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WHOLE No
460.

Ontario Bee-keepers'
Association

ANNUAL MEETING

QUESTION DRAWER — CONDUCTED
BY MR. JAS. ARMSTRONG.

Question: Would you advise all metal excluders or would you use metal and strips of wood?

Mr. Armstrong: For my part I would use both. They are the best they board for queen excluder I ever used; but they are a little harder to make and a little more expensive, so I have come to the all metal with a wood rim.

Question: Do you notice any difference in the results between the two?

Mr. Armstrong: If anything, the metal has the advantage as far as experience goes. There are no gaps in the openings. The metal supply frames are sending out now is perforated so closely that there is a very small margin between the perforations, they are nearly all open and it is nearly like as though there were no queen excluder between at all. When there is just one row of metal between the wooden strips it cloggs the holes up more or less; they are easier to keep clean.

Mr. Sparling: A friend of mine used a strip down the centre of two pieces of board and I could not see but that they did just as well as with the full sheet of metal. He claimed they did and he had some both ways.

Mr. Armstrong: At one time with the Hedden or Jones hive a board was used with seven eighths inch wooden strips. I understand that the bees would go up through quicker than they would through the metal and wood together, but I did not like them.

Mr. McEvoy: I like them all metal with a rim around about five-sixteenths and sprung in with a button so that when you turn it off it springs off; it don't clogg up and you can clean them.

The President: When you use the metal would it be advisable to have wood rims to leave a bee space?

Mr. Armstrong: Oh, yes; also in the Langstroth hive you want a strip or two small strips across the centre. If you don't have that the metal will sag down and it will spoil the bee space.

Question: Would you recommend a deeper frame than the Langstroth for the brood chamber?

Mr. Armstrong: That question is a little out of my line. I am an 8-frame man. Last summer I thought sometimes I would like to have something a little bigger.

Mr. Heise: I might say during the first two years of my bee-keeping I

used the Langstroth and I concluded they were too shallow, then I jumped to a frame about thirteen inches deep and so got out of the frying pan into the fire; then I came back to eleven inches and it just suits me.

Mr. Holtermann: I think the Langstroth is deep enough and it is so much of a standard frame I would stick to it.

Mr. Chrysler: For extracted honey eleven inches deep is preferable to a Langstroth.

Mr. McEvoy: Don't you think the man makes some difference?

Mr. Armstrong: Yes, every time. I look at it from this standpoint, it is dollars and cents I am generally after and providing I have got only fifty hives is there enough difference and would I gain enough by making the change? I have never seen it in that light yet.

Question: Do you consider it a good plan to return a swarm to the parent hive after a few days?

Mr. Armstrong: I have never tried that, therefore I don't know. I would say no myself.

Mr. McEvoy: No.

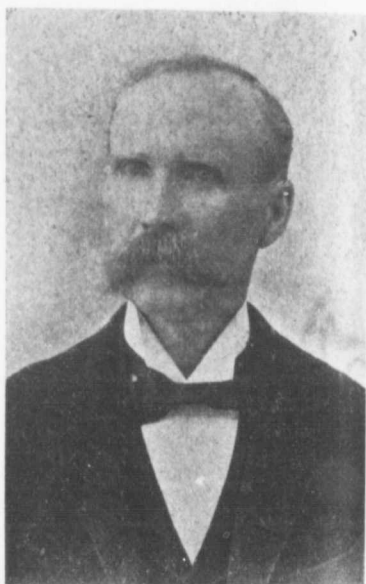
Mr. Martin: I think in the July number of the Bee Journal I saw a piece about that. It said that after two or three days to return the swarm if you didn't require the increase; and I thought I had all the bees I required and so I adopted that plan and found that the bees went right to work the next morning.

Mr. Gemmell: I think that is the Dadant plan. It has been recommended by them. That is, when a swarm issued to hive it for 24 or 48 hours and then return it to the parent colony. I tried it, but I never found it to work. Locality may have something to do with it.

Mr. Darling: I tried it once or twice with prime swarms and I don't want to try it any more. With

second swarms I don't wait two days or two hours. I run them right back home again and there is no fighting or further swarming. If I can manage to get the queen cells torn out of the hive and the bees back almost before they are settled out of the air they don't come out again. That is, after swarms; I mean all swarms with virgin queens.

Mr. Armstrong: I took from the



Mr. James Armstrong, Haldimand, Ont.

question that it was prime swarms he was talking about.

Mr. Darling: Well, it is not a success with me.

Mr. Martin: Mine were not prime swarms, most of them were second swarms; when I put them in the hive I leave them two or three feet from the entrance of the parent hive, then I leave them there two or three days and shake them down on the alighting board the last day in the evening and I had no swarming.

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Mr. Armstrong: Didn't you take the queen cells out?

Mr. Martin: No.

Mr. Armstrong: And you had no swarm?

Mr. Martin: No, except in one case.

Mr. Pettit: I have found Mr. Martin's plan works all right for second swarms; after two or three days run them back. I couldn't find time to be hunting up the queen cells because if I missed one then it would be all undone.

Mr. Armstrong: I would wait three or four days.

Mr. Heise: Is a colony, if it is not strong enough, liable to throw another swarm?

Mr. Pettit: It would this year; swarm every day for a week.

Mr. Armstrong: I would just take the hive, open it up and cut out all the queen cells and then bring the swarm back and empty it down at the entrance. That is the end of it.

Mr. Darling: I try to make a thorough job of the queen cells.

Question: Wish to hear some advice on cellar wintering.

Mr. Armstrong: Somebody else will have to answer that; I winter out doors.

Mr. Whiteside: Is an entrance a quarter of an inch square sufficient for cellar wintering?

Mr. Armstrong: I would say no.

Mr. Chrysler: A quarter of a foot better than a quarter of an inch.

Mr. Fixter: From what we know in the Ottawa district I would say winter in the cellar every time as against outside wintering; and I like to have them on shelves although they do very well tiered up. We like to give them lots of space below; we find they don't consume nearly so much honey inside as outside. Bees wintered outside do very well in the hedden and in the Root hives where

there is not too much disturbance, but I prefer wintering in the cellar, if you have a good dry cellar, but not too dry. I might say we are trying an experiment with half a dozen hives in one portion of the cellar and I have got a couple of pails of water to see if the moisture of the water being in the cellar makes any very great difference.

