

...The Canadian Bee Journal

PUBLISHED MONTHLY.

NEW SERIES
VOL. IX, No. 2.

BRANTFORD, ONT., AUGUST, 1901.

WHOLE No
488

Annual Meeting

Twenty-First Annual Meeting Bee-Keepers' Asso., Ontario.

HELD AT
NIAGARA FALLS,
DEC. 4, 5, 6, 1900.

WINTERING BEES IN AND OUT.

By H. G. Sibbald, Cooksville, Ont.

Bees to be wintered successfully, in or out, must be properly prepared, and although preparing bees for winter might more correctly come under the heading of Fall Management, still, on account of its vital importance and influence on the Wintering Problem, I cannot pass it without notice. By September our bees ought to contain a well populated colony, and a good queen, being if possible, and before the end of October they should each contain not only bees and queen, but twenty-five to thirty-five pounds of ripened, well-capped stores, in more than six or seven average combs, with a division board on each side to keep them cosy, warm and dry.

When if we are to winter outside, we must put them up anytime in October, with two or three inches of sawdust, chaff, or leaves all around them on top four or five inches. We must also provide a good water-proof cover, and place the hive one foot from the

ground, contract the entrance, and very little, if any more attention will be required until Spring.

But if we decide to winter indoors, which I prefer, if a suitable cellar can be obtained, they must be left on their summer stands until about November 20th or December 1st., when a suitable day must be chosen after they have had a fly if possible, and before sufficient frost has come to freeze the moisture inside the hives. Have your cellar ready, clean, and sweet, stands arranged a foot or two from the floor, and away from the outside walls if space will allow; then, a day or two before moving in the bees loosen the bottom boards, place a new quilt or cover over any that have chewed holes in the cover, and you are ready.

Commence to carry them in by taking the one nearest the cellar, placing it to the further end of the cellar, keep on down that row, up the next, and so on until they are all in. You will then have no difficulty in placing them back on their old stands in the spring.

But to go back a little, the stands in the cellar should be two or three inches higher behind than in front, so that the hives will sit slanting towards the front when in; then raise the back of the hive of the bottom board and block it up with 3-8 of an inch block, thus providing for perfect ventilation the fresh air going

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in behind, passing up and through the cluster where it becomes damp and heavy, causing it to fall again and pass out the front entrance.

After placing one row on the stands and blocking them up, take off all covers except the propolized quilt, place two one in. strips on the top and you are ready for another row. Repeat this until you have them as high as your cellar will permit, then start another row, leaving room between to get in and sweep up the bees which die through the winter, which is all the attention they require until Spring.

About the last of March, or April 1st, they ought to be moved out. Preparatory to doing this, go into the cellar with a candle and take a peep under each hive through the opening behind where the hive is blocked up. If the bottom board is clean and dry, the bees clustering quietly, etc., mark the hive O. K. It will not need any attention after setting out, unless you find it very light, and possibly short of stores, in which case you will have to attend to it. You will find that this is a splendid plan, saving labor and fussing with the bees when they are better left alone.

Next, gently take out the blocks and you are ready to set them out the next suitable day. Commence taking them out orderly; the first to come out will be the last you put in and will go to the far end of the yard, where it came from. Follow this right along, and you will soon have them on their old stands, with a few vacant stands, and all in splendid shape for a harvest of honey.

Mr. Hall: Mr. Sibbald is a very excellent bee-keeper. I suppose what Mr. Sibbald wants is that his paper should be picked to pieces. Mr. Sibbald commences very orderly in taking the hives from the yard into the cellar by taking first the stock of

bees nearest to the cellar door and continues thus to the end. Supposing two of the stocks of bees died following Mr. Sibbald's system that will put the balance of the hives on to the wrong stands, and if you have any special hive of bees that have done good work for you or that are cross, or have other peculiar characteristics, you have lost track of that stock of bees because it is on a new stand.

Mr. Sibbald: If you lose one—which you should not do if you winter them rightly—you can leave the old hive there until you get them all out, or skip that one.

Mr. Hall: We generally listen to them when we put them on the hands barrow; if the stock is dead we do not take it out. Your plan is very nice but allow me to tell you how we take them out. Our stocks of bees stand four in a clump; these clumps are all marked alphabetically and instead of commencing near the cellar door we commence generally at the far end of the apiary. We take one from each clump and take it out and that leaves only three on a stand. We commence again and leave one, two, and so on, and we take them in the order in which they are put in. We do not take them out at the same time; if we do they injure themselves. We have taken them out the cellar all at one time and they have created a great furore and try to get into two or three hives in one corner of the apiary, and these hives are of no use afterwards and we have lost all those fine bees in the spring. In putting them into the cellar we take them from all over the apiary; they are in clumps of five and we take one and that leaves three and commence again, and when there are two we commence again and leave one. They can never fail to go to the same place again, and then

no rushing all into the one hive. As to the cloths, we do not like the cloths because they are dirty and they blow away in the summer season when you are working and you have to get a boy to pick them up and fetch them back. If you have a good board it does not run away.

Mr. Holmes: I would like to ask Mr. Sibbald if his paper said that the form for placing the hives on in the cellar should be so arranged that the front of the hive should be about three inches lower than the rear?

Mr. Sibbald: Yes.

Mr. Holmes: Then you said to put an inch block under the rear of the hive, between the hive and the bottom board?

Mr. Sibbald: Three-eighths of an inch.

Mr. Holmes: And when the next tier goes on top of that put on another three inches for the next row?

Mr. Sibbald: Yes.

Mr. Holmes: It occurs to me that the time you would have put on three or four rows of hives you would have them pretty well tilted up. Would they not be in danger of slipping off?

Mr. Sibbald: The top one would only have about three-quarters of an inch more slant than the bottom. Three times three eighths—count that up.

Mr. Sparling: Nine-eighths.

Mr. McEvoy: We have a gentleman here from the United States who has some sixteen hundred and forty colonies—Mr. Coggshall; we would like to hear from him.

Mr. Coggshall: I winter in sawdust out doors. I never winter any in cellar. I tried it once but didn't succeed; the cellar wasn't right. I have always wintered out doors in sawdust. It would be a good deal of work to draw them home in the winter. I think. I use packed hives alto-

gether or large boxes that I pack them in.

Mr. Sparling: How much packing do you use?

Mr. Coggshall: Two or three inches; some of them would have four inches. I prefer the sawdust because the mice won't work in it.

Mr. McEvoy: About how far below zero does it go in your locality?

Mr. Coggshall: Down to thirty.

Mr. Hall: Did you ever try forest leaves?

Mr. Coggshall: They are excellent.

Mr. Hall: Did you ever try them?

Mr. Coggshall: I have in one or two of my apiaries. They are an excellent thing; there is not anything better I can assure you.

