in every way we can.

(Signed) MORLEY PETTIT,
Provincial Apiarist.

The necessity for this letter was shown by the discussion which has taken place with reference to early versus late inspection of apiaries. The advocates of early inspection claimed that much damage would be done through early spring robbing out of diseased hives. The objection to early inspection is that the weather is so uncertain that very often he inspector is unable to do any work after having taken an expensive trip; also that diseased hives sometimes do not show symptoms in early spring.

For the actual inspection work the province was divided into sixteen districts with an inspector resident in each district.

Early in May three Inspectors' conferences were held, one at London, one at Toronto, and one at Brockville, which nearly all inspectors attended. It was the privilege of the Provincial apiarist to take charge of these meetings and make the following address to the inspectors in attendance:

"Gentlemen,—The purpose of this meeting is to give Inspectors of Apiaries a definite statement as to their duties in relation to the Department of Agriculture; also that we may engage in a free discussion, and arrive at a united policy concerning our treatment of diseases of bees, and the men in whose apiaries they are found.

"You have received a letter from the Department of Agriculture, naming the counties in which you are to inspect, and the remuneration you are to receive for your services. You are well aware that our appropriation for this work is limited to \$3,000.00. Divide that by 16, the number of districts, and you have about \$185 for each district.

"You are also aware of the fact that Foul Brood exists to an alarming extent in practically every county of Ontario, west of the Trent Valley, and some east of it. With this in view and the best interests of our industry at heart, I am sure that each inspector will make the best possible use of the time and money at his disposal for this work. means that trips will be planned with a view to economy of time and expense. At the same time the work should be very thorough. Each Inspector should become familiar with his district as soon as possible. We are able to furnish considerable information to the new inspectors and to those who have new territory, from the reports of past inspection work.

"Our first move in the spring was to send to all owners of diseased apiaries, whose names we had, a circular letter telling them how to care for their bees to prevent the spread of disease in early spring. Men all over Ontario have written to us thanking us for the letter.

"By this and other means the Apicultural Department at the Ontario Agricultural College is endeavoring to make itself useful to the Bee-keepers of Ontario.

"You art all no doubt aware of the work we are taking up in connection with the Experimental Union.

"As you go about amongst bee-keepers, you represent the Department of Agriculture, and should be loyal to all it is undertaking for the advancement of bee-You will be asked a great keepers. many questions about the work in apiculture which is being done at the College. We cannot hope that all our effort will meet with unqualified approval of all beekeepers, possibly not all the Inspectors; but we are open for suggestions, and reserve the right to use them as we see fit. I have here copies of the circular of instructions which has been sent out to those who are taking the co-operative experiment, and would ask you to study them fully and make any criticisms you have, to us at the College, and not to the bee-keepers in your district.

"In addition to periment, we are g bee-keeping in Ont in the shape of a by counties and tov tell how great the v will be, but they ha to us already.

"I need not dwell cupy in the college the first year student 25 lectures in Apicul

"The matter which en up very soon, is to bee-keeping." I watario would lead in Massachusetts Agricholding an apiculture May 25th to June 81

"During the month undertaken along with give demonstrations day to the excursionis

'I have taken up College work at some will be able to answ any bee-keepers who what is being done.

"I would like to say reference to your rel work. It is importal all the information as port. It is costing u hunt out and fill in townships in the reg who have been carele We are unable of cours cession and lot, and fe future inspectors this i valuable, and would he nothing if it had been time. In the case of be sure to give street : there is no concession For example, when as into a city and has the bee-keepers, it will save of time if he is able to

unty of Ontario, ey, and some east iew and the best ry at heart, I am or will make the e time and money his work. This. be planned with a time and expense. ork should be very ctor should become ict as soon as poso furnish considerthe new inspectors we new territory, ist inspection work. the spring was to f diseased apiaries, . a circular letter care for their bees of disease in early · Ontario have writs for the letter.

r means the Apiculthe Ontario Agriculavoring to make itkeepers of Ontario. loubt aware of the up in connection al Union.

amongst bee-keepers, partment of Agriculloyal to all it is unadvancement of bee-Il be asked a great it the work in apiculdone at the College. at all our effort will d approval of all bee. ot all the Inspectors; r suggestions, and reuse them as we see copies of the circular ch has been sent out aking the co-operative would ask you to id make any criticisms the College, and not in your district.