Mr. Holtermann: There is such an immense difference in cellars. Would you advocate a man wintering in the cellar just because he has a cellar? If a man hasn't a good cellar he had better winter outside in the western part of Ontario.

Mr. Fixter: It might be in the western part of Ontario but not in the east.

Mr. Dickenson: I have wintered in the cellar ever since I have kept bees, and blocked them up with four blocks, one under each corner and tiered them up real high. As to the cellar, it is a matter of temperature; dampness plays no part at all in the condition of the cellar; if the temperature is right it absorbs all dampness. I run them in convenient to me on a little truck; it is very simple, putting 150 colonies in my cellar in four hours. Keep the temperature to about 42; it varies to about 45 but the bees are very quit. I am contented to have them at that as long as they are quiet.

Mr. Brown: My experience in wintering bees has been in a cellar, for probably 25 years. For the last ten years I have had a cellar the full size of the house. stone foundation; 23x25x7 feet deep with an earthen floor. I would consider it better if there was a cemented floor. I want the bees with a good queen and plenty of stores, say not less than 25 or thirty pounds of honey, to go into the cellar and as we usually have to put them in from about the 10th to

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15th November I want to have the hive dry, not covered over with snow, or wet; and I like to have the bees have a fly or two a day or so before they are set in. We have a way of carrying them to the cellar door from the bee yard and we get right in under the house and set them on the stands: the stands are about 15 inches from the floor, poles 2x4 scantling and we set them on those: the bottoms are attached. I leave the entrance the full width open; that entrance is usually $\frac{3}{8}$ by 7 inches. I remove the wooden cover. The propolis quilt is left on. A strip of scantling an inch square is put on the front end of the hive and the same right along from one end of the hive to the other. A second tier of hives is set on top of that and so on right up three or four tiers according to what is necessary. Then, if the bottoms are not attached I raise them up and slip blocks under and give them the full entrance, and with the last tier on top I leave the wooden cover on loosely. I find very little difference between the hives with the bottoms attached and the others that have been raised up when they came out in the spring. My experience has been less than 3 per cent. dead in the spring when we took them out. I think that is about as fair an average for wintering bees in the cellar as could be expected. The usual temperature is from 40 to 45 and it sometimes runs up to 48. The ventilator in the cellar is simply an ordinary stovepipe run down to within about 15 inches of the floor of the cellar, brought up through the floor in the house and attached with an elbow and T into the stovepipe in the drawing room. What I have had the best success in wintering in is what I call the Gallup frame; it is about 11 or 12 inches. I find ten frames of this kind come out every

time better than the Langstroth.

President: I winter very much the same as Mr. Brown. Instead of having those stands I simply put down a hive body and then tier up each separately so that when we lift the hive either on or off we don't jar the whole lot. I pile them four hives high and the bottom is simply a surplus story. Instead of taking the trouble to block them all the way around, I put two blocks in front; I tip up the hive and in order to bring it to the proper level again I put a stick under the back end of it and go on that way to the top. I use quilts and leave them without being removed. In addition to leaving the entrance open I turn up the quilt at one corner at the top. I seldom lose any except by starvation.

Mr. Dickenson: I suggested four blocks and my reason is that having neglected to put blocks in the back end of the hive in one row I noticed particularly there was a dampness at the back part of the hive. Those that had been blocked up I found dry.

President: My cellar is probably drier than it is here. I don't care if the snow goes in on the hive; in a short time it is perfectly dry. There is a furnace in the adjoining room. In fact, I am a little afraid that the air is too dry. Probably with a damp cellar it would be better to have them blocked up all around.

Mr. Holtermann: I think you could accomplish the same thing by having them blocked up at the back and not the front. You have an opening at the front and the air can circulate right through. I think if you have some packing over your bees so as to keep the under surface of the quilt dry, when that is cool there is a tendency for moisture to condense and perhaps even drip on the bees. What we use is a felt that

is used in England; it is $\frac{1}{8}$ of an inch thick. The cushion is clumsy and cumbersome, but a piece of felt laid on top of the quilt will prevent any moisture from condensing.

Mr. Holmes: For a few years I have been practising the removal of the propolis quilt and putting on of a clean cotton cloth and a cushion of very dry saw-dust, probably $\frac{1}{2}$ or $\frac{3}{4}$ of an inch thick, and I raise the hive at the back so that each tier is separate and independent of the others. I find them to winter very perfectly in that way.

Mr. Miller: When wintering inside I find it very convenient to do away with those blocks you mention by leaving off my bottom boards and piling one hive across two, first placing a row along on 2x4 as Mr. Brown spoke of, about 8 inches apart and then commencing and setting one on top of the first and second one, and so on.

Mr. Fisher: When we winter them we leave the bottom board off entirely. We tried Mr. Pettit's plan of raising the hive at the back three inches and the body of the hive $\frac{3}{8}$ of an inch from the bottom board and so on and it is a perfect system. It was published in the Journals and in our Farm report. We also tried Mr. Hall's plan of raising up the front instead of the back; we found it quite a bit of trouble putting that $\frac{3}{8}$ of an inch piece in at the back; it disturbed them more or less. I don't think you do any more good than by simply raising the front. We have also tried Mr. Brown's plan of leaving the propolis quilt on; it is an excellent one I think one of the greatest secrets is to have a good cellar.

Question: Is it advisable to supply moisture in cellar wintering in the case of a very dry cellar?

Mr. Armstrong: I don't know; I am not a cellar winterer.

Mr. Holtermann: We hear a great deal about cellars being moist and the whole tenor of conversation seems to be in the direction of dry cellars. It is a subject I believe that is very important and a subject that but few if any can say very much, about but for an opinion I would simply say that the danger of having the cellar too dry is just as great as having it too moist and what should be done is make a line of careful investigation under proper conditions where there is a wet and dry bulb thermometer and where the humidity of the atmosphere can be taken and then find out what there is in that question.

Mr. Dickenson. I think it ought to be satisfactory to most of the beekeepers to know they are successful and bring out their bees in cellar wintering. I feel I can winter my bees as well as any stock man can his stock.