M. Dickenson: I winter in the cellar. I don't know anything about out door work. Our friend Mr. Coggshall is an out door man altogether. I should judge he would be because of the number of colonies he has. It would take a good many cellars and pretty large ones at that to hold all the colonies he has to winter, but I have been of this opinion for a number of years that bees can be wintered successfully out doors or in cellars; it is all in knowing the two different systems, and it is just as possible to winter successfully in the cellar as it is out of the cellar.

In regard to Mr. Sibbald's paper, in numbering his colonies, or having the colonies so that they will all go on the same stand's again, I find a good way to do is just to number the hives so that there will be no mistake because I think it is important that the colonies should go back on their own stands. I take a shingle or piece of board, or anything that is handy and draw a few lines and mark the numbers so that I will understand thoroughly. If there is a blank there will be a blank marked on the plan. I find by having this piece of board

marked in that way there is no trouble about getting the colonies back on to the same stands they formerly were on.

Mr. Hall: I will improve on Mr. Dickenson's plan. We put ours four on a stand and in the fall when we are putting them in we mark on them, for instance, B northwest, B southwest, B north-east, B southeast; they are marked right on the front of the hive and when we take them out of the cellar we run over them and put each hive where it belongs. I find it very essential to put them on their old stands for various reasons; there are some of them which are cross, others good tempered, others pretty, others are not, others good honey gatherers, others are not. We get acquainted with these individual stocks of bees through the summer and if they get mixed up with others in the spring, we don't know where to find them, and the summer goes by before we find the characteristics of each stock of bees in the apiary; but by putting them on the same summer stand we have no trouble that way.

We winter one of our apiaries in the country, out doors and with leaves. If Mr. Cogshall will try leaves he will never go back to sawdust. I find sometimes my boxes leak, and if the sawdust gets wet the moisture won't dry out of it; it is different with the leaves and they last for years. I believe that packing with forest leaves is superior to sawdust or chaff. I prefer wintering them inside whether the quantity is large or small; it is much easier to carry them in and out again than it is to pack them. We winter one hundred and thirty stocks of bees in a small cellar 12x12.

Mr. Post: I usually winter both indoors and out. This year I am not wintering any out doors on account

of not getting my bees home in time to transfer them to the chaff hives. In the last three or four years in wintering forty-five stocks outside I don't think I have lost half a dozen colonies. My hives are filled in with sawdust four inches all round and two inches in the bottom and permanently packed to remain winter and summer and I have a cushion of about three inches of forest leaves that goes on top, and they are put in with a press so that there is a large quantity put in each one and a cloth over the top and bottom. That cushion goes over the top of the hive and the sun cap behind is raised up and rests on the top of that rim. That is the only way I can winter bees outside and I have tried almost every other way. The sun cap is four inches deep and it telescopes down over the hive three-quarters of an inch, resting on cleats. I don't allow the cover to go down; I raise it up behind. About the first of March I shut it down; it is painted red and forms a regular hothouse.

Mr. Hall: We don't live in such a cold country as you. We have a large entrance; it is one half an inch deep and five inches wide, and is four and a half inches back from the front of the box.

Mr. Post: My entrance is three eighths of an inch by the whole width of the hive and it is left open during the whole of the winter. I can't winter with a small entrance on the outside. Inside they are piled in the cellar in the usual way; I raise them on blocks behind, similar to Mr. Sibbald. They are carried into the cellar now and the cellar doors and windows are opened and they remain open until cold weather sets in; they are just the same as though they were under a shade or cover outside. When extremely cold weather sets in the doors are closed and they are

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to remain for the winter.

Mr. Holmes: Do you remove the propolis cloth for wintering?

Mr. Post: I don't have a propolis cloth; I couldn't be hired to have one.

Mr. Hall: It is a dirty thing.

Mr. Gemmell: I am glad you have come to our rescue. I was defending the plain board for a cover and they voted it down.

Mr. Hall: They haven't tried it or they wouldn't have voted it down.

Mr. Gemmell: The only difference between us is the way of doing it. I want to thank Mr. McEvoy for telling us about the leaves.

Mr. Miller: I wintered indoors successfully for a number of years by removing my hives from the bottom boards when I put them in. I placed one hive on top of two covers. Of late I have been wintering outdoors with shavings; I like them much better than the forest leaves.

Mr. Gemmell: What is your entrance?

Mr. Miller: I leave the full width of the hive, one-half an inch, with a block at the front of the breach, leaving about an inch actual entrance.

Mr. Post: In wintering outside do you elevate the back end of the hive much?

Mr. Miller: I do, by putting packing under it.

Mr. Post: But the hive proper is raised behind?

Mr. Miller: Yes; I elevate it probably three inches; sometimes I remove the cover and sometimes I do

Mr. Smith: Do I understand, Mr. Post, that you use the cushion and the leaves right on top of the frames?

Mr. Post: There is a cloth laid over the top of the frames, although lined with cloth over the bottom, I do that to prevent the bees in

the early spring putting propolis on the cushion.

Mr. Smith: I was under the impression you didn't use a cloth. (Laughter)

Mr. Heise: Mr. Sibbald in his paper mentioned four different kinds of packing, sawdust, chaff, cork shavings and leaves. I would like to know, in using those leaves, whether they are compressed or only put in loosely?

Mr. Evans: I don't think Mr. Sibbald was speaking of wintering outside; I think he winters altogether in the cellar.

Mr. Heise: This was outside.

Mr. McEvoy: There was another thing, keeping the snow away from the entrance.

Mr. Post: I place a small piece of board in front of the entrance to keep the snow from drifting in and to keep the cold wind out.

Mr. McKnight: We have heard a good deal about the material used for packing. Chaff has been spoken of here. If chaff is ever put as packing on top of the hive no greater mistake could be committed, because it will absorb the moisture. What is up there should not be an absorbent, it should be a transmitter to allow the air to pass through and not to confine it. Chaff will mildew at the sides. If it is kept perfectly dry it is right enough, but if the least dampness gets in it will do the same thing around the sides. I quite agree with Mr. Coggs shall as to the utility of the sawdust. I question very much if forest leaves are any better than sawdust of the right kind. It answers the purpose, and it answers it admirably, but it is not every kind of sawdust that should be used. No green sawdust should be used in packing. The sawdust that should be used is the sawdust you get in the planing mill from dry boards. Cork dust has been spoken of; that is better than

any other material that has been mentioned yet, but it is a little difficult to get. I think I was the first to use that. It is not to be had easily except in the neighborhood of towns and then it is only to be had from grocers who bring in these Malaga grapes during the season and quite a quantity can be collected in that way. As to Mr. Sibbald's tilting up his hives in the rear and blocking them there to the extent of three-eighths of an inch, I am not sure of the validity of his reason for doing that. If I understand him aright, it is for the admission of fresh air, which, he says, passes up through the cluster and gets heavy and falls to the bottom and passes out at the front entrance. I don't think that is just the fact. I believe the air that passes up through an empty space becomes rarefied and lighter and does not become heavier and descend to the bottom. And here comes in one draw back in the propolised quilt, it will not permit of the rarefied air that has been de-oxygenized or the oxygen absorbed out of it, to filter through the quilt. It is almost as impervious to either air or water as the board is. I think these forest leaves, so packed in is a capital thing for that; I believe they have a tendency to keep the interior of the hive dry and in good condition. Years ago I experimented on all kinds of packing and latterly I became somewhat indifferent as to some of the methods that were advertised and largely advocated. A great many of the fads have passed out of practice altogether in bee-keeping and I think a more common sense plan has been adopted largely from experience.