"In addition to the Co-operative experiment, we are gathering statistics of bee-keeping in Ontario, and getting it in the shape of a card index, arranged by counties and townships. We cannot tell how great the value of these records will be, but they have been of much use to us already.

"I need not dwell on the place we occupy in the college curriculum. All of the first year students receive a course of 25 lectures in Apiculture.

"The matter which I feel could be taken up very soon, is the "short course in bee-keeping." I was hoping that Ontario would lead in this, but I find that Massachusetts Agricultural College is holding an apiculture short course from May 25th to June 8th this year.

"During the month of June, we have undertaken along with the other work, to give demonstrations and lectures, every day to the excursionists.

"I have taken up the matter of the College work at some length, so that you will be able to answer the questions of any bee-keepers who may wish to know what is being done.

"I would like to say a few words with reference to your reports of inspection work. It is important that you secure all the information asked for in the report. It is costing us days of labor to hunt out and fill in the names of the townships in the reports of inspectors who have been careless in this respect. We are unable of course to learn the concession and lot, and for the direction of future inspectors this information is very valuable, and would have cost practically nothing if it had been done at the right time. In the case of cities and towns be sure to give street and number, when there is no concession and lot to give. For example, when an inspector comes into a city and has the name of a dozen bee-keepers, it will save him a whole lot of time if he is able to go directly to the

street and number without having to make a lot of enquiries.

"It is also understood that reports of inspection are to be mailed to the Department of Agriculture, at Toronto, at the end of every week. It is quite necessary that this should be attended to. Only one apiary should be reported on each report blank, and in the case of a second and third visit to the apiary a special report should be made of each in the same way. Try to be brief and to the point in these reports. Simple statements of the number of hives of live bees in the apiary, the number examined for disease, the number diseased, stating whether E.F.B. or A.F.B., the treatment ordered, the success of former treatment. Also give a word or two with reference to the condition of the apiary, such as "fair" or "good," or "excellent condition," or "careless," or whatever adjective will best describe the management of the apiary.

"I hope that we shall have a good discussion on the management of special cases.

"We have to deal with a serious proposition in the matter of disease in Ontario. As we stated at first, American Foul Brood is very prevalent. A new problem which we have on hand is European Foul Brood, which has done so much damage in the United States. I cannot see any reason why we should escape. It is impossible to cure it in an apiary of black bees. When we know how common black bees are in Ontario, scarcely anything more need be said. With this in view, we should urge the use of Italian bees with all the eloquence we can command.

"After the Trenton District, the next point we know of is the counties of Lincoln and Welland. We know now of a case of some 25 hives moved from Buffalo to Fort Erie. I inspected them and found them infected with E. F. B. 1 was also informed that bees on the Amer-

ican side all along the river were infected with this dread disease. We are looking after this territory carefully and will inspect it thoroughly as soon as possible."

These Inspectors' Conferences proved to be very valuable, good points in management of both men and disease were brought out by some of the older inspectors, greatly to the benefit of the younger men in the work.

Owing to the lateness of the spring the inspection season opened rather late.

The following are the reports by districts:

No. 1, Bruce and Huron. Inspector J. S. Schrank, Port Elgin.

"In speaking of that portion of my territory, Bruce county, I might say that until these last three or four years it has had very little attention, notwithstanding the fact that there is perhaps no county in Ontario where the possibilities for a good honey production are better. Consequently Foul Brood gained great headway here and the loss has been great, many apiaries having been wiped out with the owners too much discouraged to start again. Now, however, since they have the protection of the Government and understand the disease and the motive of the law, in that respect, they are gaining fresh courage as well as appreciation of the methods the Government has adopted, and I find many who have once kept bees and lost them through disease starting again.

I think the present method of the Government a good one if the inspectors do their duty."

Apiaries visited 76, hives in apiaries 2318, hives examined 920, number colonies diseased 108.

No. 2, Waterloo and Perth. Inspector, D. Chalmers, Poole.

"On account of the cold spring I did not commence inspecting until June 18th, and failed to get out after July 15th. I inspected 68 apiaries and Found Foul



MORLEY PETTIT

Brood in 18. The total number of colonies in the apiaries inspected was 455; of these I inspected 164 and found 221/2% diseased."

