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THE



CANADIAN

Honey Producer.

Its Reading Columns for the advancement of Honey Producers exclusively.

Vol. I.

BRANTFORD, NOVEMBER, 1887.

No. 9.

The Canadian Honey Producer,

PUBLISHED BY

E. L. GOOLD & Co.,

BRANTFORD, - - - ONTARIO.

Published Monthly, 40 cents per year.

TO CORRESPONDENTS.

The Subscription price of the Canadian Honey Producer is 40 cents a year. 3 subscriptions at one time, \$1.00 to one or more addresses. For further particulars see our Premium List.

Remittances for fractions of a dollar may be made in Stamps, Canadian or American. The receipt for money sent will be given with the address in the next issue of the paper.

When writing to this Office on business, correspondents must not write anything for publication on the same paper, as this causes much confusion and unnecessary trouble. Only one side of the paper should be written upon.

If we fail to credit with a subscription kindly notify us of the fact. There must be a mistake somewhere if any number does not reach you whilst a subscriber; by informing us we will replace the number unless the edition is exhausted.

Always give both name and Post Office when referring to any change in subscription.

TO CONTRIBUTORS

We will always be pleased to forward sample copies to any.

We will thankfully receive for publication items of interest to Bee-keepers, and we would like to have every issue of the paper contain at least one good article bearing directly upon the management of the Apiary for the coming month.

The Canadian Honey Producer one year with the following Books:

Cook's Manual of the Apiary, cloth, \$1.25	\$1.50
A. B. C. in Bee Culture, by A. I. Root, cloth, \$1.25	1.40

A. B. C. in Bee Culture, A. I. Root, paper, \$1.00,	1.25
Quimby's New Bee-Keeping, cloth, \$1.50	1.75
Bees and Honey, by T. G. Newman, cloth, 75 cents,	1.00
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The Canadian Honey Producer	
And Gleanings, semi-monthly,	\$1.20
" American Bee Journal, weekly, ..	1.20
" American Apiculturist, monthly, ..	1.10
" Bee-Keepers' Magazine,	60
" Rays of Light, "	85
" British Bee Journal, weekly,	2.90
" Poulterers' Profit,	65

PREMIUMS.

Single subscriptions are 40 cents per year.— Three subscriptions for one year at one time, \$1.00. In addition to the above, any one sending us 15 subscribers will receive one of Alley's Queen Traps, and to any one sending 25 subscribers we will send one of our No. 1 Smokers. Postage or express must be paid by the recipient of premium. All subscriptions must be for one year. Any one subscribing for two years will count as two subscribers. The largest number of subscriptions sent in by any one up to 1st May, '87, will receive in addition one complete Blackburne hive for comb and extracted honey. The number of subscriptions must exceed 35.

ADVERTISING RATES.

10 cents per line each insertion, 5 cts. per line each following insertion.

Space will be measured by a scale of solid nonpareil of which 12 lines measure an inch and there are about 9 words to the line.

Transient advertisements must be paid for in advance.

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GEORGE STREET, - BRANTFORD, ONT.

Champion's Buggy Tops. PATENT PROPS.

This prop fills a long felt want. It is a device by which either the front or back joints of top may be separately worked from the inside. The driver can throw back the front of top, or lower the back and replace either from his seat—all done from the inside. Any one in the habit of getting in or out of buggies will certainly appreciate this improvement.

My Tops have met with universal satisfaction by the carriage trade, and have taken first prizes and diplomas wherever exhibited.

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No. 1—Is a first-class rubber Top with superior quality of heavy brown back rubber, back and side curtains to match. Wrought rails and joints. Top prop nuts and rivets in either black, silver or oroid. Black T. P. nuts sent unless otherwise ordered.—Price \$12.50. With Patent top props and handles extra \$2.00.

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CHARLES CHAMPION,

Hardware and Carriage Goods, Brantford, Ont.

Patented in Canada and United States,

THE CANADIAN HONEY PRODUCER.

Vol. 1. November, 1887. No. 9

Bee-Keepers and their Interests.

We cannot but upon reflection ask ourselves, are Bee-Keepers really in practical every day life advancing their best interests? By this is meant, are they doing all they can to increase the consumption of honey in one way or another? We are safe in saying, we are not. Mr. Cowan while among us remarked upon the absence of honey at hotels and stores. In Switzerland, parts of Germany and other countries, but especially those mentioned, honey was used far more generally, especially for breakfast. Who is most to blame for this state of affairs, the hotel-keeper or the Bee-Keeper. If every Bee-Keeper would make a point of asking for honey at every hotel he may stop to take a meal at, and ask for it no matter how often he may stop at it, there is no doubt the Bee-Keepers would find a readier sale for their honey. When friends visit you, not Bee-Keepers, have your very nicest honey on the table and do not keep it to awaken the envy of some Bee-Keeping friend who may be visiting you. Those visiting the North American Bee-Keepers' Association meeting at Chicago this month, let them insist upon having honey upon their table at the hotel and let the ball start rolling. If a grocery has no honey get all your uncles, aunts, cousins and friends whom you can inlist to call and ask for honey. We can expect no one to help us unless we help ourselves in these matters. In the matter of hotels, if honey were used there the general public would soon assist us; and a footing secured there at all, would mean a permanent one, without any further effort on our part, after we once set them to work for us,

we could bend our energies in another direction! Now we would beg every individual Bee-Keeper to feel his responsibility and not think his services in this matter only a drop in the ocean and of no value. If every drop were taken out of the ocean there would be nothing left.

A USEFUL EXPENDITURE.

Would it not be well to expend a portion of our annual grant as it is done by some of the other Associations, notably the Diarymens'.

The method employed is to secure men who are well and favorably known to its members as likely to be able to give them information of value in an essay and aid in the discussions generally. There are men from the United States who if present at our next annual meeting in Woodstock, —which we believe is to be in Jan. next—would be able to add very much to the practical value which members present would receive. In view of this a very much increased attendance would result, and an increased membership. We would respectfully make this suggestion not presuming to mention who the man or men shall be, but leave this important question just here to the directors and officers of the Association.

The *Canadian Bee Journal* states in reply to our statement, "The hive with the Langstroth frame for brood chamber took the several first." That the frame of the hive they took the first prize with was $12\frac{1}{2} \times 10\frac{3}{8}$ in. They had three hives entered, and when the 1st prize was handed to them by the judges we asked which hive was awarded the 1st prize; we are under the impression the hive stated by us was pointed out, but according to the statement of the exhibitors we are mistaken.

In reference to the case at the Toronto Exhibition referred to by Mr. Willows, we think it would hardly be just to censure the D. A. Jones Co.

or even the Judges. This tardiness in getting displays in place is sanctioned by the Exhibition officers by permitting it, and as long as this is done by them, the judges would in all probability not be able to count upon any result even should the delay be reported at head quarters. The only good result we can hope to reach through the discussion of this question, is an enforcement of the rules another year.

As the C. B. J. says it is impossible to have Bee-Keepers' supplies judged without explanations being taken from exhibitors an undue amount of it may be permitted, especially when defects in competitors exhibits are permitted to be shown as we have seen at some exhibitions. When explanations have to be permitted it is a difficult matter to draw a line.