Mr. Evans: I would like to know if any of the bee-keepers present have had any experience in keeping bees in long clamps—eight or ten in a clamp, outside, packed in sawdust. I have kept mine for a number of

years and I have found some difficulty with some of them coming out very strong and some very weak. I believe there is that difficulty in keeping them in that way. I would like to know if any of the other bee-keepers have had any experience in that line.

Mr. McKnight: I have had sufficient experience never to try it again. With regard to a house especially constructed for bees, sawdust was largely advocated for packing when above ground, but it does not do below ground. I would advise any man thinking of that kind of a thing to never use sawdust. The reason is, no matter how dry it is it will dry-rot the posts that form the frame of the building. That kind of house was a great fad one time. I put up a house of that character and I believe it was one of the best of its kind but to-day it is pretty nearly ready to come to the ground.

Mr. Hutchinson: My experience of clamps was not such clamps as Mr. Evans had reference to. He had reference to the packing of bees above the ground where they would have an opportunity to fly. My experience has been in wintering bees in clamps under the ground, burying them like potatoes—pitting. I have had no experience in putting them in long rows and clamps in that way. The only object I can see is if a man is in a locality where he must protect them and he has no cellar, that is a makeshift, that can be done, but that is the advantage.

Mr. Heise: Mr. Sibbald, I think you spoke about using four inches top packing. Is that compressed or thrown in loosely? My reason for asking the question is that I think Mr. Newton referred to the top packing as ten inches and Mr. Sibbald as four inches.

Mr. Sibbald: Mine was sawdust. I never used leaves at all, although

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believe the leaves are all right. I have wintered more in the cellar than outside and I prefer cellar wintering. I would like to ask Mr. McKnight if he ever tried the system of blocking the hives up?

Mr. McKnight: No, I never did.

Mr. Sibbald: I have tried both and I am in a position to know, and I know from actual experience the air does pass in the back, up through the cluster and out the front, because at the front of the entrance you will often see drops of moisture and at the back you will find it quite dry, and I thought from that that the air was surely passing from the back up through the cluster and out. Whether the air would be heavier after passing through the cluster or not, I do not know, but I always thought when the oxygen was taken out of air it was heavier and passed down. I may be wrong. At all events, the fresh air coming in the back would force the foul air out the front entrance.

Mr. Gammell: It carried the moisture down to the entrance?

Mr. Sibbald: Yes.

Mr. Smith: I think if Mr. Sibbald's temperature was high enough in his cellar he would see no drops of water.

Mr. Hall: It makes no difference about the scientific question as to oxygen or nitrogen. I raise mine in winter because it is more convenient. We raise them from one and a half to two inches. The reason we do it is the combs come out sweet and clean in the spring instead of being mouldy; we do not give a rap whether the moisture goes in or comes out.

Mr. Smith: I think if Mr. Hall would loosen the quilt a little at the front it would answer just as well.

Mr. Hall: I couldn't do it, sir. You wouldn't loosen my quilt. We look a little ahead. We don't meddle with the stocks of bees when we put them in the hives until it is warm enough for them

to fly. If we want to look at them we look at the bottom, not at the top. I don't care anything about where the oxygen goes out or the nitrogen comes in, I know it keeps the combs from moulding. I have a board cover; as the bees leave it, we prefer it that way.

Mr. Smith: If Mr. Hall would loosen the cover the least bit, with temperature right, the bees would all leave the bottom board, anyway, that is a little on the slope.

Mr. Hall: My bees are hanging down below the bottom. The temperature in my place is 50 and as quiet as it is in this room. The temperature doesn't make so much difference if the atmosphere is pure. We have a door and window with a dark screen in it and if you put your hand to the chimney you will find a tremendous draught of air; it is pure; if the temperature goes up to 50 degrees they don't mind it; if you keep them down to 44 they want to get out, they want to fly.

Mr. McKnight: I once saw a bee hive in the garden of the State of New York and it had no bottom and the combs were hanging down below the edge of the hive proper.

Mr. Hall: I will tell you a story about that. I went to a friend of my wife's—I didn't know the old gentleman till I got there—he was seventy-eight years of age; he had a row of bees, there might have been twenty or thirty. The fence formed the back of the shed and then there was a roof to it and he had the hives two deep on it; he had four poles running from end to end of this shed, and his box hives were set on these poles and the combs were hanging down fourteen, sixteen and seventeen inches. His reason was on account of the moth and in that way the moths did not destroy his bees.

Mr. Armstrong: I was going to ask

Mr. McKnight why it was he didn't succeed with chaff. I have wintered bees what I call successfully, with only from one to ten per cent. loss in the winter, and I have used wheat chaff, oat chaff and sawdust, and I can't see a particle of difference. I generally pack from four to six or eight inches of packing on top, pressed down with my hands; I leave a small space under the cover between it and the packing. I never let the packing, if I can avoid it, come up tight against the outer cover, otherwise, the moisture will strike there and the chaff will get damp and rot. If you leave a small space there there is never any trouble with the chaff getting damp or rotten. My entrance is five inches by three-eighths of an inch.

I was also going to ask Mr. Hall if it was really necessary to have the entrance the full width?

Mr. Hall: If I had my choice in making packing cases again I think I would have it the whole width of the hive. My entrance is one-half an inch by five inches.

Mr. Post: My experience is identical with Mr. McKnight's with using chaff. Forest leaves are the best.

Mr. Heise: Was the chaff in the cushion?

Mr. Post: No, thrown in loosely.

Mr. McKnight: It is worse in the cushion.

Mr. Post: The chaff was placed in the top story with a cloth underneath but it got wet and mouldy; there was over 69 per cent. of the bees that were blue and the combs were blue moulded.

Mr. McEvoy: One of the greatest drawbacks is the use of a cushion filled with chaff; the bottom of the hives get choked with snow; the steam rises and goes up into that cushion of chaff which will hold it, and then zero weather sets in and the

chaff in the cushion gets frozen. With green sawdust packing such as Mr. McKnight spoke of, if you use much of that, it is like a little refrigerator. If the sawdust is perfectly dry and not too thick, all right.

Mr. Armstrong said he threw the packing on loosely. He lives away in South Ontario and Mr. McKnight lives north. It makes a difference where you live; you may be both right.

