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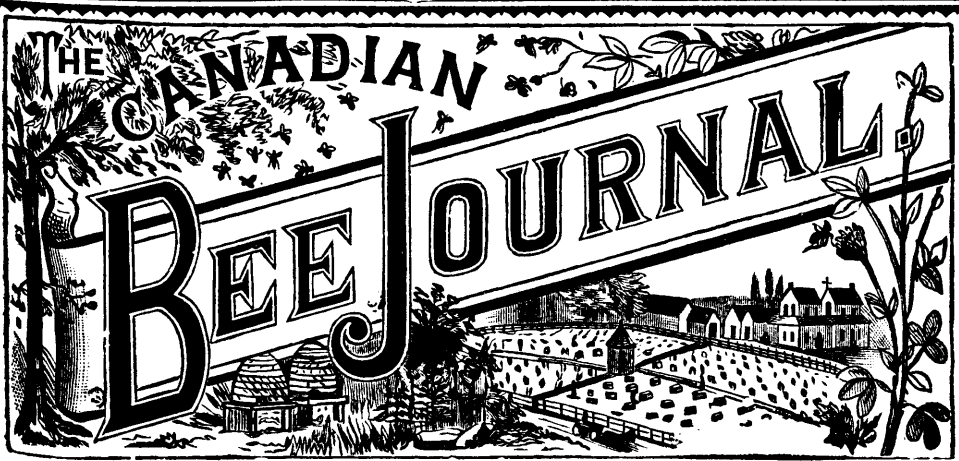
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"The Greatest Possible Good to the Greatest Possible Number."

Vol. VIII, No. 2. BEETON, ONT., APRIL 15, 1892. WHOLE No. 310

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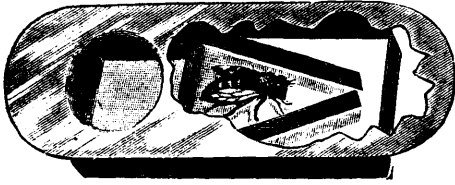
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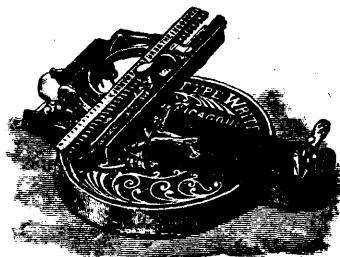
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"The Greatest Possible Good to the Greatest Possible Number."

VOL. VIII, No. 2. BEETON, ONT., APRIL 15, 1892. WHOLE No. 310

GATHERED HERE AND THERE.

BY ALLEN PRINGLE.

FOR THE CANADIAN BEE JOURNAL.

That Unpleasantness.

BROTHER CLARK quotes scripture to our American "brethering" across the line—to ye two editors of Medina and Chicago. That's right, W. F. C. Put the scripture to them strong. They preach it, and now make them practice it. I wad na gie "a teenker's daum" for a religious doctor, or any ither doctor, wha refuses to swallow his ain medicine. Let the twa o' them swallow accordingly.

RE "AVAILABLE."

My opinion is that Miller ought to get a dictionary, and McKnight a prayer book. And each one ought to hold this book "available"—that is to say, in readiness. The one for instruction, and the other for admonition. When the doctor finds his chronic malady of *cacoethes scribendi* coming on him (and this often happens) let him make sure that Webster is at his elbow; and when Mac. feels his Scotch and Irish rising within him, about that "incorporation" business, let him get his prayer book and say his prayers, (which I fear does not often happen).

THAT SPRAYING BILL AGAIN.

When I wrote last I thought that bill was sure to become an Act without further trouble. But I soon got a notice from the House to appear before the Legislative Committee at Toronto, on April 5th, to show cause why it should pass, or why it should not pass, or something of that sort. I went, and found that several others had been also summoned to show cause. Among them, Prof. Fletcher, of Ottawa; Prof. Pantor, of Guelph; Mr. Gemmell, our President; Mr. McEvoy, our Inspector; Messrs. Post, Dempsey and quite a lot of prominent horticulturists.

It seems that some fruit growers of the Niagara District were raising a storm about the Bill, and opposing it tooth and nail. Hence the meeting before the Committee to hear a lads, and then decide. All sides were accord gly heard, and the decision arrived at was that there was really no good reason why the Bill should not become law. It wuld injure nobody, infringe nobody's rights, while it would protect the trees from injury as well as the bees from poison. The Bill will pass; and while I think the adjective "full" ought to have been eliminated from the Bill (before "bloom"), and so contended before the Committee, we must be content with it as it is, till amended.