SUNDRY ITEMS.

The Southern Fair held in the City of Brantford, Oct. 11th and 12th, is to be complimented upon its progressive spirit in the Apiarian Department at least. The list for competition in prizes reads as follows :

Best 5 pounds of Honey in comb, \$1.00.

" 5 " " Strained honey, \$1.00.

One dollar must be paid into the association before one can compete for prizes.

The show of honey at Cayuga, Haldimand Co., was very poor. This district produces a very fine quality of honey, but the dry season made the crop an almost total failure. For extracted, D. Anguish, Mohawk, secured first prize. The first prize for comb was taken by a pan of good old fashioned comb honey without the newfangled method of taking it in sections. It was the only entry made for comb.

We are asked by letter, did the Heddon Hive get a prize at Toronto and how did the Shuck come out. As it doubtless will be of interest to many of our readers to have a reply to this question, we would say: The Heddon hive secured no prize at Toronto, although entered.

The Shuck hive also entered, secured only a second prize for best section crate and system of manipulation.

Lest in our editorial remarks upon "My Experience at Fairs," an article written by Mr. Willows might be misunderstood, we would say there are no grounds for saying the judges at that exhibition acted in any manner to one exhibitor they would not to another. We all know many rules laid down by the association are not and what is more appear not to be intended to be enforced by the association. In Justice to all they should be. Such a clearly defined line would be more satisfactory to all exhibitors and save no end of difficulty to the officers of the association. Of course an exhibitor does not always agree with the decision of the judges, and yet he would not say the judges desired to act partially or unfairly. Hives in particular even when practically tested we know have opinions passed upon them almost as numerous as the men who pass their opinions, and because a judge differs in his decision from our views that does not we trust lay him open to censure from the exhibitor, and so with other articles. We therefore unhesitatingly say we think the judges at Toronto did their work with a fixed desire to do justice, to all, and as far as the decisions in reference to ourselves and the firm we represented there, are concerned, favorable or unfavorable as they may have been we have nothing to say.

Mr. Jacob Alpaugh of St. Thomas, had a very nice display of comb honey at the St. Thomas Fair. He is to be congratulated upon the comb honey, also extracted honey he has secured this year especially as to quality.

HONEY CURED HAMS.—Wm. Davies & Co., 22 and 24 Queen St. West, Toronto, inform us that honey cured hams will now be a regular line of their business and can be procured from them. The first lot made for us has given such success and created such a demand for the article that they feel warranted in taking this step. Another large pork factory firm in Toronto have been communicating with us and will probably also be able to supply these hams.

The Canadian *Bee Journal* has made a mistake in the publication of the Toronto Prize List. R. F. Holtermann took 1st prize for best and largest assortment of extracted honey properly named.

Mechanics' Fair, Boston.

Oct. 17th, 1887.

MESSRS. E. L. GOOLD & Co.,

BRANTFORD, ONT.

GENTLEMEN ;

I have just had a talk with a reporter for the *Commercial News*. He says you exhibited at a late fair in Ontario a full honey comb, wholly machine made (not foundation,) was he right? I shall see him again. Awaiting your reply.

I am yours, &c.,

C. W. COSTELLOW.

How fast reports of what we did not show will travel. At this rate we have about concluded it will be best not to exhibit what we desire to advertise in the Bee-Keepers' supplies line. It is needless to say it is not in our power to exhibit such a comb. The ignorance displayed, in the common matters of the day by those who assume the place of instructors in these very questions of which they are so ignorant is lamentable and presumptuous. We have written to Mr. Costellow and shall give the result of his interview with the reporter to our readers.

Mr. Costellow is a dealer in Bee-Keepers' supplies and a Bee-Keeper, and of course knows we did not exhibit such a comb.—Ed.

CORRECTIONS.

Owing to our attendance at exhibitions several small mistakes have been made in the last issue of the C. H. P. which we in part correct.

The name of A. G. Willows Carlingford, Ont., with 2150 lbs. of extracted honey was left off the list of exhibitors at Toronto.

The Rev. D. P. Niven, Dromore, Ont., is credited with the item regarding the consumption of honey per annum by the family of Mr. Coleman, Devizes. This should not be.

REPORTS.

Kossuth, Wellington Co., Oct. 18th, 1887.

Bees have not gathered a very large surplus this last season, about 35 to 40 lbs. per colony spring count: clover yielding very little,

basswood very fair. The honey is a very good quality. There was a fair increase in number of colonies of those that came through winter well but quite a few lost theirs last winter.

Yours, &c.,

A. B. SNYDER.

Derryville, Oct. 11th, 1887.

Dear Sir.—In reply to your request in the "HONEY PRODUCER" for reports, I cheerfully send you my little all.

In the fall of 1886 I went into winter quarters with six colonies of bees, wintering all successfully two in chaff hives the other four in the cellar. From the six swarms spring count I have taken a trifle over 900 lbs. of honey; eight hundred and eighty extracted and thirty or thirty five pounds in one pound sections. Have increased to, sixteen or seventeen swarms, but would have had over twenty only that I run out of hives, and did not have time to make more. So the only resource was to cut out the queen cells or if I neglected to do that then take the only alternative when they swarm, viz., of putting them back.

The last number of *Gleanings* contains a more detailed account of my success for the present year, but as I am only a beginner my experience is somewhat limited and do not wish to trespass on your valuable space, but at some future time perhaps I may send you an article for publication.

Must say the last "HONEY PRODUCER" is really excellent. A farmer by the name of James Bagshaw with eight or ten stands of bees, spring count, got about the same quantity of honey I did.—WILL H. TAYLOR.

We should be pleased to have an article from you at any time. You should be congratulated upon your success. It is the best report we have heard.—Ed.

British Bee Journal.

Honey-Dew: its Producers.

In our last issue we mentioned the large amount of honey-dew which, especially in dry summers, was to be found on, and falling from, the leaves of certain trees,* and

* Mr. Boussingault states that in Switzerland the aphides almost kill the trees; and so exhaust them of sap that a single sick tree may produce as much as three kilograms (about 6½ pounds) of sweet substance elaborated from the juice.—BUCK-ROX, vol. iii. p. 36.

also the extraordinary migrations of aphides, or plant-lice. We purpose now to attempt a slight sketch of the physiology and life of the producers of honey-dew; and we feel assured that it will be found one of the most wonderful histories of the entomological world.

Those who have studied the history and economy of the hive-bee will find the life of the aphid equally elaborate; and as with bees the students hereof are continually making new and unexpected discoveries, so those who endeavored to probe the arcana of the life of the aphides find themselves ever coming in contact with new questions to engage their attention,—questions which they have not been able satisfactorily to answer. Among the most interesting phenomena connected with the aphides may be mentioned—the injuries they inflict upon plants and trees, their singular migrations, their almost incredible numerical increase, their processes of reproduction, the enemies they have to contend against and their defences against these enemies, and their relations with ants, who so tenderly nurse and cherish them.