Mr. Chalmers expresses his appreciation of the revision of the Foul Brood Act, whereby owners can be compelled to transfer bees out of hives with combs which are not movable. He makes the following suggestions:

1st. That an act be passed prohibiting the sowing of buckwheat before July. He says when we consider the damage done our white honey crop by the buckwheat mixture, and the profit it would be to the grower not to sow till then, as the bees would work stronger on it and thereby assure a better crop, it would be just as reasonable as forbidding the spraying of fruit trees before a certain time.

2nd. That there be an act passed compelling cider mill owners to return their pomace with those getting cider made, instead of dumping it out where it would be a damage to bees.

3rd. That the As vise some means choney inspected, as extracting before the

4th. That a quara tablished in each tow spector would order eased bees to take th and also to go or to the table table to the table table

No. 3, Wellington an John Artley,

"I found American prevalent in some sec ity of Guelph, Wellin in the Beaver Valley, pecially.

"The greatest's sourd the bee-keeper with on who doesn't know the bees. In a lot of pla all dead, but I kept no I can suggest no bett Department has adopte

Inspected 96 apiarie colonies, of which 578 think I should have a tive.

I) addition to the we have the following reation from the form. Alpaugh:

"As for the annual lo Brood disease I can har the sections in the Couton and Grey are as I visited, I would put the two countries alone at \$\frac{3}{4}\$ a good many sections keepers had lost upward that at the present would mean \$1,000.00 Those were parties who again as they felt therelong as the disease exthem."



PETTIT

inspected was 453; 64 and found 221/2%

esses his appreciaof the Foul Brood can be compelled of hives with combs ble. He makes the

e passed prohibiting neat before July. He er the damage done p by the buckwheat fit it would be to the ill then, as the bees r on it and thereby, it would be just as ling the spraying of certain time.

an act passed comvners to return their getting cider made, it out where it would 3rd. That the Association should devise some means of having extracted honey inspected, as he finds too many extracting before the honey is ripe.

4th. That a quarantine station be established in each township where the inspector would order the owner of diseased bees to take them on a certain day and also to go r them when notified. At said station the less would be treated by the inspector or some competent person.

No. 3, Wellington and Grey. Inspector, John Artley, Blantyre.

"I found American Foul Brood very prevalent in some sections; in the vicinity of Guelph, Wellington County, and in the Beaver Valley, Grey County, especially.

"The greatest source of contagion is the bee-keeper with one or two colonies, who doesn't know the first thing about bees. In a lot of places the bees were all dead, but I kept no account of them. I can suggest no better plan than the Department has adopted."

Inspected 96 apiaries, containing 3260 colonies, of which 578 were diseased. I think I should have a longer period of tive.

I) addition to the inspector's report, we have the following valuable communcation from the former inspector, Mr. Alpaugh:

"As for the annual loss caused by Foul Brood disease I can hardly say but if all the sections in the Counties of Wellington and Grey are as bad as the ones I visited, I would put the loss for those two countries alone at \$60,000. I visited a good many sections where some beekeepers had lost upwards of 100 colonies; that at the present crops and prices would mean \$1,000.00 each annually. Those were parties who did not start up again as they felt there was no use as long as the disease existed so close to them."

No. 4, Lambton, Kent and Essex. Inspector, W. A. Chrysler, Chatham.

"I have been out for only twelve days this season, but I looked up as much as possible, new infected districts.

"I visited 42 apiarus, containing 595 colonies of which I found 150 colonies diseased. It is very noticeable that those who have the disease, their bees are greatly reduced in numbers to what they would have had. There is, however, a great indifference among many about trying to cure, and also in others inability to follow instructions.

"As regards the financial loss caused by the disease of Foul Brood in bees in the counties I have inspected; I am only estimating it as I found it in the different localities and the loss is estimated for the year that I inspected it. The loss yearly in bees I estimate at from \$700 to \$800.00 and about the same loss in money.

"The present plan adopted by the Govtrnment is advisable in my opinion until the territory is once covered by the inspector, after that he should not inspect without being called out by or asked for by the bee-keepers themselves. Foul brood if left alone in certain localities will destroy itself as effectually and as satisfactorily and at as small a cost in some instances, as an inspector could do it, especially where bee-keepers are well informed and are not making or trying to make money out of bee-keeping. consider the most effective way, and probably the speediest way of destroying Foul Brood throughout Ontario, and cheaper in the end, is for the Department to instruct inspectors to have every diseased colony that was not destroyed. shipped to some central place for treatment or destruction, and that the owners receive a small compensation. The Foul Brood I have located, 90% of it can be traced back about 15 to 20 years and are the localities that did not rot out like some others."