Mr. Sibbald: I have always preferred a dry cellar and as I have had quite a large experience in cellars at the different places where I want them I have learned to take almost any cellar and make it right. If it is a large cellar I partition it off so that the bees will have a small place and I don't know how it is or how it works out but they seem to be able to keep it dry. As long as it is not frosty I don't care how dry it is. If it is damp—I have had water on the floor—just floor it over with boards so as to keep it underneath. I have not seen any difference in the results doing it that way. I wintered once in a large cellar that was damp and they got so very moist that the water was dropping out of the hives before the spring and they were moulding and I partitioned off that same cellar and I got excellent results. If it is under a dwelling I have never ventilated it. If it is an out cellar where there is no heat above I make quite

an opening in the floor and then put straw and cover that over with chaff or sawdust and only the air will escape through the straw.

Mr. Holtermann: There is another point we want to be very careful about. Some people think they have got damp cellars when they haven't got them. What I mean is when they have got moisture on the walls it may not be at all damp; the only really accurate test as to humidity is the wet and dry bulb thermometer. I believe that about two degrees between the wet and dry bulb is, as far as I know at present, pretty nearly right.

Mr. Post: I have found two degrees to be the nearest I could get. I keep three thermometers in my cellar and I always like to keep them two degrees apart.

Question: Is it safe to use again extracted combs that have been used over a colony slightly affected with foul brood, said comb having been used over a queen excluder and never having had any brood therein?

Mr. Armstrong: I would say not to use them.

Question: How to liquify honey in pound bottles?

Mr. Armstrong: My plan of liquifying is I have quite a large pan that reaches clear across the stove, it is about eighteen or twenty inches wide and four inches deep; I have a frame that goes down into that made out of slats about $\frac{3}{8}$ ths of an inch wide and I drop that slatted frame down into the bottom or into the water first and then set my jars on top of that, loosen up the corks or screw tops, but I don't bring the water to boiling point while the honey is in there. You can see when the honey is all melted and when that is done I seal up tight and that honey will stay liquid for a year or two years. I have got some now I have had in

that shape for one year and you can't see a partical of granulation.

Question: How do you prevent moths from getting into the hives?

Mr. Armstrong: Keep strong colonies. I have no difficulty.

Question: How many Langstroth frames will an average queen occupy?

Mr. Armstrong: I would say about seven.

Mr. Holtermann: I believe that the average queen will occupy a good deal more room than one thinks. I don't know just what an average queen means, it is pretty hard to say, but I find that there is a goodly portion of the season where a queen will fill a ten framed hive full with just as little honey left in it as an eight frame. There seems to be a good deal in this that the queen is crowded by the bees to a certain extent with honey and she will fill with brood to the extent of the room given her.

Question: When it is desired to supersede an old queen would it be practical to substitute a virgin queen at the time by making a forced swarm or a natural swarm?

Mr. Armstrong: I have never done anything along that line myself, I cant say.

Mr. Chrysler: I have and it wont work.

Question: Do you think there is much risk of moving colonies in hives six miles on a sleigh at this time of the year?

Mr. Armstrong: I never did any of that either. I have moved them almost every other time of the year but in the winter.

Mr. Holtermann: We had a very extensive experiment along that line last fall. We had a carload of bees from New York State and they were brought to the car in sleighs, they were two days on the road, and they were hauled a couple of miles on

wagons at Brantford; they reached there in November and they were outside for a week or ten days, after that they were put into the bee cellar and in the spring there was not as far as I know one case of dysentery in one of the hives. I know Captain Hetherington in the past has said it can be done but I confess I felt pretty anxious; I wondered if there would be a single stock alive in the spring. When we tore one of the bees to pieces there was a globule of watery matter in the bee which I believe was the beginning of dysentery. When I got the bees in the cellar I made a fire and raised the temperature up to sixty-five or seventy degrees for two weeks and when I found that that globule was dried out I lowered the temperature.

Question: Would it pay to buy some queens in the spring and kill off some failing ones?

Mr. Armstrong: I would say yes.

Question: Will a queen lay drone eggs before she is twenty one days old and then lay worker eggs?

Mr. Armstrong: I will agree with the inspector of apairies that I would pinch the head off that queen right away.

Mr. Chrysler: I would say that I would not be positive with regard to the queen laying those drone eggs, it might be fertile workers before the queen gets ready to work.

Question: Will bees leave the extracting supers if set off the hives in the morning or is it necessary to handle each frame and brush the bees off? Should the smoker be applied.

The President: I suppose the idea of that question is if the super is taken off and laid down beside the hive will the bees desert it without smoke?

Mr. Armstrong: I believe there would be quite a number of bees in the old bees likely would all leave

but a certain number of young bees I think would not.

Question: If you have a large number of extracting combs in number one condition and wish to change to a slightly larger size would you cut the combs to fit the larger frames or would you melt them up?

Mr. Armstrong: As far as I am concerned I never did a great deal of that kind of thing but if it was much of a change and the frame was much larger I think I would melt the combs up and have them made into foundation for the frames.

Getting Worker Comb Built.

"Say, Doolittle, I came over to see you about having comb built so that it will be worker comb. It is like this: I have quite a quantity of combs left over from last year, which you know was a poor season, which are only partly built to fill the frames, and I wish the bees to complete them this summer, so that there will be as little drone comb in them as possible. How can this be done?"

"Well, friend Smith, it can be done in only one way that I know of, and that is by keeping the bees so that they desire only worker brood. When in this condition they will always build worker comb."

"Will you tell me so I can understand just how this is to be done?"

"When any colony is so weak that it has no desire to swarm, during or preceding the swarming season or honey-flow, such a colony will invariably build worker comb (so that worker brood may be reared until the colony comes into a prosperous condition), providing they do not have sufficient comb already built.

Taking advantage of this fact I use all colonies which are too weak to store honey to advantage at the beginning of the honey-flow, treating them thus: Their combs are generally all taken away from them; but sometimes I leave one comb partly filled with brood, and always one of honey, giving the combs of brood to other colonies so that they will be still stronger for the honey harvest."

"What do you do with the combs which are taken away that may not happen to have brood in them?"

"These are stored away to hive new swarms on, if they are perfect worker combs; if not, then they are treated the same as I am about to tell you how to treat those only partly filled, after you have cut the drone comb out."

"Excuse my interrupting you. You see I wanted to know all about the matter."

"When the colony is fixed with its frame of honey, or this frame of honey and one having some brood in it, I next put in one, two, and sometimes three frames with starters in them, just in accord with the size of the colony after I have taken their combs away."