Mr. Armstrong: We never have it go much lower than ten degrees below zero and it will not remain for more than two days.

Mr. Post: We get it from 10 to 14 below zero for ten days.

Mr. Fixter: Has any one ever tested outside as against inside wintering in reference to the amount of honey consumed? Also, has anyone kept track of the time in packing as against carrying them into the cellar? I might as well tell you my experience. I think there is more honey wasted than will pay for building a proper cellar. And in the time consumed and the trouble in packing I give you will carry 6 into the cellar.

Mr. McKnight: Seven or eight pounds of honey will keep a hive in food for five weeks.

IMPROVEMENT OF STOCK.

By G. M. Doolittle in American Bee Journal.

All apiarists who have an eye to the betterment of their condition along the line of a better honey yield know that some colonies in the apiary gives better results than others. Thus we often hear beekeepers say, "If all the colonies had been as good as was No. 12" (number 45, or some other, as the case may be) "I should have had several hundred, if not thousand, more pounds of honey than I secured this year." Well the question is, Why not have all the colonies in the apiary as good as number 12? We must

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not accomplish all we would like to in one year, but by superseding all the poorer queens in the apiary by those raised from number 12, we certainly should be advancing our apiary up the scale toward number twelve's yield. This is what I have been working for during the past thirty years and it gives me pleasure to say that my colonies average very much more nearly alike in their yields, and the average yield per colony is much higher in proportion to the yield of nectar from the nectar bearing flora than it was when I commenced. And to improve our stock we must supersede our poorer queens with those from the better stock. I find that there is no time in the year in which the queens are so generally superseded as immediately after the principle honey flow. And we can always rest assured that when the bees are willing to do such work, then is our best time. With me, fully three-fourths of all the queens superseded by the bees are so superseded during the three weeks immediately following the basswood honey-flow. Knowing this fact I have, for years, done the most of my queening at this time of the year, and with success that has always pleased me, and that without interfering with my honey crop in the least. To this end I start a greater number of queen cells than usual from five to eight days before the expected close of the basswood honey harvest, and when these cells mature, hunt out the old queen and dispose of her, giving a mature cell twenty-four hours after having removed the the old queen. When cell protectors are used, the cell can be given at the same time of removing the old queen, thus saving the opening of the hive; for, as a rule, the bees allow the queen to be removed all right where a cell-protector is used. If the young queen emerges

from her cell in an hour or so after giving the cell, or before the bees are aware that their mother is gone, they will sometimes kill her and start cells from their own brood; but if the cells do not hatch in less than from twelve to twenty-four hours after the old queen was removed, nearly every queen will be accepted all right. By raising the queens before the honey harvest closes; that is, the bees doing the feeding of the embryo queens while in the larval form before the honey flow is over; they are sure to be fed in such a way that the very best of queens are produced, this also having a great advantage toward accomplishing our object over and above what would be if we raised our queens before the harvest commenced, or after it was over.

Another plan which I have often used since my apiary became very much improved beyond what it formerly was, is to raise a lot of cells from my best queen at the time given above, and, twenty-four to forty-eight hours before they are booked to mature, give one to each colony having a queen more than one year old, using a cell-protector for each one, and placing this protected cell in one of the sections on the hive, or anywhere I best can where the bees can cluster about it, without hunting out the old queen at all; when, if the bees have any notion to supersede their queen, they will accept of this young one and destroy the old queen. If they destroy the young queen I allow the old queen to remain, thinking that the bees know what is right, and in nineteen cases out of twenty where the bees decide on keeping the old queen I find she improves par excellence till after the honey flow of the next year is over. This is something that does not cost much labor and which I practice much to my satisfaction.

THE
CANADIAN BEE JOURNAL

Devoted to the Interests of Bee-Keepers,
Published Monthly by

GOOLD, SHAPLEY & MUIR CO
(LIMITED)

BRANTFORD - CANADA

Editor, W. J. Craig.

AUGUST, 1901.

EDITORIAL NOTES.

The Industrial, Western and Central Exhibition prize lists are well worth the consideration of progressive bee-keepers. We hope to see creditable displays and keen competition at these centres. The management assures us that every consideration will be given to the comfort and advantage of exhibitors. For dates, etc., see advertisements.

We recently had the pleasure of a visit from Mr. W. Z. Hutchinson, editor of the "Bee-Keepers' Review." Bro. Hutchinson is looking well, has been making a short tour with his kodak among his Canadian bee-keeping acquaintances. He regretted his inability through lack of time, to call upon a number of friends that he had intended to visit. Among those he especially mentioned were Mr. C. W. Post, Mr. Deadman, Mr. Heise and Mr. J. H. Shaver.

Secretary Mason of the "National Bee-Keepers Association" requests that we repeat the convention notice given in our last issue:—"All ar-

rangements for the next convention of the National Bee-keepers Association have been completed in so far as possible, and the convention will be held in the lecture-room of the Buffalo Society of Natural Sciences, on the 10-12 of September next, commencing on Tuesday evening.

The Natural Sciences Society, through Mr. Smith, its president, has also very kindly offered our association the use of their library and other committee rooms during its meeting, and to do all in its power to help make our convention a success. The place of meeting is in the Buffalo Library building, on the corner of Washington and Clinton streets, near the business centre of the city.

Railroad rates will vary in the different passenger association territory, from one cent a mile each way to one and one-third fare for round trips. Each one can readily learn the rate on enquiry at their railroad station.

The Buffalo bee-keepers will try to provide entertainment at reasonable rates for all attending the convention who will notify Mr. Sidney S. Sleefer of Holland, N.Y., of their wish for entertainment, on or before Sept. 2nd.

In a letter just received from Mr. Sleefer, he says, "We want all to come that can, for we wish to make the Buffalo meeting the most pleasant and instructive one that was ever held in America. We will have the cooperation of the Society of Natural Sciences as well as the School Board, and names some professional men who are interested in our specialty and will be at the convention to help make it instructive."

In a long letter from Mr. Hershiser just received, he closes by saying "call upon me for whatever further assistance I am able to render," and Mr. Penton, an ex-president of the Erie County Bee-keepers' Society, and others have offered to do all they can

to provide for the comfort of the delegates.

As stated in my previous convention notice there will be no fixed program and no papers and the time will be occupied in the answering and discussing of questions.

Arrangements have been made for a joint session of our association with the American Poenological Society on the evening of the 12th, to discuss the mutual relations of bee-keeping and fruit-growing, and Prof. Beach, of the N.Y. Agricultural Experimental Station, and Prof. Fletcher, of the Central Experimental Farm of the Dominion of Canada, will help talk for the bees at that session. As this is the first time bee-keepers have had a meeting with the Poenological Society, it is hoped that much good will result to fruit-growers and bee-keepers' from this joint session, for we expect a large attendance of the members of the Ontario Bee-keepers' Association, and many of the leading bee-keepers of N.Y.