No. 5, Middlesex and Elgin. Inspector John Newton, Thamesford.

"On account of the very bad spring for handling bees, then becoming very busy all at once and sickness in the home, I was unable to do my work justice, but for all, I don't think there was anything that suffered. I found on the whole that Foul Brood was not so prevalen as in 1909. I find one great drawback to stopping the spread of disease and that is bee-keepers will move bees from place to place without permission of the inspector, (I mean those that have had disease in their yards.) You know nothing about them till after they are placed for some time along side of some clean yard. This should not be so. I find this season I have only been out 9 days, visiting 30 yards with a total of 1,572 colonies and examined 651. Found no new cases. Found disease in six yards altogether about 15 colonies diseased. I found five yards that had disease in last season, this season free from disease. I feel that the bee-keepers in general are taking more interest in their bees and doing their best to keep them

"I have always maintained that honey from diseased yards should not be placed on the market for retail trade. In some way it should be sold to manufacturers who would use it up and destroy the vessels, that it contained. It is clear to me that there is more disease around the larger centres, and I lay it to honey being retailed and vessels being thrown out into the garbage heap for the bees to feed upon."

No. 6, Norfolk, Haldimand and Welland. Inspector, Jas. Armstrong, Cheapside.

"Of 820 colonies inspected there was 71 diseased. Of 44 apiaries inspected there was 15 with Foul Brood in. At Fort Erie Village, 41 colonies had European Foul Brood, 1 yard of 14 colonies was treated and I found them all clean on my second call; others had promised to clean up, and owing to only limited time I was unable to find out if they had done as they agreed.

"This is one great drawback, the Inspector's time being limited, as in this case it will have to remain until next spring before it can be seen if they cleanned it up.

"Six apiaries in the neighborhood of the smelter at Thorold was completely wiped out, and according to this and what the people said I am perfectly satisfied that the damage was caused by the smelter. Mr. William Hoover ore-half mile from the smelter got two colonies of bees this spring and when I examined them the brood was dying.

"There should be an act passed that all bees coming into the country should be inspected. The officer at the port of enty could notify the Department and the Department could notify he Inspector into whose district the bees were going, so that they could be inspected and the diseased ones destroyed or sent back."

No. 7, Oxford and Brant. Inspector, Wm. Bayless, Grand View.

"I would not like to estimate the loss by diseases of bees and as to the method of preventing the loss by same, think possibly a tax on bees would help some; for where a successful bee-keeper makes a home people in the neighborhood think all they have got to do is to get some bees and they will have a gold mine in their own yard. They don't look after them, and if anybody has an old hive or comb they will do anything to get it, sooner than pay for some good foundation, and the result is loss and danger to all the beekeepers in that part."

No. 8, Wentworth and Lincoln. Inspector Alex. Robertson, Waterdown.

"Mr. Robertson went to B. C. for the winter and was unable to send a report."

(To be continued next month).

(Continued fro

capitalists. It is a different to be prepared we see arming agains alone too can deal efmatters as distribution the establishing of prices. Co-operation tant market beyond remains show clearly forming an association tive marketing of hone

Before closing this p haps, be permitted to tions as to methods constitution of the been formulated, the I quire to elect from a a general committee, secretary. This genera proceed to appoint a r wise a small finance latter body would be expert as far as possi work. As regards the probably rest with him scheme achieves succes A man of good busine principle and strict ho honey and acquainted v failure in finding this ably mean disaster. would consist in purch the producers and sellin tailers. His relationsh must be purely busines as possible, he should general committee with

The finance committ definite and frequent have sole control of t may be mentioned that i other countries, whe amongst producers is proscale, a special system of id them all clean iers had promised

g to only limited ad out if they had

drawback, the Inimited, as in this remain until next be seen if they

e neighborhood of d was completely ding to this and am perfectly satiswas caused by the n Hoover ore-half got two colonies of when I examined ying.

act passed that all country should be er at the port of ne Department and notify he Inspector to bees were going, inspected and the ed or sent back."