"But that wasn't what I wanted to know. I do not want to have full combs built, but frames partly filled finished out with worker comb. However, I am glad you touched on this matter, for now I know how to get full combs built, should I wish to thus instead of purchasing foundation."

"I said what I did as a preparing of the way for the other, for the method is the same with the one as with the other; only where frames partly filled with comb are to be built out, the comb of brood is not left in the hive."

"Why don't you leave it now as well as with the building of full frames?"

"Because, where the bees are to fill

the frame with comb from the starter, there will be no place for the queen to lay till they build the cells, only as she so lays in the remaining cells in the comb partially filled with brood; and as she had all the room she needed before the combs were taken away from her colony, this sudden stopping of her laying would be an injury to her. But where partly filled frames are given she will have all the room she needs after the brood is taken, as well as before."

"I see the point now. Is the frame of honey as necessary with these partly filled frames as before?"

"Yes. In all cases I see that each of these colonies thus building comb has a frame well filled with honey; for should storms or cloudy windy weather come on at this time they would build no comb of any amount, and might starve; while with the frame of honey they will go right on converting that honey into comb, storm or no storm."

"How soon will they fill out the frames with comb?"

"If the right number of frames is given to suit the size of the little colony they will fill them very quickly especially when honey is coming in from the fields, and each comb will be filled with brood as fast as built."

"How long will they continue to build all worker comb?"

"If not too strong they will generally build comb of the worker size of cell until the bees begin to emerge from the eggs first laid in the newly built combs by the queen; but as soon as many bees emerge they will change to the drone size of cells: or if the little colony is quite strong in bees they may change the size of the cells sooner than this."

"How do you tell about this?"

"As soon as the first frames given them are filled with comb I look to see how many bees they have; and if they are still well stocked with bees

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or in a shape where I may expect that they may change the size of cell before they reach the bottoms of the frames, should I spread those apart which they already have and insert other empty or partly filled frames, I take out the combs they already have built, and thus put them in the same condition they were in when I started."

"Will they still work just as well?"

"No, not quite. They will not build combs quite as freely this time as they did before, unless there can be some young bees emerging; so, if I can conveniently, I give them a comb containing mostly honey and a little brood (if they have such a comb it is left with them, which is more often the case than otherwise) from some colony, when they are ready to work the same as before. In this way a colony can be kept building worker comb all summer, or till the bees are nearly used up from old age, the colony becoming so small as to be unable to build comb to any advantage under any circumstances. But if just the right amount of brood is left, or given them, so they stay in about the same condition, they will build worker comb all summer by the apiarist supplying honey or feed when none is coming from the fields."

"But suppose you do not find them very strong on your examination—what then?"

"If not so strong but that I think they will still continue to build worker comb, instead of taking the brood away I spread the frames of comb (now built) apart and insert one or more frames between them, when these will generally be filled with worker comb before enough young bees emerge for them to change the size of cell."

"I think I understand now, and so will be going."

"Hold on a minute. Don't be in too big a hurry."

"Why? What is the trouble?"

"There is one thing I do not think you take into consideration as fully as you should."

"What is that?"

"You should always keep this in mind, whenever you find these colonies building drone comb: The combs they then have, all except the one mostly filled with honey, are to be taken away so that they may feel their need of worker brood again, when they will build cells of the worker size the same as they did on the start."

"Thank you for this part. I should hardly have known what to do when they commenced to build drone comb had you not stopped me to tell me this. And now, in parting, how many combs have you ever had built in this way?"

"I have had hundreds of frames built full of worker comb in this way; hundreds completed as you are proposing to do, and hundreds and thousands 'patched,' where I had cut out small pieces of drone comb which had gotten in in one way or another. If you ever have a mutilated comb you wish to have fixed so it will give a surprise to you, just give it to one of these little prepared colonies, and see what nice work they can do at 'patching' with all worker comb. This last is an item the bee world does not seem to take in fully, and it is something which gives me the most pleasure of the whole, especially where, through mice in winter, or otherwise, comb has been destroyed in spots where said comb was in wired frames."—Conversations with Doolittle in "Gleanings in Bee Culture."

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THE
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BRANTFORD - CANADA.

Editor, W. J. Craig.

JUNE, 1903.

EDITORIAL NOTES.

Recent rains have improved conditions in most of the districts but in some places it came too late. Eastern Ontario has suffered very much from drouth. The West is now in splendid shape and a good yield from clover is anticipated; basswood is making a fine showing and should give a flow if the weather is right when the bloom opens.

Secretary Couse sends a copy of the plan of management agreed upon by the Directorate of the Canadian Honey Exchange. Copies of the same we believe have been submitted to all the county associations. The idea of arranging with commission houses to handle the honey is perhaps the best that can be done for the present. Section 4 however strikes one immediately as a weak point, "every member will have the privilege of wholesaling in any market except those places mentioned above where the commission house will be sole agent." Why prohibit members

from wholesaling in these places provided they adhere to the uniform grading and prices as in the retailing. This restriction would, we are afraid, keep a good many desirable bee-keepers out of the membership as a man who is not a member can wholesale where he likes, save his 5% commission and obtain all the advantages of the exchange by way of prices if he wants to.

Brant County Association

Brant County Association met in the court house Brantford, on Saturday afternoon May 23rd. There was a good attendance of members and visitors, among the latter our old friend Jacob Alpaugh of Galt who has returned from his trip in Florida and the south. Mr. Alpaugh had the misfortune to lose his Owen Sound apiary of bees and fixtures by fire, in his absence. The house wherein his stuff was stored and his bees were wintering was burned, with all its contents; and no insurance. He is going on with the business however. Alpaugh motto is "never be discouraged."

Miss Aukland a lady bee-keeper from England who is at present assisting in the Foster and Holterman apiaries was introduced to the members and spoke briefly on some England lines of management. Miss Aukland is quite a plucky young woman and of good ability, she has come out to this country all alone and purposes taking up bee-keeping as a business and we are sure she will succeed in it.

A communication was read by the secretary from Mr. John Newton presenting the plans decided upon by the committee for the conducting of the Canadian Honey Exchange; considerable discussion followed but nothing definite was decided upon. Clause four, prohibiting the wholesaling of honey by members in cities where the exchange is represented, was objected to by many.