EXIT BEES.

On April 7th I commenced setting bees out of cellar. Put out twenty-four colonies. Found one dead. Cause, mice. The day being warm and fine, the bees enjoyed themselves in a rushing flight. When settled down in the afternoon, commenced overhauling them and cleaning them out. Found them in good condition, though there had been a pretty large consumption of stores, as temperature of cellar was well up through the winter. United two colonies, removing a slightly inferior queen of '90, which had not yet commenced to lay, and giving her family to an excellent queen of '91 alongside, from which double colony I shall expect good results in comb honey.

The next day brought a change of weather to raw, windy, and freezing, so that I have set no more out. So far as I have gone through them, the bees have wintered very well. Shall report results later on after all are out and fixed up. Give your bees spring protection—it pays. Pack them up and make them comfortable with saw-dust, chaff, straw, hay leaves, or whatever is available. If none of these are available, or get-at-able, and you cannot pack sides, put plenty of covering on top at least. And if you have nothing better than old news papers, they are excellent. Contract the entrances and shut them all together for cold nights and cold windy days.

GENERAL.

FOR THE CANADIAN BEE JOURNAL.

Blacks vs. Italians.

IN one of our Bee Journals a certain brother takes another to task for praising the Black bees too highly, then he makes the same mistake in the other direction by giving the Italian bee an unseemly boast. He says he got 1,100 pounds of honey from twenty-five colonies of Italians, while 9 colonies of Blacks gave him "nary a bit." Now, perhaps we are not careful enough at times in our verdict. I don't doubt the brother's statement, but have all the facts been brought to light in this case. Were the nine colonies on an even footing with the Italians at the first of the season? Had they the same hives, the same numbers, the same feed, and care? Did he pet the Blacks as much as the others, and call them fine fellows? Did he try to work the Blacks up? There is a good old homly saying, that to have a fat pig, you must pat him with your hand and tell him he is a fine fellow. Did you look cross-eyed at the Blacks, and tell your neighbors that you didn't expect any honey from those nine Blacks; did you expect after that they would be faithful to you.

I have handled both Italians and Blacks—or German bees, about as long as any one, and I find there is no need to be losing sleep over the bad qualities of either race. My best hive of Blacks gave me about 110 pounds of comb honey and my best Italian colony about the same. I know nothing about all these new kinds of bees that people are hunting up, so I will not speak for, or against them, but I know this, that if all the praise that is sung in their favor prove as groundless as the praise bestowed on many other things in years gone by, it only proves, that we will never find a better bee, all things considered, than the German or Black bee. In saying this, I do not disparage the Italians, for they are as good as the Blacks, but not better, this wholesale praise of any race of bees, to the exclusion of the native Blacks, is not doing bee-business any good, it is causing perpetual changes and expenditure of money where it is not needed. I have found no reason to give any bee preference over Blacks. Perhaps much that is said in praise of any variety is only for effect. Imagination and prejudice, also play their parts on these changes. No profession is free from jay-hawkers, and sharks don't all live in the sea, farmers are duped with Bohemian oats, while bee-keepers stand in open mouthed wonder listening to wonderful tales in praise of some new kind of bees, which

if once obtained, no further assurance of riches would be needed; so it goes, year after year, all unmindful that there is nothing new under the sun. Evolution never has nor never will give us better bees, even could we fence our bees in as we do cattle, we could produce no better bees than the Blacks, but as it is, I fear the result of our native bees coming in contact with some of these imported wonders that are praised so much by those who may have selfish ends in view. Most honey producers have long ago settled the question in a simple conservative way, and wish nothing better than the bee that made honey for his pan cake when he was a boy. Evolution is needed in our management of bees, but we need to evolve many of our absurd and costly fixtures which only add to our worry and the cost of raising honey. In these days of multiplied nonsense what must be the cost of producing honey, when conservative men say its production costs them thirteen cents per pound. But let us compare the two races of bees, for in this way we may not condemn either race unjustly. The Italian is a little larger than the Black, and for this reason has a longer tongue in proportion, and can gather honey from Red clover, still I have no reason to believe that it excels its sister Black in this direction to any great extent. If it protects its hive from moth better than Blacks, it is strange I have not observed it. Italians are not as domestic as Blacks, they are roamers, leaving their brood on cold days when the Blacks are employed at home to better advantage, they are also more apt to rob.