The name 'Aphis'* was given to this class of insects by Linnæus; and the minds of many naturalists have been much exercised to account for his selection of the word, and many ingenious suggestions have been put forth for its determination. Among these suggestions, the readiest seem to be that the word is derived from the Greek in its sense of *emitto* ('I emit'); having a reference to the very peculiar office of the unique organs known as 'nectaries' or 'cornicles,' from which is ejected the substance to which we give the name of honey-dew.

It is scarcely within the province of a periodical devoted to a special purpose like the *Bee Journal*, to enter into a recondite or scientific history of the physiology of this insect, or to enumerate the numerous varieties of it. Buckton, in *Monograph*, describes several hundred tribes; and almost every tree—the rose, the apple, the lime, the oak, the beech, the sycamore, &c.—has its special aphid; and some trees have several varieties. The aphides assumes different colours according to the plant upon which

they feed. That on the rose is green; that on the bean is black; and that on the apple takes a kind of cottony appearance, called 'American blight.'

The bee-keeper' however, is specially interested in the two organisms of the aphid concerned in the production of honey-dew. These are the rostrum or proboscis, † which pierces and sucks the juice, and the two ducts on the posterior part of the abdomen through which is ejaculated the substance.

The proboscis is an elongation of the *labrum* (or lower lip), which is modified into a three-jointed sheath, inside which are three sharp-pointed lancets, which have a backward and a forward motion. This suctorial organ is folded on the breast; by its means the insect pierces the skin, and extracts the juices of the leaves or the roots of plants which form its nourishment. The length of the proboscis varies in different kinds, some being very short, and others quite as long as the insect itself: it is also found disproportionately long in the young of some of the aphides. By means of this organ the juices are drawn into the mouth by a kind of pumping movement, similar to that noticed in the proboscis of the bee.

The function of the nectaries or cornicles is to give off, as the result of the suction of the proboscis, the drops which gradually accumulate at the ends of the tubes. Sometimes, as we have mentioned, these drops fall on the grass saturating with the treacle-like substance the ground, at other times on the leaves and so choking the stomata, or leaf-pores, and thereby preventing the natural respiration performed by the pores. The nectaries vary much in form and size. In some they attain half the size of the aphid; in others they are very small while in others they are altogether wanting. There is considerable difference in opinion as to the part these nectaries play in the economy of the insect. The opinion that of late has prevailed is that they have some connexion with the respiratory organs. C. Morren considers them to be nothing more than prolonged stomata, *i. e.* the apertures leading to the tracheal or respiratory system; and he states 'that a considerable lacing of tracheæ may be seen to

* Class *insecta*; sub-class *Haustellata*; order *Hemiptera*; sub-order *Homoptera*.

† By some called *haustellum* from *haurio*, 'I drain' or 'suck.'

start from the points at which the cornicles enter the integument.' Also, he asserts, 'that the air replaces the liquid which is ejaculated from the bubbles so often to be seen within their cavities are evidences of the regurgitation of air.' Morren points out at the bases of the cornicles a gland to which he ascribes the secretion of the usually sweet liquid known as honey-dew, and which he regards as the first nourishing fluid provided for the young aphids. The same naturalist also puts forth the singular idea that there is some similarity between the Aphides and Mammifers, as he maintains that he has frequently seen the young suck the secretion from the tips of the cornicles of the mother.

By the proboscis of the aphid the soft under skin of the leaf is pierced and the juice pumped out and eventually ejected by cornicles. The leaves are ever forming starch, which is converted into sugar. It is quite possible that the juice in its passage through the body of the aphid may undergo some change, even as we know that the nectar drawn by the bee from flowers into the honey-sacs is in some degree changed in its qualities. It is doubtful to what extent the juice sucked up by the aphid passes through the alimentary system. This still requires elucidation. * * * * * C. Morren noticed the first advent of this insect into Belgium, and he states that the countless swarms that spread over that country in September and October, in 1834, came over the sea from England. He says that the clouds of aphides obscured the light of day, and covered the pavements of the streets. To this insect was at one time ascribed the potato disease, but further research has proved that this was not the case, but that it was caused by a small insect which fed upon the roots.

If we look at the under-leaf of (say) a rose where the aphides love to congregate, we shall find it infested with these insects. The majority of them will be found wingless, but some few are winged, and it is somewhat of a mystery how these latter come there. Aphides are produced from eggs, or are born alive, under certain conditions. The aphides in spring are the product from the preceding autumn. They pass through some changes, and they moult four times. The first brood

are wingless, and are all females, and being wingless, are imperfect females. The second generation is counterpart of the first, and so on during the summer, to the tenth (or as some naturalists say, the eleventh) generation, without the intervention of a male. The last generation, however, consists of perfect insects—males and females—all winged. These latter are fecundated, and this renewed condition of life suffices for the next ten (or eleven) generations. The females now lay their eggs in autumn, and this closes the year's story.

Not being subject to the usual law of metamorphosis, aphides increase in an astonishing manner. Reaumur calculates that each aphid produces ninety young ones. She lives to see five generations; and if we multiply ninety by ninety four times over we shall find that it amounts to 5,904,000,000; and if the increase were allowed to go on unchecked for a single season it would be found that one aphid would produce a quintillion of aphides. One mathematician has made a calculation that if the generations were continued 300 days, the progeny would fill the universe, land and sea, so that there would not be room for any creatures but themselves. Professor Huxley makes a singular calculation. Assuming an aphid to weigh 1-1000 grain, and a stout man 285 lbs., the tenth brood of one aphid would be equal in matter to more than 500,000,000 of such men, i. e. to more than the whole population of China.

Let us be thankful that there is a law of compensation which steps in and keeps these pests under subjection.

In our last issue we noticed the enormous fecundity of the aphides. Bee-Keepers, not desiring that the Genuine produce of their bees should be contaminated by honey-dew, have especial cause for rejoicing that there are many insects whose life-mission appears to be the reduction and destruction of aphides. Stormy weather and heavy showers sweep them away likewise by myriads.

The foremost of these insect enemies is the lady-bird, or lady-cow (*Coccinella septempunctata*.) As the locust-eating thrush is always to be found accompanying the locust so does this insect seem ever to be in pursuit of the aphides. The food of the lady-bird appears to be almost exclusively the bodies of these

insects. In the *Journal of Horticulture* of September 22, 1887, a correspondent dating from Whitcroft, Perashore, writes:—'On Saturday last about half-past three in the afternoon we had a great swarm of lady-birds, thousands upon thousands; we could distinctly hear the noise of their flight. Is it usual for them to move in such large numbers? Have they been seen elsewhere? There can be no doubt that these visitants were in quest of the aphides which commit such devastation in the hop gardens.