If any bee-keeper who cannot be at the convention has any knotty questions he would like to have answered the convention, will send them to me I will see that they are presented."

A. B. MASON, Sec'y.

Box B., Toledo, Ohio.

The Honey Crop.

The honey harvest is practically over, and bee-keepers are looking around and enquiring what the results have been. From the district reports received and published from time to time, and from other sources of information, we conclude that there has been a fair average general crop, nothing extraordinary. The actual amount of the honey crop is not by any means great

we must remember that there is not nearly the number of bees in the country that there was a year ago. In some districts the winter and the spring loss has been estimated at about forty per cent. Taking these things into consideration we do not see any possibility of the market being glutted, or the need of bee-keepers selling at extra low prices. Small bee-keepers, and indeed some of the larger ones who "do not think it worth while to take a bee journal," are making the usual mistake of rushing what they have got on the market, and selling "in trade" to the grocers, and as a result the prices are probably lower now than they will be after these people get cleared out.

Editor Root in "Gleanings in Bee Culture," makes rather an interesting statement in this connection; he says that "the Root Company finds it can buy honey from those who do not read bee journals at a lower figure than from those who take one or more, and keep track of the market; and that it is a fact that the fellow who thinks he cannot afford to take a bee journal will sell his honey enough lower in one season to pay for all the bee journals for ten years."

Hutchinson is right in preaching "more bees." I find in my travels that the most successful bee-keepers—those who make money—are those who run from 500 to 1000 colonies, and some of them make more clean cash than the ranch and fruit men with ten times the investment.—Ed. E. R. Root, "Gleanings."

LONG TONGUED BEES—Fad or Fallacy, Which?

By G. M. Doolittle

Of late years some of our newspapers start off with some new idea, or some old one revived, and in a little while the heads in all beedom seem to get twisted out of the "straight and narrow path" and run off after an "apparent something," which a few years later, is dropped as if it never had an existence, with hundreds and thousands of hard-earned dollars wasted over the hobby or fad.

The fad now "on" seems to be "long tongued bees," the fad having run long enough, and the excitement become great enough to warrant asking \$10, \$15 and \$25 for queens, giving bees having a certain length of tongue-reach. And our good Editor York is compelled to fall into line with the announcement at the head of his advertisement, "Long-tongued bees are demanded now" Of course, the "fad" has caused the demand, and no one blames the editor for heading his advertisement in accord with that truth. But is the fad founded on truth or fallacy? That is the question that should be asked in all seriousness, before more money is wasted on the fad.

Long-tongued bees are either better workers, or they are not better. Then they may work on red clover where that abounds and be a great advantage there, without being any more industrious at gathering honey from apple-bloom, basswood or buckwheat, the nectar from which any bee could reach having a tongue not more than half as long as the shortest tongues measured. That being the case, long-tongued bees would be an advantage only to those residing where red clover and other long-tubed flowers abound. This brings me to look into this part of the matter, for

red clover has not blossomed to any extent in this locality for the past 15 years, owing to a "midge" or very small larva which works in the head just before it would blossom, thus reducing what used to be fields "red with clover blossoms" to fields having a dull-brown color, which is assumed at blossoming time from the workings of this pest in central New York. So, if these long-tongued bees are no better otherwise, their working on red clover is of no advantage to me. So I turn to the testimony

On page 220 of March 15th Gleanings in Bee-Culture, I find these words:

"The movement for longer tongues is simply to get the red-clover crop of the North, which now is practically all wasted. The bees no one claims would be any better except on that account."

If the above is correct, then these long-tongued bees are of no special advantage to me, nor to two-thirds of the acreage of North America. And yet I find parties in the extreme Southern States and Texas, heading their advertisements, in that very same number of Gleanings, with "Long Tongued Queens" just as though such long tongues was the great desideratum for that Southern country, when according to the reading columns of the same paper no one should say they were any better. But such claims are being, and have been made. Let me quote a few of these claims:

"Heretofore I could only assure that the bees were superior, that they would store more honey, but I could give no reason why, except that the trait had been developed by years of selection and careful breeding; but now I can say why, or at least, give a reasonable reason why."

And what is that reason? "They have very long tongues." (Gleanings

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ings for Jan. 1st, page 32). If there was any thought about red clover in the author's mind, no hint is given to that effect.

"The fact begins to dawn that bees, in order to make a better showing in their hive than the bees of another, must have long tongues." (Gleanings for 1900, page 882). These words are given in connection with bees living in the State of New Mexico, where no red clover grows, if I am correct. "It is the old story. In every case where we have long-tongued bees we have good honey-gatherers." (Page 881, same number of Gleanings). Not the least hint at red clover here, either. "We have now learned the secret of their great honey-gathering qualities. It exists, as I supposed, in the great length of their tongues." (Gleanings, page 813, 1900). "Another record-breaking queen whose bees have long tongues." (Gleanings, 1900, page 844). "Long tongues and good working qualities go together." "The evidence is still piling up, to the effect that long-tongued bees are the ones that get the honey."

And so I might go on giving quotation after quotation of statements made along this line, without any special qualification, or, if any qualifications have been made they have been so hidden under a mass of rubbish, or so twisted that the reader is led to believe that long-tongued bees are just the thing he should have if he would succeed, in the matter about red clover, or in that portion of the country he resides.

Now, as I hinted in the start, long-tongued bees do have an advantage outside of the red clover districts, or they do not, and to give misleading statements, or those actually false, is something that our bee-papers in the present day should not stoop to

doing, not even when the motive of gain prompts its advertisers. I am satisfied that long tongues are only of advantage to those in red clover districts, if they are of any special advantage anywhere, for the reason that I have repeatedly had colonies that I considered hardly up to the average during certain seasons, (and would so mark the hive, preparing to supercede their queens in future), that the very next season would go ahead of many others which I had marked as the best I had in the yard. And such reports have come to me from many bee-keepers in other localities.

Then, there is another thing which casts a shadow of doubt on this whole measuring matter and that is that many admit that there is nothing of minute exactness about it. Undoubtedly, a bee with a tongue only 50-100 of an inch long can be told from one having a tongue reach of 20-100; but with the most exactness and the nicety of the instruments used at the Medina establishment, we have this strange admission by E. R. Root, found on page 579 of July 15th Gleanings for 1900:

"All the tongues I measured would reach easily 15-100 inch. By exerting a little pressure on the head of a decapitated bee just chloroformed I could get most of the tongues to stretch to 18-100."

With such an admission as this from one who has all the paraphernalia in his establishment for nicety of work, what can be expected from the thousands of bee-keepers that Dr. Miller would have set at this work? And so one of my correspondents can be excused for asking me the question, 'Do you not think that one of those queens advertised on page 240 of the American Bee-Journal at \$10, could, 'by exerting a little pressure,' have its tongue

stretched so as to make a \$25.00 queen of it?"