The Italian is not quiet enough to make a good wax secreter, they delight in "git up and git" no doubt. They lack wax, so they fill their cells so full of honey as to wet the cappings making their honey appear watery, and dark. If honey is not abundant they forsake the supper, and store their brood chamber so full as to exclude brood, hence, the lack of young bees for winter, and consequently spring dwindle takes place. The Italians like to gather honey, and by giving them combs, and working for extracted honey, they will do well, but if you give Blacks the same advantage, they will not be left far behind even in this; it is natural for blacks to store in boxes and they will fill the boxes if there is a hole big enough for them to enter, while Italians seem to like their hive to be all in one, and they ignore any surplus arrangement that has not the largest possible entrance. Hence, the tiering up of hives, with combs supplied, and working for extracted honey in this way you can work Italian bees, still there is something that makes us like this gold bands, and we can

hardly tell why it is. I am not against them, nor yet do I enthuse in their favor.

JOHN F. GATES

Ovid, Erie Co., Pa.

It is not an uncommon thing to find the Hybrid Colonies as black as the black bee. They need just a little Italian blood in them to make them better honey gatherers, and we frequently find these Hybrid Colonies produce better results than either the black or Italian, but when they come to be crossed with the expectation of getting something better, we will find the result disappointing.

It is not unfrequently the case that Italians in this locality produce Hybrids which are as black or nearly as black as our blackest bees. Then a small drop of Italian blood is sufficient to make them better honey gatherers. Who has kept bees and have not found numbers of Hybrid Colonies giving better results than either the blacks or Italians, but when the attempt is made to cross them or improve them the result is frequently unsatisfactory. As the first gives better results our experience is entirely in favor of Italians over pure blacks. The comb honey by the blacks is better as they do not fill their cells so full and it leaves a larger air space under the capping, which makes the capping look whiter. Syrians are more inclined to fill the cells full to the cap than the Italians, and we have known them to cap large patches of comb so that it would look watery and dark.

From the Bee-Keepers' Guide

Glueing Dovetailed Sections.

S. CORNEILL.

For several years I used nailed sections, but latterly I have used white poplar sections with dovetailed corners. My experience with these is that they do not keep their shape as well, and are far from being as strong as the nailed ones. I find that such prominent bee-keepers as L. C. Root, G. W. Demaree, Will M. Kellogg, S. Cushman, C. W. Dayton, and Capt. J. B. Hetherington agree in saying that their experience has been the same as mine. I have seen descriptions of appliances for glueing sections, but the machines seemed to be so difficult to make, or the process was so troublesome, that I never attempted it. During a conversation with Capt. Hetherington at the Albany convention, he said that if he could not conveniently glue the dove-


tailed sections, he would go back to the nailed ones. He then described a simple appliance which he used for putting a very little hot glue on the corners of the tenons of the narrow pieces before putting them into the section press. I have fitted up such a machine, and I find I can now glue my sections with very little additional labor. Near a wall place a kerosene stove on a stand, and on the stove place the glue pot. The problem to be solved is to invent an appliance by means of which the end of a stick, say an inch square, may be dipped into the hot glue by the pressure of the foot on a lever, and may then be quickly withdrawn, by means of a spring. At a cost of ten cents I procured from an upholsterer a spiral spring such as is used for sofas, etc. I placed this spring in a box, about seven inches square and 14 inches in height. When finished this box is closed on all sides except an opening of about an inch from top to bottom on the front side. The box is fastened vertically against the wall. From the centre of a board placed on top of the spring, a string is dropped down through the spring to the end of a treadle, near the floor. This gives us the downward and upward motions. For the dipping part of the arrangement fasten by screws to the board on top of the spring an arm extending horizontally through the opening in front. To this arm fasten the piece which is to dip into the glue, to make sure that the dipping piece shall always come down true into the glue pot, the piece to which the arm is attached should run in grooves or between sort of guides. I secured this feature by running saw cuts, say three-eighths of an inch deep, in the ends of a piece of board about four inches wide, and of such a length that it just goes into the box crosswise. The grooves in the ends of this piece run on the edges of two pieces of three-quarter-inch hoop iron, fastened in the saw cuts in the opposite sides of the box. The piece placed horizontally on top of the spring is fastened with screws to the lower edge of this grooved piece, causing the vertical motions of the arm to be true every time.