The association decided to affiliate with the O. B. K. A. Exhibiting at the fall fairs was considered; Mr. R. F. Holtermann suggested that the members should send an exhibit of honey to the Industrial Exhibition Toronto in the name of the association; quite a number signified their willingness to join in this. The request of the Southern fair, Brantford, for exhibits and financial assistance was favorably received and a committee appointed to meet with the fair board to make satisfactory arrangements.

The session concluded with a question drawer which was conducted with much interest.

Commercial Organization

... Among Bee-Keepers.

Paper read at the Ontario Bee-Keepers' Convention,
by Mr. W. Z. Hutchinson, Flint, Mich.

Nothing is truer than the fact that times and conditions change. Regarding the conditions and peoples of this continent in ages past, we have little more than conjecture; but, so far as the present race is concerned, there

came, first discovery; then, settlement. The clearing away of the forests and the building of homes. Nearly all that was accomplished was the result of individual effort; and mainly with the bare hands, unaided by machinery. Next came labor saving machinery and the beginning of organization in the shape of factories. At first there was much opposition to machines—"they robbed men of an opportunity to labor". But then, as now, opposition to progress was useless. The wagon-maker who made wagons by hand, sawing out the felloes, and shaving out the spokes, found it simply impossible to compete with the factory with its system of speciality, organization and machinery. The individual wagon makers may have protested against organization, just as some of us now protest against the great organizations called "Trusts", and it is probably true that it inconvenienced them temporarily, and caused them to seek other employment, but the great mass of people who use wagons were benefited; and so were the individual wagon-makers benefited by this same process being introduced into the production of nearly everything they were compelled to buy.

This country has now reached what might be called the age of organizations, and the industry that fails to catch the true spirit of the times, and act accordingly, will eventually find itself in the position of the man who would now attempt to make wagons by hand; organization begets organization, in fact, compels it. When the mine owners organize the laborers must do likewise, or be crushed. There is more than one industry in this country that would have been crushed out of existence, had not the men who were engaged in it, organized.

The best illustration of which I

ever heard regarding the effect and value of organization, was the act of an old man whose large family of boys failed to live and work in harmony. He gathered up a handful of sticks equal in number to his number of boys, and tying them in a bundle, gathered the boys in a group, and said he would like to know if he had a son strong enough to break the bundle of sticks. Each in his turn put the bundle over his knee and strained with all his might to break the united strength of the sticks. All to no purpose. The father then untied the bundle and handed a stick to each boy saying, "Let's see if any of you are stout enough to break one stick." One contemptuous jerk of the stick across his knee was the emphatic answer of each boy. It is not necessary to repeat the sermon the old man proceeded to preach to his sons, but it is well that we take the lesson to heart.

As we are now selling our product, we are competing one with another. We don't exhibit the business sense of even that despised class of people, the saloon-keepers. They never cut prices. With them, so I have read and have been told, the price of a glass of beer is always five cents. With us, the price of a pound of honey is that at which our poorest or most unfortunate member is compelled to sell, as he must have the money.

I doubt if there is a bee-keeper in this country, one who has given the matter serious thought, who does not believe that the time has come for national commercial organization. It seems as though it were time wasted to discuss its desirability, that we are ready to talk about the HOW. On this point we should gather wisdom from the past. How many other organizations have been born, grown and brought up? Most of the

great industrial organizations have resulted from amalgamations of smaller organizations, and they in their turns were made up of individuals. First, there was the individual wagon-maker, then the individual factory, so to speak, then organization of the factories into one immense combination or trust.

Such organizations as Life Insurance companies begin with a strong central office from which agents or organizers are sent out to establish branches. One method is that of gathering together organizations, and uniting them under one great head; the other is the opposite that of a central society spreading out and starting branches.

Which plan is the most feasible for bee keepers? Colorado has an organization. California is working to establish one. Canada has in contemplation a similar move. Shall California and Canada succeed, and New York and Texas follow suit, then shall these already successful organizations be united, or shall some strong central society like our present National Association reach out and establish branches?

Right here, it might be well to say that our National Association, as now organized, is not fitted to take up the commercial feature of organization, but its influence and machinery can be used to assist in the starting and fostering of a commercial branch organization.

Some have opposed organization on the ground that it would be a trust. If it is an "Organization" or an "Exchange" it is all right, but they want nothing to do with a "Trust." Let us not be deceived by a jugglery with names. An organization or an exchange, or a trust, matters not what it is called, is a combination, or joining together of individuals, or firms, or corporations

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for the benefit of its members. It is not necessary nor desirable that such benefit shall work hardships or injuries to the public. It may lessen the cost of supplies, prevent the lowering of prices from forced sales by poor men, save freight charges by gathering car load lots, and prevent gluts by means of statistics and proper distribution. It can do all this without raising the retail price of honey.

The great question at present is, "How shall we do it?" Let us discuss it.

W. Z. HUTCHINSON,
Flint, Mich.

**News From The
Districts**

NO. 1

Re the honey outlook here, would say that the prospects are nil, no rain since March to speak of, absolutely none since April 8th and unless some comes very soon there can be no crops of any kind: fire and smoke all around us.

W. J. Brown.

Prescott Co., June 6th,

NO. 2

As a district I think the prospects good for a honey crop. Bees wintered fairly well. As a general rule those set out very early are at this date behind those put out later; weather being cold, dry and windy bees did not build up during May as they should have done. Heavy drought has held clover back but the showers which have come in some places and are expected in others ought to bring in a later bloom. Can't

say how it will be with basswood. No fruit bloom to count on in this locality. Of course if the drouth continues we will be out completely.

J. K. Darling.

Lanark Co. June 5th,

NO. 3.

Bees are in pretty fair condition, very little swarming yet—nor is there likely to be much during the season; Never in the history of the district has there been such a burning withering drouth. No rain, except a very slight sprinkle, for about fifty days. Clover prospects are out of it for this year. Can not say yet as to basswood.

M. B. Holmes.

Leeds Co. Ont. June 5th,

NO. 5.

The bees have done well so far, rarely has the weather been so favorable during fruit bloom and the hives are heavy with honey, in fact, have had to take combs of honey from the brood chamber; had two extracting supers on one colony in apple bloom but fear the clover yield will be light as the weather keeps very dry.

Yours truly,

J. W. Sparling.

Durham Co., June 6.

NO. 6.