There are times when it is necessary that a "halt should be called" by some one, and as no one has seen fit to do this, I have felt it my duty to do so, that too much money need not be sunk by this latest fad, even if we do not call it a fallacy.—American Bee-Journal.

Onondago Co., N. Y.

Improvement on Veil.

Take a piece of about No. 12 wire or lighter, and bend into an oblong square about 9x12 inches, (a circle might be just as good). Sew this to the face of your veil, stretching the face of the veil across the square as you sew it on. Instead of slipping the lower end of veil under the suspenders, put a drawing string at bottom and draw around the neck. This applies to the No. 1 or 2 veil commonly shown in catalogues of bee-keepers' supplies. The wire keeps the face of the veil from falling in folds before the eyes, and thus obstructing the view; and being fastened at the neck, gives a more free use of the arms and head.

Try it and be convinced. It will do you more good than a bottle of Swamp Root.—S. E. Miller, in "The Progressive Bee-Keeper."

Dr. E. H. Thurston thinks he has found a true antidote for the sting of bees. It is a carbonate of ammonia, powdered and kept in a tightly corked bottle. When a sting is received the surface over the wound should be wet and a small amount of the powdered carbonate applied. The pain is instantly relieved, and the injured place never swells.

Prices on California Sage Honey.

Southern California will not have the big crop that was expected earlier in the season. The rain fell short at just the critical time. But some of the buyers and commission merchants are trying to cram the idea into bee-keepers that the yield has "been tremendous," and in consequence, are making low offerings. A few who need ready money may have to take advantage of the low market; but I am satisfied that prices will advance a little later as soon as some small lots are sold. But I know of some large lots that will be held till better prices are obtained.—Gleanings.

Honey Imports.

The value of honey imported into the United Kingdom during the month of June, 1901, was £2,404.—From a return furnished to the British Bee Journal by the Statistical Office, H. M. Customs.

Mr. James Armstrong, Cheapside District No. 8, writes: "I find that as a general thing the honey crop has been fair in our district. Some places promised a big crop, but dropped off very short. At my out yard I got no surplus after July 4th, but at my home yard I got my largest yield. I would advise all those having honey to sell, not to fall over on another rushing it to market at low price."

A grocer at Dantzig, Germany, has been condemned to a fine of \$18.00 for selling manufactured honey instead of the genuine article.

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OUT APIARIES. — PROFIT AND LOSS.

(Fifth Article.)

G. A. Deadman, Brussels.

It is said that "fools rush in where angels fear to tread," so I am thinking, Mr. Editor, that it would have been much more in place could we have had articles dealing with this subject from some of the "big guns" who have out-apiaries almost by the dozen. We take it for granted that they are managed entirely different from anything I have described. What I have written refers only in a small way to an apiary at home or abroad without natural swarms. Those who are engaged with other pursuits can manage a small apiary by these ways and still attend to their regular business. I would say, however, that frequently in bee-keeping, as with the weather, "all signs fail," so that what works charmingly one season may be anything but so another. I found this season that some colonies, unlike last year, seemed to prefer the brood chamber for storing honey rather than the surplus department, so that frames of foundation that last year would have been partly neglected, this season were filled, or nearly so, with honey, decreasing the surplus but, of course, increasing their winter supplies. I promised in your last issue to give an estimate of the time given to, or the profit and loss of a given number of colonies, in an average season, in an average locality.

I remember on one occasion after Miller had secured a crop of honey the editor of "Gleanings" put the question, "Now, Dr., how much honey did you give to securing this crop?" I never remember seeing an answer to this question. We frequently see in the journals how many lbs. of honey a given number were extracted in a given time, but I

have never yet seen an estimate of the time required to catch and cage a certain number of queens, or to make as many artificial swarms, or to destroy all queen cells, or if you like, the time given to an apiary from the beginning to the close. I am not prepared to say which would take the most time, an apiary run without natural swarms or one run with them. I know this, however, that in many cases I could artificially swarm, and prevent a colony from swarming, in much less time than it took to have it do so. Natural swarming is ahead in one respect at least, which is, that in a properly managed apiary many colonies do not swarm so that unless necessarily absent from an apiary for days at a time, I would not interfere by caging queens or any way I have described to prevent it. I am not sure, after all, whether we can arrive at anything very definite as to time required to find and cage a queen, or other things, because a great deal will depend upon the "fixtures." If your frames are "readily movable" with the top bars (and sides too) free from burr and bridge combs, then much greater speed can be attained. The apiary I base my estimate upon (it will be fairly estimated) is one that contains frames that I purchased with bees on them. They are a standing witness that deep top bars will not prevent bridge combs when not the proper thickness. These are only $\frac{7}{8}$ thick though $1\frac{1}{4}$ in. deep and the consequence is they are almost filled with bridge combs, and too frequently attached to the sides of the hives as well. It may be that some of these "lightning" fellows will think I am altogether too slow; well, I would say that those who know me best do not think so, and the party who is now managing the Owen Sound apiary is not by any means slow, and

the care of this small apiary of 24 colonies has been between us. The day we caged the queens he started on his wheel and began work about half-past one. He took a lunch with him but he did not even take time to eat it, lest under the shade of the big maples he would lose sight of the queens before sunset. Well, he got through with finding and caging these but had no time to spare. I would say, however, that it was a windy day and the bees were not only numerous but cross, with two or three colonies of bad hybrids thrown in. In nine or ten days it took nearly as long to examine carefully and remove all cells, and I have found that to examine for queens, and make divisions, takes well on to 6 hours, or fifteen minutes to a colony. This is, of course, when every colony requires some attention that we have to go to the brood nest to do. To go over one hundred and fifty colonies may be an easy matter early in the season, compared to one-fifth that number at swarming time. I first intended including the time and expense of going back and forth, but I will purposely omit this, so that it will apply to a home apiary also, leaving those who wish to figure for themselves the extra expense or time, should they decide to establish out-apiaries in their neighborhood. I look upon a beekeeper who understands his business as a skilled workman and entitled to good pay, not only this, but there are only certain days in the year that he can work with the bees and therefore requires extra pay on this account. Our estimate will be based on one dollar per hour for every hour spent in the apiary on work that can only be done when the weather is favorable. Any work that can be done indoors by hired help, or otherwise, can be estimated accordingly. It is supposed you will "make

hay while the sun shines," and although ten hours may be considered a day's work, you will, during the busy season, be engaged from twelve to fifteen hours, i.e., if you have many bees to look after:—

- April—Examining to see if sufficient food supply; crowding up when necessary and cleaning bottom boards of weak colonies and to see if all have queens, 5 hours.. \$ 5 00
- May—Clipping queens and giving more room when necessary, 4 hours..... 4 00
- May—Giving more room when necessary either in brood chamber or surplus department, 4 hours 4 00
- June—Artificial swarming and putting on supers, 6 hours.. 6 00
- June—Examining brood (removed when preventing swarms) after seven days for cells, 4 hours..... 4 00
- June—Examining parent colony after eight days to see if no cells and all O.K., 5 hours 5 00
- June—Extracting 500 pounds honey, 5 hours, self and man 5 75
- June—Examining 16 colonies (made by removing the brood from old colony) to see if queen is laying, 3 hrs. 3 00
- July—Extracting 500 pounds honey, self and man, 5 hrs.. 5 75
- July—Removing supers and seeing if sufficient left for winter stores, and extracting 200 lbs. honey, 5 hours... 5 75
- Sept.—Doubling back extra colonies; reserving the best queens, 10 hours..... 10 00
- Oct.—Putting on cushions, fixing up for winter, 5 hours.. 5 00
- Interest on investment, say... 20 00
- Contingencies, extras, etc.... 6 00

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 The wax from cappings can be used to replace broken or damaged combs.