To glue the sections it is only necessary to hold two narrow pieces together in the hand, even at the ends, and, after dipping the stick into the glue by a motion of the foot, touch first the corners of the tenons on one side, then those of the other, to the glue on the stick, then turn the pieces in the hand, end for end, and touch the corners of the other end in the same way. When the section is put together there will be so little surplus glue that it will require close inspection to pick out glued sections from others not glued.

Lindsay, Ont.

FOR THE CANADIAN BEE JOURNAL.

Prevention is Better Than Cure.

 HAVE examined several of the back volumes of the Druggist's Circular and Chemical Gazette, also the files of several Medical Journals, to ascertain the opinions of chemists, and of the medical profession as to the antiseptic as well as the poisonous properties of beta-naphthol, the remedy for foul brood recommended by Dr. Lortet and T. W. Cowan, in the article from the B. B. J. re-published in another column. *The Therapeutic Gazette* says; "Dr. Bouchard, of the Paris Academy of Science, recommends naphthol for the following principal reasons:

1. It is only slightly soluble, and insoluble antiseptics are preferable to those that are soluble, as they are not absorbed, and do not affect the general organism, but still make any fermentation or growth of micro-organisms locally impossible.

2. It is five times as active as carbolic acid, three times as active as creosote, and is superior to sublimate, which is ten times as active as naphthol, because it is 187 times less poisonous." I might quote to the same effect from the *London Pharmaceutical Journal*, the *Medical Register* and other publications, but space will not permit. In regard to its poisonous properties, the dose which is sufficient as an antiseptic for a man, is twenty-five times less than that which marks the limit of danger.

Beta-naphthol is a comparatively new drug. Only one of the four drug stores in Lindsay keep it in stock. There is an impure kind which may be purchased at about one-fifth the price of the pure article. This unrefined sort is in lumps and is of about the color of dirty beeswax. The pure kind consists of white crystals and resembles granulated sugar. A quarter of an ounce measures about three desert spoonfuls. Anyone sending twenty-five cents to E. Gregory, Chemist, Lindsay, Ont., will receive by return mail one quarter of an ounce of the purest kind of Beta-naphthol, with directions for dissolving it, or an ounce for seventy-five cents. It may be dissolved in alcohol, chloroform, ether, or glycerine.

Dr. Lortet's dose is 1.8000. A convenient way to make a solution in this proportion is to first dissolve one-quarter of an ounce avordupois in glycerine, and add water sufficient to make one pint. As there are twenty ounces in one pint this will make a solution of about 1.80. Then measure out one table spoonful of this solution, which is half an ounce, and add hot syrup to make one pint. This solution will con-

tain a little less than 1.3200, but if the measures have not been quite filled, it will be nearly right. One quarter of an ounce is sufficient for 37½ pints of syrup. For a larger quantity dissolve one ounce of beta-naphthol in half a gallon of water, and add two table spoonfuls of this solution to each quart of syrup. An ounce of beta-naphthol is sufficient for eighteen and three quarter gallons of syrup.

It is admitted on all hands that foul brood is frequently spread in spring and fall by the bees from healthy hives robbing diseased stocks, and sometimes by gathering from contaminated combs thrown in the yard by ignorant or culpably careless bee-keepers. Some of the bee-keepers in the vicinity of a certain town in Western Ont. have had undesirable experience from this latter cause. Had they fed regularly with a good antiseptic, while the bees were working on the infected combs, the microbes could not have developed, and the trouble of effecting a cure would have been avoided.

If beta-naphthol is as good an antiseptic as it is represented to be, and from what I have gathered, I have no doubts about it, we should be able to mix the brown ropy matter from an infected comb with medicated syrup and feed it to a healthy stock without starting the disease. And if enough of this infected syrup (but without the beta naphthol) be fed to a healthy stock until the disease is fairly well started this stock may be cured by doubling the dose and compelling the bees to use the medicated syrup. If in the interests of the industry, Inspector McEvoy will agree to make these experiments I will cheerfully furnish the beta-naphthol.

By feeding salicylic acid in spring Hon. R. L. Taylor of Lapeer, Mich., kept the disease so much in check that he secured almost an average yield of honey from his diseased stocks. Although I am not aware that there is any foul brood within reach of my bees, last spring I fed salicylic acid and this spring I shall feed beta-naphthol, because for anything I know to the contrary, some neighbor may have unconsciously introduced the disease with a queen perhaps, or in some other way, or it may be lurking in some hollow tree and "prevention is better than a cure."