Mr. Buckton, in his *Monograph of Aphides*, says of lady-birds:—The marvellous voracity of lady-birds is shown equally in their larval and their winged condition. The former stage may be commonly seen throughout early summer as slaty-grey or brown six-footed creatures, covered with tufted tubercles, and provided with mandibles efficient both for holding and sucking out the juices of their victims. In some years the imagos are wonderfully numerous, and when they take wing, form vast swarms, which travel great distances. By their sudden appearance in a district they often raise popular astonishment. In the year 1869 such a cloud passed over a large part of Kent, Sussex, and Surrey, slighting on the footways of Maidstone, Guildford, and Midhurst, and making it difficult to avoid crushing hundreds under foot. In the autumn the perfect insect often enters houses for hibernation, and clusters of many hundreds may be seen in Crannies and under the ceilings, and in the angles of the walls of houses within the hop districts. These clusters sometimes are so large that a half-pint measure would not contain them. Although the coccinella is not restricted to the hop aphid for its food, it frequently follows its migrations, and travels on the same winds. It is also a valuable visitor to the apple orchard, and destroys thousands of *Aphis mali* and *Aphis pruni*. Whilst feeding the aphid is seized by the lady-bird near the back, and the liquid contents are quickly sucked out of the abdomen, about one minute being allowed for this process. The aphid is held and manipulated by the jaws and palpi of the coccinella, and the devouring operation proceeds, amidst the struggles of the victims, from the tail to the thorax, which parts, together with the head and legs, are finally rejected.'

(TO BE CONTINUED.)

MR. IVAR S. YOUNG'S VISIT.

We had a very pleasant and instructive conversation with Mr. Young, and of course made all possible inquiries about the state of bee-keeping in Norway. Bees can be kept very well as far North as Dronthoim. In Norway as here in Canada there is no method by which the number of colonies can be ascertained, but the number of colonies kept are estimated at about 40,000; of these about 2000 are kept in the movable frame hive, the balance in straw skeps.

The government of Norway realize the importance of apiculture as an industry and have sent Mr. Young at their expense to Canada and the United States to promote the interests of the Bee-Keepers. Wintering is done very successfully in some of the old straw skep hives. Many think the bees in the movable frame hive do not winter as well but such is not the case but to the contrary, the honey taken by means of the movable frame hive is mostly extracted. On account of so few frame hives and but little comb foundation being used the average yield per colony for the country is not great, but he thinks if properly conducted it would be 70 lbs. to 100 lbs. per colony. The chief sources of honey are clover, basswood and heather. The clover is mostly alsike, there is but little white. The Norwegian Bee-Keepers' Association has some 1500 members, has been in existence three years, the bee-journal 2½. Every member gets this journal free and the journal is the property of the association and under their control; any one having goods to advertise can do so in the advertising columns. Fifty cents entitles a Bee-Keeper to membership and the paper which is monthly. Any one not in the country pays \$1.00, this extra charge is made to cover the extra postage. The Journal is in its third year. Mr. Young also very kindly presented us with a copy of his book on bee-keeping, he may justly be called the father of advanced bee-keeping in Norway.

Queries for November Number.

No. 22. By what time should I have my bees packed in clamps or put in bee home or cellar?

I would prefer to have them packed by the middle of September, when they are to be

wintered on their summer stands. I carry my bees into the cellar about the middle of November or when I think the winter has set in.—Edward Lunan, Buttonville, Ont.

Just before the cold weather sets in. About Nov. 1st.—Will M. Barnum, Burr Farm, N. Y.

Usually by the middle of Nov. bees should be put in the bee house or cellar, but they may be put in clamps earlier if allowed to fly.—W. Couse, Streetsville, Ont.

Before hard frosts come, put them in on a dry day.—J. Yoder, Springfield, Ont.

Just before severe weather. Here usually middle of Nov. Better earlier than too late.—Prof. A. J. Cook, Lansing, Mich.

Sometime early in November as soon as cold weather sets in.—Ellis F. Augustine, Anghrim, Ont.

About the 1st November in my locality unless a very open Fall, when 15th might do.—D. P. Niven, Dromore, Ont.

I always pack mine in September when preparing them for winter but I put them in separate boxes on their summer stands.—There is too much moving to suit me in putting them in clamps. In most parts of Ontario between the middle and end of November is a good time to put them in the cellar, before hard frost comes to make the inside of hives damp.—Miss H. F. Buller, Campbellford.

My judgment would be of little value touching this subject. Our climate is not severe enough to require cellar wintering.—G. W. Demaree, Christianburg, Ky., U. S.

They should be in the cellar by the 15th of November or when winter comes to stay. I never used clamps.—A. D. Allan, Tamworth, Ont.

From 10th to 20th of November.—Robt. H. Shipman, Cannington, Ont.

No. 22. Mine will be all packed before the first of October.—Will Ellis, St. Davids, Ont.

No. 22. When cold weather sets in, which is usually about the 10th or 12th of November.—Doctor Duncan, Embro, Ont.

Cannot tell. We attempt to pack our bees before severe cold weather sets in and always in time to make certain that they will have a good fly after packing. It may be well to pack earlier, however, certainly not later.—Ed.

No. 23. Do I need underground ventilation for bee-house or cellar when I have a pipe going upward from floor of such a repository and reaching above roof of home.

I think an under ground pipe would be an advantage to a bee cellar. The cellar that I now use has no underground pipe, but if I was building a new one I would put one in.—Edward, Lunan, Buttonville, Ont.

Yes, if convenient to do so. It would ensure good ventilation. But if your "floor pipe" works satisfactorily, I should hardly go to the expense of "underground ventilation". Will M. Barnum, Burr Farm, N. Y.

It would likely be better with sub-ventilation.—W. Couse, Streetsville, Ont.

If in cellar where you can, the upward pipe should go into the chimney of the house, don't think a pipe going out into the cold air above the roof is much, if any use, have no experience with underground ventilation.—J. Yoder, Springfield, Ont.

With a few colonies, perhaps no. Yet I should always prefer it. Sub-earth ventilation is not appreciated among Bee-Keepers as its merits deserve. Observation for ten years, and actual trial for eight makes me a warm friend of this arrangement.—Prof. A. J. Cook, Lansing, Mich.

Have no experience in wintering in cellar.—Ellis F. Augustine, Anghrim, Ont.

No. Successful wintering depends upon an even temperature of very nearly 45° Fahr. and good food, the less pollen the better.—J. M. Shuck, Des Moines, Iowa,

No; I have such pipe and no underground ventilation and have wintered without loss when other conditions were right.—D. P. Niven, Dromore, Ont.

Have never tried to winter without underground ventilation and would rather not do so as I have been very successful with it.—Miss H. F. Buller, Campbellford.

Have not had experience with more than forty colonies in a cellar, but think that with such an arrangement one hundred colonies might be wintered safely if the cellar were not of more than ordinary tightness.—Robt. H. Shipman, Cannington, Ont.

Yes, you need some way for the fresh air to get into your cellar if you have many colonies.—A. D. Allan, Tamworth, Ont.

No. 23. I cannot say much on this subject, but would not care so much for underground

ventilation. My opinion is not worth much on query No. 23.

No. 23. I think it is not necessary to have underground ventilation.—Doctor Duncan, Embro, Ont.

Cannot tell without a guess. Do not think however it is necessary to successful wintering, have never heard of it doing any harm. Many claim it is an advantage.—Ed.

No. 24. Can we sell honey for more money in a year of scarcity, if so how much more?

As long as honey is counted a luxury as it is at present, I think we need not look for much of a change in prices on account of the scarcity. The only difference that I can see; there is not as much cutting off prices among Bee-Keepers as usual.—Edward, Lunan, Buttonville, Ont.