Bees wintered well in this district and are in good condition now. Clover is plentiful and in bloom already. With a reasonable amount of moisture a good crop of honey ought to be secured.

H. G. Sibbald.

Peel Co., June 5th.

NO. 6.

Bees in this county have wintered fairly well and are now in good condition for the time of the year, but clover is almost in full bloom, over a week earlier than usual but for want of rain has yielded little honey up-to-date; to-day we are having a nice rain which will improve the conditions very much.

W. Couse.

Peel Co. June 8th.

NO. 7.

Bees have done well on fruit bloom and are in good shape. The outlook for a honey flow is very poor at present on account of the drought, even rain now can hardly help the situation. The clover in bloom seems to have but little attraction for the bees.

J. F. Switzer.

Dufferin Co., June 8th.

NO. 8.

Bees in excellent condition recent rains have brightened prospects for a fair honey flow from clover bloom. This should be the basswood year.

James Armstrong.

Haldmand Co. June 8th.

NO. 10.

Prospects are bad here for honey, it has been and is too dry. Every thing is maturing quickly, clover is ten days ahead but very little honey in it yet. I understand twenty miles north supers are half filled. Owen Sound apiary reports favorably. Prospects for swarming not bright consequently will replace some three

or four frames of brood with some frames of foundation which I think will do away with most of it. I am killing, 91 queens in colonies not over strong. This is a desirable plan when season promises to be short, it does away with swarming and the need of extra hives. I am thinking of placing my bees in groups of three in a row and then when not wishing increase take away the undesirable one and throw all the surplus bees into the other two I will explain fully in some future issue of C. B. J.

G. A. Deadman.

Huron Co. June 4th.

NO. 11.

Bees are working well on clover which is very promising, though rain is badly needed, I fear that a large number of colonies are not ready for the clover, which has opened earlier than usual.

F. J. Miller.

Middlesex Co. June 5th.

NO. 11.

The clover started to yield honey about two weeks earlier than last year. Bees however are somewhat behind last year in strength at same date. Honey is coming in at a good rate at this date, there seems also to be a prospect for a long seasons' flow; Basswood what there is bids fair.

W. A. Chrysler.

Kent Co. June 6th.

NO. 12.

Prospects here for white clover never was better if we only get rain; ground is very dry. Bees are in good shape and we are in hope of a good harvest.

Samuel Wood.

Simcoe Co. June 6th.

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Thoughts and
Comments
 ON CURRENT TOPICS

By a York County Bee Keeper.

ADVANTAGES? OF CHAFF
PACKED HIVES.

Mr. A. C. Miller, in "April Review" says that he has come to the conclusion that bees winter in chaff hives in spite of the packing and not on account of it, and thinks that the ideal hive for out door wintering is the ordinary single walled hive covered with a wind and water proof cover of black. He states that such a hive warms through quickly and retains the heat a long time. In testing the different kinds of hives, he has found that the bees winter well prepared in that manner. Editor Root, commenting article in "Gleanings," on Mr. Miller's thinks that such a hive will not show up as well in practice as in theory. He says that some years ago they experimented along this line and in nearly every case, while the bees wintered well in the chaff hives, those in the hives protected with paper suffered severely. On the other hand, Mr. D. W. Heise, one of Ontario's most careful and successful bee-keepers, after seven or eight years experimenting, has discarded the packed hive, and is to-day using almost exclusively a hive made of half inch siding nailed together with board between. From observation as to Mr. Heise's success, have no doubt but that it is a splendid hive for out door wintering in our locality, and it is my intention to give them quite an extensive trial this coming winter. They have

the advantage of being light to handle and of taking up but little more room than the single walled hive; something that cannot be said of the packed hives, which by the way, is one of my chief objections to the latter, to say nothing of them being a harboring place for ants etc.

FORMALIN AS A CURE FOR FOUL BROOD

While a bit dubious when reading the glowing accounts of some who think this drug is destined to be a universal panacea for all foul brood troubles, am nevertheless open to conviction and have a slight hope that it will at least prove effective in disinfecting "doubtfully clean" super combs. However must confess to a feeling akin to disgust; when I see some advocating its use in treating combs reeking with foul brood matter. Granted that the remedy would be effective in destroying the germs, pray who would wish to use the foul combs with the filthy stain marks and dried up larvae adhering to the cells? They would be nice for having surplus honey stored in, wouldn't they? Am reminded of an eccentric friend who often said "he didn't mind a bit of 'clean' dirt "but he did object to nastiness," if the case in question does not come under the head of nastiness, I give up. In my opinion the only reasonable methods of treating combs containing foul brood filth, is either by the wax-press or fire. Certainly, I for one do not wish to use or sell, honey that has been stored in cells containing corpses which have been victims of foul brood'

THE "OTHER SIDE" OF BEE-KEEPING
IN CUBA.

Mr. Harry House, of Cuba, formerly one of Coggs' Hall's "lightning" operators in N. Y. State, in May "Review" objects to the rose colored views of Cuba being given, without

giving the other side of the picture as well. Mr. House has certainly given the "other side" with a vengeance, as a few quotations from his article will testify. "We must travel when the roads are seas of mud, and work when the air is so moist that everything either rusts or moulds. The man who works out of doors has his feet wet half of the time. "The summer is the time of the mosquito and the flea; the time when we look in our shoes in the morning for scorpions and tarantulas—and find them at other times when we don't look for them. "Malaria prevails everywhere, while consumption claims many victims. "The common people have no sanitary conveniences. The closet when there is one is usually in the corner of the kitchen. "There has been two murders within a mile of me and two more within six miles of me, this spring. Robberies are too frequent to take any account of them." In conclusion Mr. House says that he don't mean to imply that Cuba is all bad (wonder how he would describe such a condition?) and that he likes it well enough to stay there, "but there are two sides to the question."

LONGEVITY OF BEES.

Mr. Gill of Col. in same issue of "Review" cites his experience of having bought a three frame nucleus, to which some three months previous a queen had been given in a self-introducing cage. Strange to say, instead of liberating the queen, the bees had built comb over the end of the cage. When Mr. Gill discovered this, the nucleus was yet in fair condition, as the youngest bees must have been about seventy days old, Mr. Gill thinks that this upsets the forty five day limit, as the life of the worker bee during the honey season.