S. CORNELL.

Lindsay, 12th April, 1892.

Reports from Bee Keepers.



HIELMANN, of Thielmannon, Mich, says: "On the whole we had rather a mild winter here except a cold spell with but very little snow at any time during the whole winter. No sleighing to speak of which

is an exception in this part of the country; mud and rough roads are prevailing up to date. For the past two months the temperature in the bee cellars got up too high, caused breeding and uneasiness, and many of the bees came out and fell on the cellar floor. On March 7th it was 60 degrees above zero in the open air and many bee-keepers put their bees out, but those leaving them out met with heavy losses in the strength of the colony as the weather became cooler and the air kept raw and it is very unfavorable even now. Winter grain, clover, and grass look very dead on account of no snow, it has been freezing and thawing alternately all winter, so far the loss of bees cannot be estimated, and will depend on the weather for next month or two, I have not mine out yet but am waiting for a good day."

MR. A. BECHTEL, of Port Elgin writes:—This is a poor place for bees; I do not intend keeping more than two or three colonies. I sulphured nearly all my bees last fall, and it is not worth while going into bees any more in this part of the country unless the Foul Brood Inspector comes here and provides a remedy. Got 1400 lbs. of honey last summer, but have not sold it all yet. We are selling good honey for six, and seven cents per lb, and best comb honey for ten. I think it is on account of sugar being so cheap it lessens the price of honey.

MR. H. COUSE, in a private note says his bees wintered splendidly, and that he intends to put them out in a few days.

MR. GEO. F. BEACH says:—My bees are wintering good so far. Have in all fifty hives; thirty five in cellar, fifteen packed out-doors.

Please send Journal along another year. Enclosed please find \$1. for same
Meadows, Mch. 13, 1892.

MR. D. ANGUISH, Southwold, Ont., writes:—There has been quite a loss among bees in this part of the country, small bee-keepers are pretty well wiped out of existence, but what is one man's loss is another's gain. For my part, I cannot complain, I put in winter quarters last fall 168 colonies, they are all alive to-day and in fine condition except two, which are queenless. So you see bees can be wintered outside without loss. My bees gathered pollen on the 3rd of this month, and to-day (April 5th) are working on soft maple. Everything looks well for this time of the year.

We are sorry to learn that there are such heavy losses of bees in section but your success only proves that those who attend to their bees properly are sure of success.

Good Locality For Bees

Dear Journal:—As I have got settled down to business again and this time for myself in Southwold with no less than 200 colonies of bees in three separate yards. I thought I would drop you a few lines. I have one of the best locations in Ontario, one of my yards containing 100 colonies is on an Indian Reserve beside the river Thames, where there is a weed called Bluedevil growing in abundance. The other two yards are bordering on the same reserve. I intend contributing to the C. B. J. during the coming season; my subject will be from practical Bee-Keeping, not scientific, as we get sufficient of that at our conventions. Probably some of our friends will feel inclined to criticise, but my idea is that what we want, is something for the novice. I intend to begin with the old box hive and give something every month but will not give the new method for some time yet. I am going to run 100 colonies on Mr. Alpaugh's new plan this coming summer. I worked for Mr. Alpaugh last season and extracted from one colony in his yard nearly 174 pounds of honey.

Truly Yours.

D. ANGUISH, Southwold.

The weed you call Bluedevil is *Viprus Bluegloss*. We shall be pleased to have the articles you propose to write for us as we are sure they will be very interesting.

Bees wintering well.

BEES in this locality as far as my own apiary is concerned, have come through the winter so far in splendid condition. I examined them on the 24th of March and they were very strong in bees with plenty of honey. I winter them out doors packed in chaff, with a good cushion of the same over the cluster; and after a trial of this plan for five years, they always come through in good condition if they have plenty of honey. They have had two or three good flights this spring which I think is an advantage that bees wintered in the cellar do not get. I set my hives close together in a row, and pack chaff over and around them and place a cushion in the upper story. Notwithstanding the fact that they are very near one another they never mix of any account, but seem to all find their own hives. This locality (Wentworth Co) is an excellent one for bees, and I find much pleasure and profit in taking care of them.

THOS PATTON.

Westover, Ont.

FOR THE CANADIAN BEE JOURNAL.