DISTRICT INTELLIGENCE.

District Number 1.

Clover yielded well; basswood, as far as I can learn, yielded well also; buckwheat in full bloom; the dark stuff is coming in fast. A fair honey crop for the season.

W. J. BROWN.

Chard, July 20th.

District No. 2.

Bees have swarmed more than abundantly in this section, and that without filling their hives. Clover was great, but for some reason the honey did not come in in a satisfactory way. Colonies are strong and swarms large; basswood bloom is abundant but my bees are quiet; have not seen a bee on the trees. Swarming appears to be over for this season. Don't know whether there will be much or any buckwheat. I have no honey for Pan-American.

J. K. DARLING.

Monte, July 12th.

District No. 3.

The general result of apiarian operations in these counties to this date is such as the very favorable appearance and general prospect of the earlier part of the season gave warrant in anticipating. The clover bloom was abundant and the atmospheric conditions were favorable, but most yards from which I have been able to get a report, excessive swarming stood in the way of securing large or the best results. Then came the basswood and with it came a awful heat (too hot) followed by high temperatures and shady, cloudy days for quite a spell. However, in the face of all these disquieting, disturbing and disturbing combina-

tions, the crop will be rather above the average of four or five years past.

M. B. HOLMES.

Athens, July 27th.

District No. 5.

In our vicinity the season has been almost a complete failure.

J. W. SPARLING.

Bowmanville, July 27th, 1901.

District No. 6.

Honey season over; crop a fair average; clover yield light; basswood good while it lasted. Honey first-class in quality. J. D. EVANS.
 Islington, July 26th.

District No. 7.

Clover has yielded fairly well, basswood very light yield, too dry and no dew at nights seems to be the cause.

Yours A. Pickett.

Nassagawey, July 24.

District No. 9.

We have had a very fair crop. Basswood has been a good crop, but I think about to a close. There is still lots of white clover and thistle in bloom. Am still looking for more.

JOHN NEWTON.

July, 20th.

District No. 10.

The flow from clover and basswood has lasted just one month, it being over at the present writing. The bees are, however, working a little night and morning on thistle, and an odd bee can be seen at times on a stray head of white clover, but the season is practically over so far as white honey is concerned in this locality. The quality is A1. The season has not reached the anticipations of many of the local bee-keepers, and is about what I expected. The crop is not large, and the advice already given is not to be in a great hurry to sell at give away figures.

F. A. GEMMILL,

July 22nd.

\$90

District No. 11.

The honey crop has been a good one; clover and basswood have yielded well; white clover is pretty well dried up now owing to drouth. Prospects for a fall flow are not encouraging, but too early to pass a judgment. Prices for honey should be good owing to less bees throughout the country than formerly. What is the matter with the O. B. K. A. sending a few carloads of honey to England? W. A. CHRYSLER.
July 26th.

Division No. 12.

Basswood turned out very well. There are not many bee-keepers around here, but, as far as I can learn there was very little surplus from clover. We are having nice rains now, and hope for a good flow from buckwheat. S. WOOD.
July 29.

BEES AND ALFALFA.

The introduction of alfalfa into Kansas has made the state richer by \$6,000,000. But the discovery that the honey bee can feed on alfalfa blossoms has added another million. Bees and alfalfa are an ideal combination. Experiments have been made by raisers of honey bees and they report most favorably upon the blossom of the alfalfa.

Alfalfa contains a certain degree of sweetness not found in either the sweet clover or white clover. Every stock-breeder knows that in-and-in breeding will cause a deterioration in the strain of stock. Infusions of new life are required to give a new life and vigor to the breed. As it is with animals so it is with plants. Cross fertilization must take place to keep up the standard. It was once supposed that within each flower are the necessary means for assuring the formation of the embryo within the seed. The truth is that many plants instead of endeavoring to facilitate

self-fertilization, are so constructed as to prevent it. Alfalfa is of this class. The pollen or fertilizing agent must be carried from one blossom and placed where it is needed in another to insure a full crop of seed, and some foreign agency is depended on to accomplish the purpose. In the case of alfalfa, currents of air are unable to carry the pollen and accomplish the cross-fertilization, and most insects do not carry it. Here is where the bee is useful. The alfalfa blossoms offer the bee a sweet drop, and in return for the favor the bee leaves a few grains of pollen, unconsciously brought from another blossom. So the exchange goes on, to the mutual profit of the owner of the alfalfa and the keeper of the bee.—Saturday Evening Post.

Honey and Apiary Supplies at the Fairs.

TORONTO INDUSTRIAL EXHIBITION.

Best and most attractive display of 50 lbs. of extracted granulated Clover honey, in glass, quality to count 80 points, display 20 points, 1st prize \$5, 2nd prize \$4, 3rd prize \$2, 4th prize \$1.

Best and most attractive display of 50 lbs. of extracted granulated Linden honey, in glass, quality to count 80 points, display 20 points, 1st, \$5, 2nd, \$4, 3rd, \$2, 4th, \$1.

Best display of 500 lbs. of liquid extracted Honey, of which not less than 250 lbs. must be in glass, quality to count 80 points, display 20 points, 1st, \$18, 2nd, \$12, 3rd, \$8, 4th \$5.

Best 500 lbs. Comb Honey in sections quality as per score card to count 100 points, display 33; total, 133 points, 1st, \$22, 2nd, \$17, 3rd, \$10, 4th, \$6.

Best 12 sections of Comb Honey, quality to be considered, that is to say clear sections and best filled, 1st, \$5, 2nd, \$3, 3rd, \$2, 4th, \$1.

Best 100 lbs. of extracted Liquid Linden Honey, in glass, quality to count 80 points, display 20 points, 1st, \$7, 2nd, \$5, 3rd, \$3.

Best 100 lbs. of extracted Liquid Clover Honey, in glass, quality to count 80 points, display 20 points, 1st, \$7, 2nd, \$5, 3rd, \$3.