Brant. Inspector, Grand View.

to estimate the loss id as to the method by same, think poswould help some; ul bee-keeper makes neighborhood think) do is to get some ave a gold mine in ney don't look after y has an old hive or anything to get it, some good foundatis loss and dangers in that part."

tson, Waterdown.
went to B. C. for
unable to send a re-

ed next month).

CO-OPERATION (Continued from page 360)

capitalists. It is a duty we owe to posterity to be prepared to meet the forces we see arming against us. Co-operation alone too can deal effectively with such matters as distribution, underselling and the establishing of fair and equitable prices. Co-operation will seek the distant market beyond reach of the individual. These and many other such arguments show clearly the desirability of forming an association for the Co-operative marketing of honey.

Before closing this paper, we may, perhaps, be permitted to offer a few suggestions as to methods of working. The constitution of the association having been formulated, the members would require to elect from amongst themselves a general committee, together with a secretary. This general committee would proceed to appoint a manager, and likewise a small finance committee. This latter body would be composed of men expert as far as possible in accountant work. As regards the manager, it will probably rest with him as to whether the scheme achieves success or the reverse. A man of good business habits, of high principle and strict honesty; a judge of honey and acquainted with the marketsfailure in finding this man would probably mean disaster. His chief duties would consist in purchasing honey from the producers and selling again to the retailers. His relationship with members must be purely business one, and as far as possible, he should be armed by the general committee with large powers.

The finance committee, meeting at definite and frequent intervals would have sole control of the accounts. It may be mentioned that in England and in other countries, where Co-operation amongst producers is practised on a large scale, a special system of book-keeping is

employed, thus facilitating the inspection and auditing of the accounts of Co-operative Societies. This system we can strongly recommend as affording effectual protection both to official and member alike.

We have endeavored to outline, as far as possible, a scheme which we believe could be adopted by the bee-keepers of Ontario. We are writing from actual experience. But probably among the large body of your subscribers there will be many who will desire to help in the discussion of this very important subject. We earnestly entreat these to communicate their ideas for the benefit of their brother bee-keepers. Unfettered discussion will elicit many points worthy of serious consideration.

"Help one another," the maple spray
Said to his fellow-leaves one day;
"The sun would wither me here alone,
Long enough ere the day is gone;
But I'll help you and you'll help me,
And then, what a splendid shade there'll
be."

w.w

WILL TRY SANFOIN CLOVER

I wish through the Journal to thank Mr. John Foster for the information he has given us re sanfoin clover. I will try some of this clover this coming summer.

JOHN McEWEN.

Clandeboye.

H H. Selwyn, Kirks Ferry, Quebec, has 1000 lbs. Extracted Clover Honey for sale.

We will be very pleased if our readers will kindly give attention to the number on their labels, and remit to us the amount due, together with renewal for the new year. The year 1910 ends with No. 550. This will readily show the amount due.

Want and Exchange Column

AGENTS WANTED—Whole or part time; liberal terms; outfit free. Over 500 acres in trees. Write at once. "The fruit tree specialists," Thos. W. Bowman & Son Co., Limited, Ridgeville, Ont.

BEE BOOKS

FOR SALE BY

The Canadian Bee Journal

A B C and X Y Z of Bee Culture	. \$1.75
Irish Bee Guide	1.00
British Bee Guide	1.00
Forty Years Among the Bees (Dr.	
Miller)	. 1.50
Cook's Manual of the Apiary	1.50

The Canadian Bee Journal
Brantford, Canada

PURE BEESWAX WANTED

If you have any to sell write to

L. H. Packard & Co. Limited

PACKARD'S SPECIAL

SHOE DRESSINGS

Poultry News

HELPS YOU MAKE MONEY

25 Cents Yearly

Write for Sample

PAUL F. WILLIAMS

New Brunswick, New Jersey, U.S.A

EUROPEAN AGENCY

INDENTS promptly executed at lowest cash prices all kinds of British and Continental goods, including

Books and Stationery,
Boots, Shoes and Leather,
Chemical and Druggists Sundries.
China, Earthenware and Glassware,
Cycles, Motors and Accessories.
Drapery, Millinery and Piece Goods.
Fancy Goods and Perfumery,
Furniture and Upholstery,
Hardware, Machinery and Metals,
Imitation Jewellery and Precious
Stones,

Jewellery, Plate and Watches, Photographic and Optical Goods, Provisions and Oilmen's Stores, etc., etc.