The British Bee-Keepers' Association.

THE Annual General Meeting of this Association was held on Wednesday, the 16th of March, at 105 Jermyn Street, London, England, in the Board Room of the Society for the Prevention of Cruelty to Animals, who have kindly placed this room at the disposal of the British Bee-Keepers' Association, for the purpose of holding all their committee and other meetings therein, as well as for the quarterly conversaziones of the members.

The business was of a routine character—passing the accounts, report, and the balance sheet for the last year, and votes of thanks to the officers, etc.

The Baroness Burdett-Coutts kindly consented to be President for another year. The Treasurer, Auditor, Analyst, Secretary, Librarian and Experts were all re-appointed.

The Managing Committee, consisting of 15 members, are annually appointed by the vote of the whole of the members of the Association by voting papers. Each candidate is nominated by two members, and the names of the nominees and nominators are printed and sent to each member to select 15 for the Committee. The largest number of votes was given to Thomas W. Cowan, who was again elected Chairman. The Hon. and Rev. Henry Bligh, who obtained the next largest number of votes, was re-elected Vice-Chairman.

The committee congratulates the members on the success which has attended the labors of the B. B. K. A. and its affiliated branches in their efforts to obtain from the state some recognition of apiculture. Under the present educational code, bee-keeping, horticultural and agricultural subjects may be taught at the discretion of school managers in accordance with the requirements of the neighborhood in which they are situated.

The knowledge of bee-keeping has been widely diffused by the support which has been given to the subject by the Royal Agricultural Society, and other agricultural and horticultural societies, under whose auspices exhibitions have been held in many parts of the United Kingdom.

Instruction has now been commenced under "The Technical Instruction Act of 1889." Applications for grants have been made by the affiliated branches of the B.B.K.A. to the County Councils, and the following have already made grants in aid of Technical Instruction in bee-

keeping, namely: Berks, Cheshire, Derbyshire, Essex, Kent, Northants, Lancashire and Warwickshire.

The B.B.K.A. has prepared a syllabus for those lecturers who are about to give instruction in practical and scientific bee-keeping.

A vote of thanks was given to the proprietor of the *British Bee Journal* for the kind assistance given in opening its pages as the organ of the B.B.K.A.

The business of the general meeting being finished, those in attendance partook of refreshments in the shape of tea, coffee cake, bread and butter, and the conversazione commenced. Mr. R. H. Grimshaw read an interesting paper on the "The Simple Eyes or Keunnata of the Bee. Are they bull's-eye lanterns?" This was described at some length, and Mr. Grimshaw promised to continue his investigations.

Mr. Wells then read a paper on "A new method of working Bees," and explained his success in obtaining an average of 138 lbs. of honey from 12 stocks, each having two queens. His paper created a great deal of interest, and several well known apiarists present thought well of the plan, and said they should certainly try it during the coming season. If you wish, I will at a future time give particulars of the system which is not altogether new.

JOHN M. HOOKER.

9 Beaufort Gardens, Lewisham, S.E., Eng.

We are pleased to be able to furnish our readers with a report as above from our esteemed friend, John M. Hooker. He is one of the most active members of the British Bee-Keepers' Association, and has done much to bring it to the high state of perfection that it now occupies. We are sure our readers will be pleased to hear from friend Hooker more frequently.

How Far Will They Fly.

FOR THE CANADIAN BEE JOURNAL.

A SUBSCRIBER in your valuable journal asks if bees will gather honey nine miles from an apiary. For my part, I say no bees will ever gather honey at such a distance. In 1888 I introduced the first Italian queens in this locality. All of the bees in this vicinity were black before that time. I never knew of an Italian bee to fly further from my apiary than two and one-half miles. It may be possible that bees will fly from three to four miles, but not to

my knowledge. I never saw them gather honey or pollen at so great a distance, and at present I cannot believe they will fly from five to nine miles for honey, and will not believe it before I see it.

EDWARD J. KUBBEL.

Spring Branch, Texas, March 26th, '92.