Best 10 lbs. of extracted Liquid Clover

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Honey, in glass, 1st \$4, 2nd, \$3, 3rd, \$2, 4th, \$1.

Best 10 lbs. extracted Liquid Linden Honey, in glass, 1st, \$4, 2nd, \$3, 3rd, \$2, 4th, \$1.

Best 10 lbs. of extracted Liquid Buckwheat Honey, in glass, 1st, \$4, 2nd, \$3, 3rd, \$2, 4th, \$1.

Best Beeswax, not less than 10 lbs., 1st, \$4, 2nd, \$3, 3rd, \$2.

Best foundation for brood chamber, 1st, \$3, 2nd, \$2, 3rd, \$1.

Best foundation for sections, 1st, \$3, 2nd, \$2, 3rd, \$1.

Best exhibit of Apiarian Supplies, 1st, \$10, 2nd, \$5.

Best and most practical new invention for the Apiarist, never shown before at this Exhibition, 1st, \$6, 2nd, \$4, 3rd, \$3, 4th, \$2.

Best six varieties of uses to which Honey may be put in preparing articles for domestic use, the increase they are likely to make in the demand for honey, quality and originality to be considered, 1st, \$6, 2nd, \$4, 3rd, \$3.

For the most tasty and neatly arranged exhibit of honey in the Apiarian Department, to be limited to the quantities called for in the preceding sections, all the Honey to be the product of the exhibitor. The first prize in this section is given by the Ontario Beekeepers' Association, 1st, \$25, 2nd, \$16, 3rd, \$8, 4th, \$5.

To the exhibitor taking the largest numbers of prizes for Honey at this Exhibition, 1901, to be awarded by points as follows:—a first prize to count five points; a second, three points; a third two points, and a fourth prize one point. 1. Silver Medal. 2. Bronze Medal.

To the exhibitor showing the best and most originality of design in setting up the display.—Silver Medal.

Entries positively close August 3rd.

THE WESTERN FAIR.

Judge, Martin Emeigh, Holbrook. The arrangement of exhibits will amount 5 per cent.

The largest and most tastefully arranged exhibit of Comb and Extracted Honey, Beeswax, the product of one exhibitor put up in most marketable shape, not less than 400 lbs., and distinct from other entries, 1st prize, \$16, 2nd prize, \$12, 3rd prize, \$6, 4th prize, \$4. Comb Honey, 200 lbs. in sections, put up in most marketable shape, 1st, 10 00, 2nd, 7.00, 3rd, 5.00, 4th, 3.00.

Liquid Extracted Honey, 200 lbs., put up in most marketable shape, 1st, 7 00,

2nd, 5.00, 3rd, 3.00, 4th, 2.00.

The Prizes in each of the next eleven sections are 3.00, 2.00 and 1.00.

Comb Honey, 20 lbs. in sections, in best marketable shape.

Liquid Extracted Clover Honey, 40 lbs. in glass packages.

Liquid Extracted Honey, not clover, 40 lbs. in glass packages.

Extracted Granulated Honey, 20 lbs., in glass packages.

Beeswax, 10 lbs.

Honey Vinegar, half gallon, in quart glass packages.

Maple Syrup, half gallon, in quart glass packages.

Largest and best variety of domestic uses to which honey may be put, prepared by the exhibitor or his household, two samples of each—Canned Fruits, Cakes, Pastry, Meats, Vinegar, etc.

Comb Foundation, for surplus honey, for manufacturer.

Comb Foundation, for Brood Chamber, by manufacturer.

Display of Queens put up in shape to be readily seen by visitors.

Queen Cage admitted to mails by postal law.—Diploma.

Assortment of glass packages for re-tailing extracted honey.—Diploma.

New and most practical invention for use of Apiarists.—Diploma.

Display of Honey-bearing Plants, named and labelled.—Diploma.

Display of Apiarian Supplies.—Silver Medal.

COST OF SEEING THE PAN-AMERICAN.

From the Roller Mill

Extravagant stories as to the cost of board and lodging in Buffalo have been going about the country and may have deterred some of our readers from planning to visit the Pan-American Exposition.

The only basis for these stories is the fact that a few of the larger and more fashionable hotels are asking, and getting, rates as high as eight to ten dollars a day, which certainly is enough to stagger a man of moderate means. But there are many respectable hotels and countless boarding houses and private homes where one may lodge comfortably for not to exceed one dollar a

night, and meals can be procured both within and without the exposition grounds for prices little if any above the normal. We say this after careful investigation, and we have placed millions through our Accommodation Bureau at rates which fully sustain our statement. Leaving out the cost of railroad fare and sleeping car berth, which varies with distance, the day's list of expenses in Buffalo for one person may be set down as follows:

Lodging	\$1.00
Three meals.....	1.50
Admission to grounds	50
Incidentals.....	50

Total for one day and night \$3.50

These figures are neither high nor low. They are moderate and reliable. By little effort eating-places can be found that will bring the item of meals considerably nearer one dollar. Under incidentals we include such expenditures as street-car fare; one or more midway admissions at ten or twenty-five cents each; light refreshments at five cents and upward, etc.

CANADA'S GREAT EXPOSITION
TORONTO
AUG. 26
TO SEPT. 7, 1901.

LIBERAL PRIZES FOR HONEY
AND APIARY SUPPLIES

ENTRIES CLOSE AUG. 3.

Applications for special spaces should be made at once.

For prize lists, etc., address

A. SMITH, H. J. HILL,
 President. Manager, Toronto.

THE ANNUAL FETE

The Central Canadian Exhibition Association

Will hold their Fourteenth
 Annual Fall Fair at

OTTAWA
FROM SEPT. 13TH TO 21ST, 1901.

Entries Close on September 11th.

The Gold Medal Special Prize List is bigger and better than ever this year. \$250.00 offered in cash prizes by the Massey-Harris Company.

Special Attractions comprise Balloon Ascensions and parachute leap, trained elephants, slack-wire artists, world famous dancers, all the finest specialties which money can secure.

The spectacular in the evening will be a representation of the "SIEGE OF TIEN TSIN" and the destruction of the Boxer stronghold. All the soldiers of the different nations will be correctly uniformed and the representation will be the finest ever placed before the public.

Special rates on all railway and steamboat lines both for visitors and exhibitors.

For prize lists, entry forms and all information, address the Secretary.

E. McMAHON, 26 Sparks Street.
 WM. HUTCHISON, Ex-M.P., T. C. BATE,
 President. Treasurer.

WESTERN FAIR, LONDON, SEPTEMBER 5TH TO 14TH, 1901.

Entries close September 4th.

Buildings painted and renovated.

Liberal Prizes and enlarged purses.

All departments well maintained.

Apiary a prominent feature.

New and original first-class special attractions.

Excursion rates on all railroads.

Send for prize lists to

COL. W. M. GARTSHORE,
 President.

J. A. NELLES,
 Secretary.