Another important thing noticed was that when he released the queen the bees refused to accept her, although the cage had been in the hive three months. This would seem to imply that the length of time bees are queenless is not always an essential to safe introduction. The author has, however, overlooked a very important condition in giving these bees credit for extra longevity. I refer to the fact that they had no brood to nurse, as from my limited experience am led to believe that brood-rearing is a greater factor in determining the age of the bee, than what honey gathering is. Mention was made in these columns recently, about a queen introduced to a colony late in Sept, that had been queenless since June. To day they are in excellent condition, in fact one of the best in the apiary. As before stated no stimulating whatever was done, so the colony this spring was practically composed of old bees all of which were reared the previous June.

S'pose Fish Don't Bite at Fust.

S'pose fish didn't bite at fust;
 What be you goin' to dew?
 Chuck down your pole, throw out
 your bait
 An' say your fishin's threw?
 Uv' course you hain't; your going 'to
 fish,
 An' fish, an' fish, an' wait
 Until you've ketched your basket full,
 An' used up all your bait.
 S'pose success don't come at fust;
 What be you goin' to dew?
 Throw up the sponge and kick
 yourself,
 An' go to feelin' blue?
 Uv' course you hain't; you've got to
 fish;
 An' bait, an' bait again.
 Bimeby success will bite your hook,
 An' you will pull him in.

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The Canadian Honey Exchange

The committee of the Honey Exchange in connection with the Ontario Bee-Keepers' Association met in Toronto and decided to appoint a reliable commission house as general sales agent, at a commission of 5% for the city of Toronto, and any other cities in Ontario where the majority of local bee-keepers desire it, also Manitoba and the provinces west of it and the Maritime provinces.

1st—Bee-keepers will be supplied with forms on which to report their honey crops by the 15th of August.

2nd—The committee shall meet immediately after receiving the reports to take into consideration the crops, the probable demand, etc., and shall set the prices accordingly, wholesale and retail.

3rd—Every member of the exchange will have the privilege of selling retail in any market but must be governed by the prices of the exchange.

4th—Every member will have the privilege of wholesaling in any market except those places mentioned about at the prices set by the committee.

5th—The committee recommend that the extracted honey be put up in 60 lb tins, cased, holding 60 lbs net. Also in well cleaned barrels; but not in smaller tins as it is the intention of the exchange to adopt a uniform package for smaller quantities and have them labelled with the name of the association.

6th—Comb honey is to be put up in dozen sections in a case and 12 cases packed in a crate for shipping.

7th—All honey shall be graded according to rules recommended by

a committee composed of Messrs. M. Emigh, F. J. Miller, and R. H. Smith, and a copy of these rules will be mailed to each member of the exchange and all members should see that their packages are marked according to grading rules before shipping.

8th—Payments will be made monthly to members in proportion to honey sold out of stock held: for instance if 20 per cent of all honey should be sold in September each member would be paid 20 per cent on the amount of honey received from him but should any member wish an advance on his consignment he may receive the same by paying bank interest until such time as he would be entitled to it.

W. COUSE, Sec.

Bee Stings For Rheumatism.

Berlin, May 24.—Dr. Perc, of Marburg, addressed a brilliant gathering of physicians the other day on the healing properties of bee stings in cases of rheumatism of the joints and muscles. The professor pointed out that it has been known from time immemorial as a cure among the poorer classes of people who have no faith in medical science. He has tested it thoroughly and proved its efficiency in 500 cases.

If a patient is suffering from rheumatism the stung part does not swell at first, nor until the bee poison is frequently introduced. Then the rheumatic pain gradually vanishes. Dr. Perc allows his patients to be stung at first by a few bees and then gradually increases in numbers. In one sitting he allows seventy bees to sting the patient. He describes the case of a woman who suffered excruciating tortures from rheumatism. In the course of her cure she was stung 6,952 times, and this resulted in a complete cure.

Forced or Artificial Swarming

I notice that of late there is considerable interest in shook, brushed, or what is my opinion, more properly speaking, artificial swarming. I think it was 8 or 9 years ago that I stated in this journal how I practiced artificial swarming by removing all the brood; and that this was the only method that would stop natural swarming, if the swarming fever had been contracted; or in other words, if a colony had started queen cells with the intention of swarming. In such cases I found that if a single comb of brood was left, that they would often swarm just as soon as they could construct or start new cells.

I had practiced artificial swarming for some years before mentioning the matter in print, and, each year since, I have artificially "swarmed" from one to two hundred colonies. I state this simply that it will be known that I have had a good deal of experience in the matter, and this method, that I have practiced so many years, is practical and identically the same so far as results is concerned as the brushed or shook method that is attracting attention of late. For, of course, it can make no difference, so far as results are concerned, whether the bees are shook, brushed or jarred of the combs. There are, however, a good many things about this method and perhaps I should say about any method, of artificial swarming that do make a very big difference in results so far as the crop is concerned, and if there is any difference about our pursuit that requires skill and judgment, as well as a thorough understanding of one's locality in respect to the time and length of its honey-flow, it is artificial swarming

practiced in such a way that as good a crop will be secured as would be had if natural swarming were allowed.

One that practices artificial swarming should thoroughly understand queen-rearing, for, with artificial swarming artificial queen-rearing must be practiced; and unless good queens are reared, the apiary will very soon degenerate. I know that as many have described the method in print the whole matter of artificial swarming is so simple that it may be successfully practiced by a novice. But one who has had a large, actual and long extended experience in the matter can see by reading between the lines of much that has been written on this subject, that the writers have had but limited experience in the matter. In saying this I do not wish to be understood as questioning the veracity of any one who has written about this. What I mean is, that they might practice the same method the next season with entirely different results.

I am also aware of the fact that many who have had a large experience in the matter have given us much that is of great value on the subject. I would like, though, to call attention to the very important fact that in this matter of artificial swarming, locality is one of, if not the most important, things to be considered. For instance, one prominent writer, some time ago, in one of our bee journals (I do not remember which) advocated giving the artificial swarms full sets of drawn combs instead of empty frames. Now, let me briefly describe how that works in my locality:

The first surplus flow here is from white clover. This usually commences to yield about the first of June, but, of course, more or less according to the season. Very few colonies swarm naturally or are strong enough to swarm artificially until the flow

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from clover commences. Now, from a great deal of experience in this matter, I know that if a swarm, either natural or artificial, is hived on a full set of drawn combs, that from 25 to 40 pounds of this white clover honey will be stored in these same combs, when, if frames with only starters are used, most of it would be in sections.