It depends on how much "old" honey there is on the market.—Will M. Barnum, Burr Farm, N. Y.

If there is not plenty of old honey on the market I think honey will raise one or two cents per lb.—W. Couse, Streetsville, Ont.

Think not, unless it is very scarce, the price of honey has about found its level and when honey is a poor crop other things are apt to be so too, and when all crops are poor times are dull and consumers are not so apt to indulge in luxuries.—J. Yoder, Springfield, Ont.

Yes; How much more depends on the degree of scarcity—Robt. H. Shipman, Cannington, Ont.

I think we can, how much more I cannot say.—A. D. Allan, Tamworth, Ont.

No. 24. Last year I retailed extracted honey at 10 and 11 cts., this year I am getting 12½ s., comb honey about the same.—Will Ellis, St. Davids, Ont.

No. 24. That depends on the Bee-Keepers themselves if they sell under value as they are doing at present the prices will remain as they are.—Doctor Duncan, Embro, Ont.

Most certainly. This year will answer.—Prof. A. J. Cook, Lansing, Mich.

This has been a very poor year for honey in this section and prices are 2 or 3 cts. higher per lb. than in the last couple of years when honey was more plentiful.—Ellis F. Augustine, Argarim, Ont.

Ordinarily, yes. How much easier it is to

put in a question than it is to answer. It depends on many things.—J. M. Shuck, Des Moines, Iowa.

Yes; and to what extent the present season will decide.—D. P. Niven, Dromore, Ont.

In answering this question there are two things to be taken into consideration. First, in a year of scarcity money is likely to be scarce also, and most people are likely to lay it out for necessities only. From a long experience I have found that when there is a scarcity in a general way honey sells slowly, but when there is a great plenty except "small fruits" (berries, &c.) my honey sells briskly and at good prices.—G. W. Demaree, Christianburg, Ky., U. S.

An extremely difficult question to answer. If the amount secured is not greater than will supply those who are willing and able to pay the advance, advance it. A large number however will do without honey in preference to paying a high price for it. We are retailing at a fixed price and that price is the same as the highest retail price we secured last year. We make the minimum wholesale quantity greater and sell ½ cent higher than last year, at present.—Ed.

Our query department is conducted as inaugurated by S. M. Loche the then editor of the American Apiculturist. There is one exception in the method of conducting. Our queries are published the month previous to the appearance of the answers. This allows everyone who feels interested to reply. True this opportunity is not as generally made use of as desired, but we look for more assistance from our readers in the near future.

Queries For December Number.

No. 25. I winter a number of colonies outside in clamps. The clamps are so situated that a heavy drift of snow would if permitted collect over the clamp. Should I permit this drift of snow to remain or keep the entrance open?

No. 26. I am compelled to move my apiary half a mile, between Oct. 1st and May 1st. What is the best time to do it; location, Ontario? What precautions shall I take to prevent the return of bees to the old stand?

No. 27. Is it advisable for general results to break down queen cells to prevent swarming? Is it advisable to confine the queen with perforated metal at the entrance to prevent swarming?

To the Editor of Canadian Honey Producer.

In compliance with a longcherished thought of visiting Missouri and some of the S. W. States.

The evening of the 26th of October found my wife and self aboard of C. S. Train moving pleasantly on our way to Detroit where we put up for the night.

The next day as we neared Toledo I was greatly tempted to drop off and see brother Mason, but as I had failed to notify him we decided to go on.

From Toledo we took the M. P. R. W. A pleasant run through the N. W. of Ohio and Indiana, a distance of 249 miles brought us to Danville where we stopped for the night.

Next morning I took a stroll through the town, called in at several groceries to see their honey. Most of that article so far as I could ascertain came from California in the shape of comb.

We found one lot produced by R. Osborne who lives 2½ miles out of town and is reported to have 200 hives of bees. Time was too short to make him a call. Another grocer said he had some nice comb down cellar. He brought it but it made me feel sad to see it. Sweetly weeping great drops as it were of honey running down its face. In answering my queries he said "we keep it down cellar to keep it from the bees."

The evening found us in Saint Louis. The next morning we recrossed the river took St. Louis, Alton and Terrehaut R. W. for Cairo, passing down through Illinois to that point. Here we could find no bees, but the sight of the numerous pigs and hogs in the streets with their long snouts, long curved backs and long straight legs more than paid us.

Cairo is about 165 miles below St Louis. Looking across the Ohio river we could view "the old Kentucky shore."

The next night we spent at Charlestown 12 miles north of Cairo. The country round this place produces large quantities of melons. There seemed to be a great lack of nice gardens such as we see in the north, about these places, but the land is most excellent.

Meeting a colored man upon the sidewalk I inquired are you acquainted with this place. Answering, he said "Yes sah, Ise been heah dese fifteen yeah and knows evah nook and

conah in dis town." Will you kindly tell me if any body keeps bees here, and if so where? "Yes sah, dere be some bees across de lot ober yonder by dat white house and dey swarms just as dey like all summah.

In a couple of minutes we were looking at bees. The owner had sold out and moved away that spring and they had been running things according to their own sweet will all summer. There were seven stocks in box hives, in poor condition. The lady who had moved in about a fortnight ago said she supposed that they were hers as she had purclased the place and no one claimed the bees.

Next I was shown Mr. L. S. Marshall's place. Here I found an agreeable old man of 75 years in very poor health, he had some forty hives of bees in what he called Root Simplicity hives. He claimed that most of his bees were the large brown Arkansas bee. I was doubtful in my mind about their being different from the common black bee that we have in Canada. He said that his yearly take was from 10 to 40 lbs. per hive.

At about 10 a. m. we boarded train on Saint Louis and Iron Mountain R. W. for St. Louis on West side of river, reaching St. Louis that evening, Sep. 30th, where we remained until Monday, Oct. 3rd. At 9 a. m. we took train for Sedalia. A nice run of 188 miles brought us to that place.

Most all the honey to be found in the groceries was California production, though it boasts of an extensive bee-keeper some 9 miles out. Everybody cries out about the dry season. At 8.20 next morning we were again comfortably seated and gliding away through the prairie country to Deerfield, Vernon, M. O.

On Friday, the 14th, I visited a county Exhibition or as they are called here Expositions, at Fort Scott, Kansas. All the honey I could find consisted of 5 lbs. extracted and about one dozen sections, all gathered from spanish needle.

The young man who showed the honey has some 40 hives and although the year was a failure, he is very enthusiastic in the business. My sister here keeps some bees in the old way. She says that they never loose anything by bees simply because they never put any money in them. Many farmers here

keep bees in the old way and when spoken to about improved ways answer "we have no time to fuss with bees and don't care to loose money upon them." Some keep them without a bottom board the year round and claim that they winter better that way.

S. T. PETTIT.

Oct. 17th, 1887.

ON THE WING.

First a Bee-Keeper's law suit, now a honey law suit.