Commission 2½% to 5%.
Trade Discounts allowed.
Special quotations on demand.
Sample cases from £10 upwards.
Consignments of Produce Sold n Account.

WILLIAM WILSON & SONS (Established 1814).

25, Abchurch Lane, London, E.C. Cable Address: "Annuaire, London."

One Ma One Nev

person of i

ature, because it whole field of hum tion in both hemis It contains a mo world's news; quo numerous graphic illustrations; graphic sketches personalities of the recent advances in ery; the noteworthy literature and art; the best fiction, dra works; a page of the a condensation of t the month.

It gathers impar field of human tho those facts which ar ing and gives the rdefined and illumin the whole world is

CURRENT LITERA

Canadian Bee Jo

A Profit of

There is plenty chickens if you intelligently dir the right way to by subscribing:

PROFITABLE Milton.

For a limited tim per ye

IAKE MONEY

Yearly

Sample

/ILLIAMS SHER

New Jersey, U.S.A

AGENCY

ly executed at lowkinda of British and acluding

iery, Leather, ggists Sundries. re and Glassware, d Accessories. y and Piece Goods. Perfumery, holstery, nery and Metals, lery and Precious

and Watches, Optical Goods, ilmen's Stores, ., etc.

to 5%. allowed.

s on demand.

a £10 upwards. Produce Sold n Ac

SONS LSON & shed 1814).

ane, London, E.C. "Annuaire, London."

One Magazine Newspaper

December, 1910

are indispensible to every person of intelligence.

The "one magazine" is Current Literature, because it alone sweeps the whole field of human thought and action in both hemispheres.

It contains a monthly review of the world's news; quotations from and comments on the press of the world; numerous graphic cartoons and other illustrations; photographs and biographic sketches of the conspicuous personalities of the month; the most recent advances in science and discovery; the noteworthy events in religion, literature and art; critical reviews of the best fiction, dramatic and musical works; a page of the best humor and a condensation of the leading play of the month.

It gathers impartially from every field of human thought and activity those facts which are best worth knowing and gives the reader a clear, welldefined and illuminating view of what the whole world is doing.

CURRENT LITERATURE \$3.00 for one year Canadian Bee Journal \$1.00 for one year



Review of Reviews

Success Magazine Canadian

> Bee Journal ALL FOR

\$3.00

Money in

If you know how to get it out. We show the way. On our regular staff are the world's most famous

the world's most famous poultry experts. Amongst them Prof. A. G. Gilbert, Dominion Experimental Farm, Ottawa; Prof. W. R. Graham, Ontario Agricultural College, Guelph; Rev. J. N. Williams, B.A., England; H. S. Babcock, Providence, R. I. Dozens of other well known poultry men and women write for us, telling of their experience. 48 to 72 pages monthly, full of interesting and instructive reading matter and high classengravings. All poultry—nothing but poultry. Mailed anywhere in Canada, one full year for 50c. or three years for \$1.00. 30th continuous year of publication. Address

CANADIAN POULTRY REVIEW,

The People's Popular Poultry Paper.

184 Adelaide St. West, Toronto, Ont. Standards and other books free for a little work.

A Profit of Profit

There is plenty of money in chickens if your effort is intelligently directed. Learn the right way to do things by subscribing for

PROFITABLE POULTRY

Milton, Wis.

For a limited time only 25 cents per year.

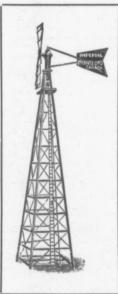


Anyone sending a sketch and description merquickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. HANDBOOK on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the

A handsomely iliustrated weekly. Le culation of any scientific journal. To Canada, \$3.75 a year, postage prepaid. all newsdealers.

NN & CO. 361 Broadway, New York anch Office. 625 F St., Washington, D. C.

WINDMILLS



OUR TOWERS are girted every five feet apart, and double-braced. This doubly insures against accidents in storms. All Mills are galvanized after completion. This gives increased strength.

OUR MILLS have proven by test to be the best.

Gas][and Gasoline Engines (stationary and mounted), Grain Grinders, Pumps, Tanks, Etc. Automatic

Batch Concrete Mixers

WRITE FOR CATALOGUES

Goold, Shapley & Muir Co
Limited
Prantford, Canada