Another thing, a swarm that is hived on drawn combs will often swarm again when these combs are full, instead of going to work in sections. But if empty frames are used, and they get started to work in the supers soon after being hived, they seldom attempt to swarm again.

When supers are placed over drawn comb it is perhaps needless for me to say that no work will be done in the sections until the comb below is filled with either honey or brood.

One thing I might say against drawn comb for swarms is, that here at least, a swarm, natural or artificial, is more apt to desert when hived on them than when empty frames are used. There is, though one great disadvantage about using empty frames, and this is the matter of drone-comb. In this locality a good deal of drone-comb that a swarm, either natural or artificial, builds will be used to rear at least one generation of drones in, that same season; and a swarm that has an old or failing queen will build a good deal more drone-comb than one with a good queen, for this reason.

It is very important, when hiving on empty frames, to have strong, vigorous queens. I have found that where it doesn't pay to artificially swarm a colony until they make preparation to swarm naturally, no matter how strong they may be. But when they are to be swarmed artificially, the sooner it is done after they begin to construct cells the better. If they are not swarmed until they are about

ready to swarm naturally, especially if they have one or more sealed cells, they are, after being swarmed, almost certain to swarm out or desert the hive the next day, even if a frame of brood is left them. On the other hand if they are swarmed before they begin to start cells it seems to discourage them, or at least they do not work with as much vigor as they would if swarmed later.

I notice that great stress is laid upon the matter of getting all the bees to fill themselves thoroughly with honey at the time the swarm is made. But this makes no difference whatever so far as their staying in the hives or the way they work. In fact, with me they seem less inclined to desert the hive the next day if they are not made to fill themselves thoroughly when swarmed. This deserting of the hives the next day is one of the greatest drawbacks to artificial swarming I have to contend with.—C. Davenport, A. B. J.

Use of Foundation.

Full Sheets are More Profitable—The Fallacy of the Crowded Brood-Nest.

A few days ago, while looking over my bee-papers for some information, I came across several articles about the use, and abuse of foundation. If I have not misunderstood the writers, the only point considered was the amount of wax saved to the bees by the foundation given, or lost to the bee-keeper, in case the bees could have secreted that amount of wax just as well. This seems to me the smallest side of the question, if that expression can be used. But before going further, let me make a comparison. Suppose you have a brick wall 32 feet long by 20 feet high. It takes 4 feet of space to accommodate a brick-

layer, so you can put 8 men at work. Now suppose a second wall be 64 feet long by 10 feet high. That wall contains as many bricks as the other, yet it can be built in half the time. Why? Because you can put 16 men at work instead of only 8. Do you see?

Now suppose you give some of your colonies full sheets of foundation to some other fair-sized starters, and to the rest only small starters. Two or three days later you go and look. Those having the smallest starters have only them perhaps to only one-third of the section. Those having the larger starters have extended them to two-thirds and perhaps a few drops of honey are deposited already in the deepest part.

But the full sheets have been drawn over nearly their whole surface; the cells are partly built up, and quite an amount of honey is already in. Why the difference? Simply because there is room for a larger number of bees to work at the same time on a full sheet than there is on a starter. The bees might be there, and the wax scales also, but only a limited number of bees could work on the smaller starter, just like the masons on the wall above referred to. I think this is the most important point gained by using full sheets of foundation.

CONTRACTION.

Contraction, or small brood-nests, came also under consideration with a number of writers. Their argument is something like this: If, when the honey-flow opens, there is room in the brood-nest, the bees will store the honey there, and go into the sections only after the brood-nest is full. If, on the other hand, the brood-nest is full, the honey brought in by the bees will necessarily go into the sections because there is no other place to put it. Don't you see?

Yes, I see—that is, providing it is so. May be it is a question of locality. In my locality the thing does not quite work that way. At the opening of the flow I have only sheets of foundation, sometimes only starters in the sections. In this locality it is impossible for the bees to store honey in empty sections. How it is in Illinois or Michigan, I don't know. It takes about three days to establish the wax secretion in full, and that many more days, or about, until sufficient headway is made in the sections to admit a rapid storage of what can be brought from the field.

Now suppose the brood-nest full. What will be the result during the first week? Having no place to deposit the nectar, the field bees will necessarily be idle; and the result is, the first week of flow will be practically lost. Lucky will be the apiarist if the bees thus forced to remain idle do not take a notion to swarm.

If we use large brood-nests there may be, at the opening of the flow, perhaps two, three, or more combs empty, or practically so. They will be filled rapidly with honey.

The movement of the bees, the constant handling of the nectar, the fullness of the bees, will provoke the secretion of the wax, regardless of the room in the brood-nest; and if the strength of the colonies, and the temperature, are right, the comb-building will begin in the sections not quite but nearly as soon as in the other case. So in fact, the honey stored in the brood-combs is almost a clear gain. Furthermore, the propensity to swarm is considerably reduced. At any rate, that is the way the bees do in this locality.—Adrian Getaz in Gleanings.

Remember that in making character for yourself you are making character for posterity.

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Middlesex County Association

The spring meeting of the Middlesex County Association was held in the city hall, London, on Saturday, May 2nd. Two sessions were held and were both well attended. The morning was largely taken up with reports on wintering, spring losses, etc. At the afternoon session we had a very large attendance, all taking a deep interest in the discussions which partook largely of the usual routine questions. Spring management occupied considerable attention, being opened by Mr. Morley Pettit, who spoke on cellar wintering, time to set out, etc. Mr. Aches found that smoking each hive before removing bees from the cellar would keep them in the hives and quiet while removing them to their stands. Stimulative feeding was considered an advantage if done with judgment, the open air plan being condemned by some of the veterans present.

Various methods of queen clipping was explained and discussed. Shook swarms received the usual "shaking" without anything particularly new being brought out.

Winter preparation for both cellar and out-door wintering were discussed.

Mr. John Newton spoke on the

Honey Exchange, explaining the reasons why each one should help to make it a success, our members taking quite an interest in the cause which was evinced by the number who paid in their dollar to become members.

Our association was reorganized on Feby. 28th last Mr. D. Anguish of Scottsville being elected president whose usual broad smile seemed to be considerably lengthened by the success of our spring meeting.

F. J. MILLER,
Secy.

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