There are many ways of educating the public that granulation is a fine test of the purity of honey. A law suit in London, Ontario has probably been the strongest evidence in favor of the Bee-Keeper which has been heard of for some time. Mr. C. Depper a store keeper of London has been handling honey for some time in connection with a grocery business. Bee-Keeper from whom he purchased honey had made it a point to impress upon him the fact that if the honey were pure it would granulate, and he (Mr. Depper) had always in consequence looked for granulation. Mr. Depper purchased a lot from a man who was a stranger to him and who stated he would shortly come in for his pay. The honey did not granulate although winter had set in and Mr. Depper's suspicions were aroused, so much in fact that he removed the honey from sale with the intention of returning it to the party from whom he received it. Months elapsed before this man returned for his money, upon demand of which payment was refused. A law suit followed. In court Mr. Depper stated that all Bee-Keeper told him honey must granulate. It so happened that an expert in honey who was in the court house was called up who gave evidence in favor of Mr. Depper and the latter won the case. London consumers of honey will doubtless have the fact that "pure honey granulates" impressed upon them to the satisfaction of Bee-Keeper.

At the Aylmer Fair there were in the prize list three prizes for competition being for extracted honey, strained honey and comb honey. With all the apicultural literature abroad and such men as John Yoyer, Springfield, a Bee-Keeper of long and extensive

experience in the vicinity, one would imagine that a prize on "strained honey" would be a thing of the past. The honey department may be considered of small importance by those manifestly knowing so little about honey. It would be better, however, were the department left entirely off the list than to make such lamentable mistakes about it. Let us make a more vigorous effort to have proper prizes offered for the aparian department and to have these prizes properly awarded.

MANITOBA.

We have had the pleasure of sampling Manitoba honey and making some inquiries as to the possibilities of the Canadian North West as a honey producing country. The honey of which we have a sample is very good, as its source is probably largely willow, to body it is good, color slightly cloudy.

As in other localities the source from which it is derived will decide the flavor. Sufficiently long and numerous tests have certainly been made to prove to us that bees can be wintered there, the winters are cold but steady, flowers will in that climate also yield honey profusely. One man alone exhibited at a Manitoba Fair last autumn 1886, nine hundred lbs. of extracted honey. The prairie abounds with natural flora from early spring to frost. The days in summer are very long as we all know, and generally very warm with winds. The nights are cool with very heavy dews. It would not be surprising to find in the not far distant future that Manitoba and the North West Territories will produce a large amount of honey annually.

FOREIGN.

There is considerable discussion on food in *Le Revue International D' Apiculture* upon the question: Is the sex of the egg determined at the will of the queen or is it determined by the cell into which the egg is deposited?

The same paper in speaking of the exhibition in Neuchatel says: apiculture was brilliantly represented in all its branches. Movable frame hives, unmovable hives, tents, extractors and purifiers of honey, wax, purifiers of wax, foundation and comb presses

and other implements. Also mead, vinegar, honey brandy, honey liquors, honey candy, works instructive and scientific.

It adds: the exposition of 1887 marks a new era in bee-keeping. The change in hives and other appliances since the exhibition in 1883 at Zurich is very marked. The Lucerne Bee-Keepers' Association exhibits in a closed tent 36 hives alone.

There were upon exhibition almost sixty colonies of bees, comprising Italian, Carmolina, Cyprian, Syrian, Palestine and their crosses. Some of these still contained the entire yield of honey for the season 25 to 60 k. of honey.

The exhibition of honey was also very large, and honey from many different flowers was shown chiefly from the cantons of Switzerland.

The *Bienen-Vater* gives an account of the use of straw and wood for hives. It states, first wood was used, then the straw skep gradually took its place. Then as the movable frame hive took its place, wood again came into use. The writer of the article however thinks, now that a straw hive can be made of straw walls fairly smooth the straw hive will again come into general use. It claims that wood takes up the moisture from the inside of the hive as well as the outside, and when the wood has become thus moist it loses its power to ventilate, a disadvantage the straw hive does not have. It claims straw hives are warmer, lighter and more durable.

The writer must evidently be an advocate of unpainted hives, for surely if through the absorption of moisture the hive loses its ventilating power, it must lose it still more when covered with paint. There are a number of Bee-Keepers who condemn painted hives. We should be pleased to have the opinions of our readers upon this question.—Ed.

The same writer points out the importance of having a passage above the frames for the bees, during winter. In Switzerland the importance of this is also pointed out.

The *Deutsche Illustrierte Bienenzeitung* gives an illustration of a lady with a barrow which latter is designed for the convenience of the Bee-Keeper. The next author of books in

giving illustrations might take a lesson from this, providing he were an advocate of bee-keeping by ladies.

A cut of a lady inverting a hive, in Mr. Heddon's book, for instance, would speak volumes.

HONEY AND ITS USES.

The Germans have for long ages made much practical use of honey. It is used as a daily food in itself, in cooking and baking and very extensively in medicine. We are making arrangements to secure some of the principal works written in German upon the subject and from time to time glean items from them for our readers.

Der Honig-Konsument, by Max Paulz is a 45 page work devoted to receipts with honey or bees wax as ingredients. It contains the following:

FOR WOUNDS AND BRUISES.—The top and root of the plant *Leucocjum vernum* is taken when fresh and the juice squeezed from it. This juice is mixed with honey and the mixture laid upon the wound.

FOR IMPURITIES OF THE SKIN—Pulverize cinnamon bark (*Canella*). Mix this powder with honey and brush the parts of the skin affected upon retiring at night, wash the part in the morning with rosewater.

TO INDUCE PERSPIRATION.—No. 1.—Oats steeped in honey water, the tea taken in small quantities two or three times a day.

No. 2.—The flower of the plant *Genista* soaked in honey water. This tea taken in moderation, warm.

For the Canadian Honey Producer.

The wintering of bees is the most important subject that we can consider at this season. We winter our bees in a repository in the side of a sand hill, built of logs, size 10x16 and 6 feet deep; with entrance hall 3½x5 feet, with two doors and ventilators in the doors and in the top these ventilators can be contracted or closed in very cold weather. If the outside temperature is 25° below zero and these ventilators closed it will be about 45° inside and by opening these ventilators this temperature can be maintained. We place the lower hives about four inches from the ground, build them four high, raise them one inch from the bottom board by placing two

strips under the sides, leaving the front and rear open, and allow no top ventilation. This plan has proved very satisfactory. We expect to go into winter quarters with about 200 colonies.

A. D. ALLEN.

TAMWORTH, ONT.

The Bee-Keepers' Magazine.

The Honey Bee Plant.

The honey bee plant is of a thistle-like growth, and has become well known of late years among Bee-Keepers as possessing great attraction for bees and yielding fine honey. It is extensively grown in this State, and its seeds sell for \$1 a pound. Some time ago the seeds of the honey bee plant, which resemble oats in form, were brought to the attention of Mr. F. L. Pease, the well known oil dealer of this city. He perceived that they were rich in vegetable oil. Learning that the plants grew with very little attention and produced a large quantity of seed, which could be easily beaten out from the balls, the idea occurred to him that possibly the plant might some day hold a prominent commercial position as an oil producer, thus serving a double purpose during the periods of its existence. Acting upon this thought Mr. Pease two years ago procured a quantity of seed, and extracted therefrom the oil for experimental purposes. It was found to be equal to the best linseed oil for all purposes, but in its qualities more closely akin to poppy seed oil. It does not solidify and shows no tendency to acidulate. A two years' test has demonstrated that it has a commercial value as an oil equal to linseed oil. This raises the question as to whether it can be manufactured profitably. The linseed oil cake, which comes from the compress after the oil has been extracted, is a valuable commercial product. The residuum of the honey bee plant seed possesses qualities so closely allied to quinine that the taste and after effects are almost identical with those of the costly drug. To determine the full value of his discovery, Mr. Pease will go to New York this week, accompanied by Mrs. Pease, to attend the meeting of the American Association for the Advancement of Science. Mrs. Pease will read a paper in the botanical section upon "The Honey Bee Plant," while the oil itself

and the bitter residuum left after the extraction will be brought to the attention of the chemical section by Mr. Pease. Each plant bears something like thirty balls.

[The above extract from the New York Times of Aug. 8th, is indeed gratifying. If *Echniops Spherocephalus* should really turn out to be something valuable besides as a honey plant, we should be doubly grateful to Mr. Chapman for having brought it to the attention of American Bee-Keepers.]—Ed.B. K. M.

The Ontario Agricultural and Experimental Union.

The above Association was inaugurated by students, ex-students, and graduates of the Ontario Agricultural College eight years ago. The Association has met annually. Its object is largely to conduct experiments in the various branches of Agriculture, every year these have grown to importance and magnitude. This growth has been due not alone to the energy and perseverance of the faculty of the O. A. C., its graduates, and ex-students, but to the aid of a number of prominent Agriculturists in Ontario who have so kindly come forward to assist in conducting these experiments. The number of these volunteers have increased rapidly, showing not only the confidence they have in the utility of the Association but the more general desire of the times to follow the wise course of combining to do experimental work and thus gain financially and intellectually. Heretofore the experiments have chiefly been confined to different manures with wheat oats and barley. Any willing to assist in conducting such experiments should correspond with the corresponding secretary, Wm. Stover, Norwich, Ont.

It is desired to conduct during the coming winter a careful experiment as to the temperature of a cluster in the hive during the winter months. In order to do this the combs should be so arranged that the thermometer may be lowered into it or remain in it if desired without disturbing the bees. This can be done by having a wire cloth tube closed all but at the top through which the thermometer is lowered; and can be withdrawn at will without disturbing the bees. The hole through the top quilt and packing be closed

level with the top bars of frames to keep the heat in the hive and in a normal condition in this respect.

The temperature of the cluster is to be taken at intervals during the winter, say once a week; the outside temperature is taken at the same time. A record to be taken of each observation, giving temperature of cluster (bulb of thermometer to be in its centre,) outside temperature, day and hour of taking and as far as possible if bees appear restless or quiet. The colony may be upon its winter stand, in the cellar or both, and each experimenter may take one or more colonies as desired. If possible the colony should be weighed when prepared for experimenting. The date and weight being put down, it should be of average strength at least. In Spring it should again be weighed and its numerical strength noted. Also, if it has signs of dysentery and if so to what extent. Also, its condition as to brood.

This experiment carefully conducted would by comparing temperature during winter, weight and condition in Spring, throw some light upon the best temperature at which to winter bees.

All who are willing to assist in conducting this experiment should communicate with the corresponding secretary of the Association. Or they may communicate with the president, R. F. Holtermann; Brantford, Ont.

The experiments will be recorded in the annual report of the Association of which one thousand are printed.

The Association meets annually at the Ontario Agricultural College, Guelph, probably the third week in Feb'y next, to which all interested in agriculture are invited. This experiment is open to any Bee-Keeper in the world, who is prepared to make it carefully. Volunteers will receive the hearty thanks of the Association. Bee-Keepers should combine more in experimental work.

CONVENTION NOTICES.

Jan. 20, 1888.—Haldimand, at Cayuga, Ont.
E. C. CAMPBELL, Sec.,
Cayuga, Ont.

UNION CONVENTION AT CHICAGO. The North American Bee-Keepers' Society and the North-western Bee-Keepers' Society will meet in joint convention at the Commercial Hotel,

cor. Lake and Dearborn Streets, in Chicago, Ills., on Wednesday, Thursday and Friday, Nov. 16, 17 and 18, 1887. Arrangements have been made with the Hotel, for back room, one bed, two persons, \$1.75 per day, each: front room, \$2.00 per day each person. This date occurs during the second week of the Fat Stock Show, when excursion rates will be very low.

The following is the programme so far as has been determined upon:

Cost of the production of Honey.—J. H. Martin, Hartford, N. Y.

Controlling the Price of Honey—M. M. Baldrige, St. Charles, Ills.

Getting the Best Price for Honey—E. J. Oatman, Dundee, Ills.

Commission Men and the Honey Market—R. A. Burnett, Chicago, Ills.

Legislation for Bee-Keepers—Dr. C. C. Miller, Marengo, Ills.

Objects and Methods of a thorough Organization of the Bee-Keepers of America—Thomas G. Newman, Chicago, Ills.

Comb Foundation, its Manufacture and Use—C. P. Dadant, Hamilton, Ills.

Production of Extracted Honey for table Use—T. F. Bingham, Abronia, Mich.

The production of Comb Honey—W. Z. Hutchinson, Flint, Mich.

Production of Comb and Extracted Honey in the Same Apiary—J. A. Green, Dayton, Ills.

Out apiaries—D. A. Jones, Beeton, Ont.

Foul Brood, How shall we treat it?—A. I. Root, Medina, Ohio.

Wintering Bees in the Northern States—R. L. Taylor, Lapeer, Mich.

Bee-Keeping alone, or with other Pursuits; if the latter, in connection with what?—Eugene Secor, Forest City, Iowa.

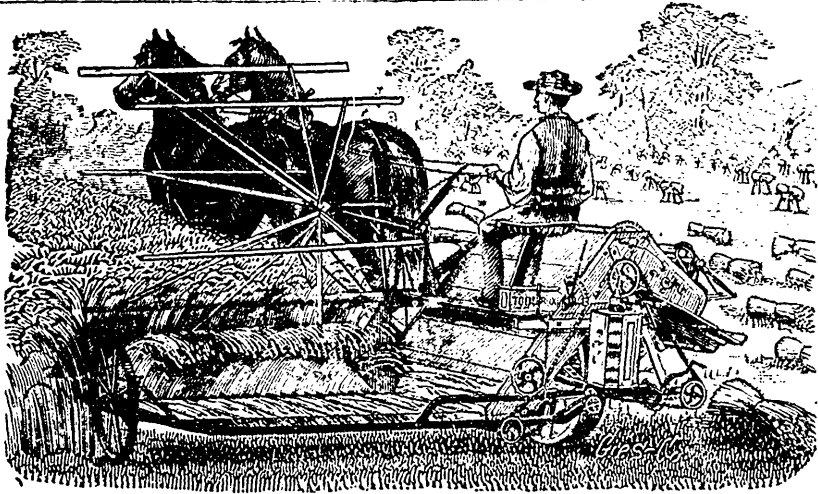
Legs of the Bee—Prof. A. J. Cook, Agricultural College, Mich.

What is the Best Name for Extracted Honey?—Thomas G. Newman, Chicago, Ills.

Bee Hives and fixtures—James Heddon Dowagiac, Mich.

W. Z. HUTCHINSON, Sec.

American Bee Journal says, rates will be one and one-fifth round trip,



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HOW TO WINTER BEES.

The October Number, 1886, of the AMERICAN APICULTURIST contains ELEVEN ESSAYS on WINTERING BEES, from eleven of the best known Bee-Keepers in the World. Sent free. Address,
HENRY ALLEY, Wenham, Mass.

THE BEE-HIVE

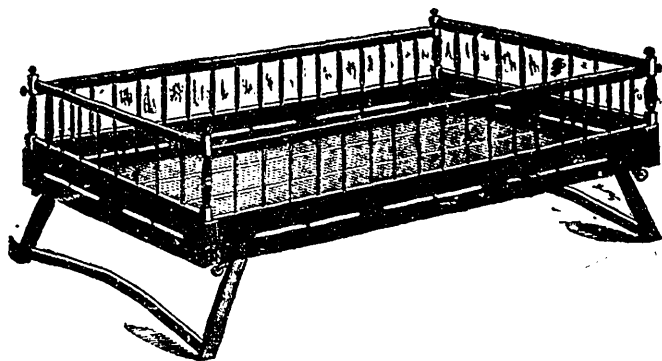
Contains Questions and Answers, Whit and Yumer (comic.) Departments, and is the only Bee-Paper publishing G. M. Doolittle's Method of rearing Queens; being the most natural way yet discovered, and like all of Mr. D.'s writings, practical. 4 Nos. of *Bee-Hive* giving above method, 15c; or *Bee-Hive* and *Canadian Honey Producer* one year for 60c.

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Used with or without ice, for both summer and winter use. Will positively save their price in one season. Our market Butter carries is the delight of all who use them, will hold from 36 to 100 lbs. according to size. Send for price.

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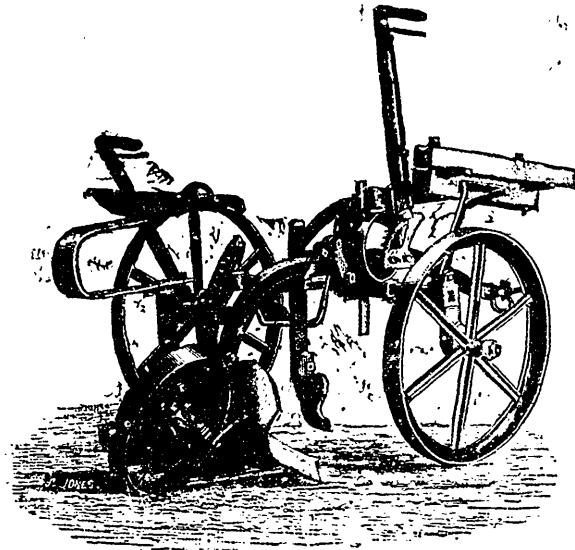
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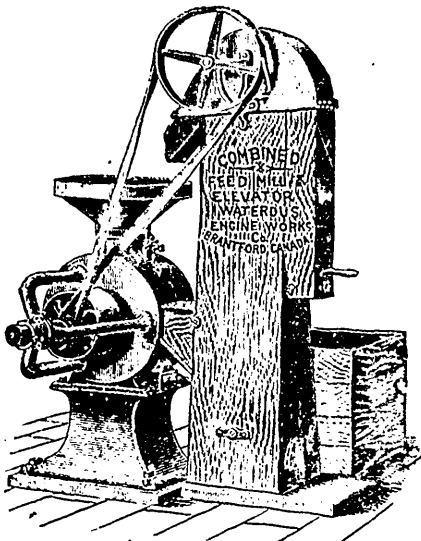
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The Simplest, Lightest Running, the Fastest Cleaner, and Most Durable Fanning Mill in America. Thousands will testify to their Superiority.
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 Yours faithfully,
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SUFFOLK LODGE, OAKVILLE, Jan. 2nd, 1886.

Agents wanted in all unrepresented districts.

YOUR NAME IS WANTED

to appear in the American Bee-Keeper's Directory. The Directory will be a neat hand book containing the names and addresses of Bee-Keepers in the United States and Foreign countries. Send us 10 cts. and have your name appear in this book, and by so doing you will receive circulars from dealers and thereby become posted as to where you can do the best. You cannot invest ten cents better than by having your name printed in this book.

To those who send their name to be published in this book must enclose ten cents; write your name, post-office directions, county and state. Write how many colonies of bees you have and your average yield of honey, so that we may properly rate you. Also state the variety of bees you prefer, whether Italians, Carniolans or other breeds. This work is intended to fill a long felt want among Bee-Keepers and by the co-operation of all, a good work can be accomplished.

A department will be reserved in this hand book for the names of Apiarian Supply Dealers and queen breeders, and two lines will be allowed them giving room for their name, address and business and will be inserted for 25 cents.

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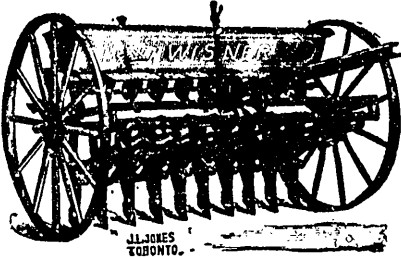
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The size of the book will be 5x7 inches, neatly printed and bound. A space will be left by each name for a memorandum. The names will be printed in alphabetical order. Besides being an accurate index to active Bee-Keepers, giving their names, addresses, and almost a report of their business, the book will also contain a dictionary of Bee-Keepers' implements and descriptions of the various races of bees together with autographs of our more prominent and scientific apiarists. You cannot afford to miss having your name in this book.
 Address at once,

J. B. MASON & SONS, Mechanic Falls, Me.

The Celebrated "Wisner" Machines.

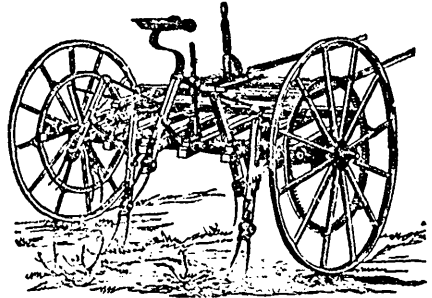
Tubular Iron Frame.



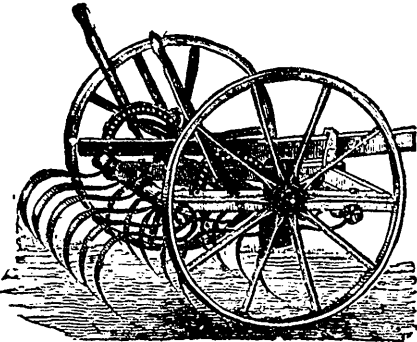
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We guarantee all our Machines
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Also, 30 lb. cans, 15 lb. cans.

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