It is very common for bees to go farther than two and a half miles when gathering honey. If pasture is plentiful they will not travel this far but will gather it within a radius of less than a mile. I once recollect a large quantity of clover which was yielding abundantly just across the road from our apiary and it seemed by watching the bees as if almost every bee from the yard would cross the road and pitch down into the field, when walking through the clover they would rise up in swarms around us. I never recollect having had honey gathered from clover as rapidly as on this particular occasion. Have also known bees to go many miles in times of scarcity, there have been instances where bees have gone more than two and a half miles. For instance, when they are surrounded by belts of timber, then a clearing, they will very seldom rise over very many belts of this kind, for after searching in one or two, they will not usually fly over the next field but where the range is perfectly clear and there is nothing in the shape of hills or woods to prevent them from seeing or flying, they will go more than double as far in search of stores. A few years ago a man who had a quantity of buckwheat in bloom, with a large number of yellow bees on it, thought there must be a swarm of Italians in the woods, as there were no italians. in fact no bees, in that locality, so with a couple of friends he went to the field got some of the bees in a box and commenced lining them, to his surprise they took in the direction of our apiary and there being only one block of woods between the apiary and the buckwheat, we thought as a matter of course, they must be in the woods, so after getting them to work thoroughly on the honey, we took them in boxes to the woods and commenced cross lining, as we term it, in order to find the point where they were located, we also carried some through the woods on the opposite side to see which way they went into the timber, when they turned back and we were not a little surprised to find they

started straight across the field for our apiary, and we were not long in proving that they were none other than our own bees. It has been my experience that where there are a large number of colonies in an apiray, they frequently go farther in search of stores than where there are only a few.

Lectures on Bee Keeping at the Yorkshire College.

THE first of a series of lectures on bee-keeping promoted by the West Riding County Council was given on Friday, March 11th at the Yorkshire College, by Mr. R. A. H. Grimshaw, of Horsforth, the Secretary of the Yorkshire Bee-keepers' Association. It is intended to give the lectures fortnightly, on the second and last Fridays in each month. During the summer the gatherings will take place in the lecturer's bee-garden, when the theoretical teaching will be carried out in practice as far as possible. Mr. Grimshaw on this occasion described the operations of a prosperous colony of bees. He explained that it was nectar, and not honey, which was gathered from the plant, but that the nectar was converted into honey by the bees. Having described the nature of the different kinds of flower and fruit blossoms, the lecturer showed that the bee, by visiting flowers of the same species, fertilized the seeds with pollen brought from another plant, and produced finer and better fruit and more satisfactory plants than would otherwise be the case. In support of this, he cited some of Darwin's experiments. Mr. Grimshaw remarked on the lack of statistics in this country with reference to the number of bee-keepers and hives. In Europe and America there were proper statistics compiled, ranging from Greece, with its 30,000 hives giving a yield of 3,000,000 pounds of honey per annum, to the United States, with its 2,800,000 hives, yielding 62,000,000 pounds of honey. Europe and the United States together produced the vast amount of 81,696 tons of honey per annum. It was, he said, desirable that the practice of bee-keeping should be spread in this country, because, at the present time, we are paying large sums of money for foreign honey. Last year honey to the value of 38,247l. was imported, and the quantity landed at our ports during last January alone was worth 13,000l.—B.B.J.

Secretaries of Associations will confer a favor by, sending in reports of their meetings. Letters addressed to the editor and marked printer's copy will carry with a one cent stamp.

A New Spring Feeder.

DURING the autumn I visited a friend's apiary, and he not being able to get in a sufficient quantity of syrup before the winter set in, and knowing that the stores would not be sufficient to last them until spring, I tried to persuade him to place on a large cake of candy, but he thought syrup would be better, so having made a feeder that I had not properly tested, I lent it to him early in January to test, and I find it has been quite a success. His bees are in excellent condition and the queens have been laying considerable during the past two months. I will explain its construction.—Take a glass tube one-eighth inch in diameter, and with the aid of a gas jet bend it about three inches from one end in the ordinary syphon form, thus, *f*; to work it, fill any ordinary vessel full of syrup and place it on the honey board or quilt and fill the tube by suction; place the short end that is bent into the syrup and guide the long end between any two frames you may wish it to occupy, through the board or quilt into the brood nest. I should here mention that a small piece of sponge is inserted into the long end of the tube which goes between the combs, to prevent the syrup from running or dripping. The bees are able to get a very limited supply through the sponge, but not sufficient for storage purposes. I think any one will soon see where the cheapness and usefulness of the article comes in, viz., no loss of heat, as when using an ordinary feeder, and having to uncover the hive; there will always be about four inches of the syrup in the tube of the same temperature as the cluster of bees. I think that if the feeder is properly tried it will supply a long-felt want as a stimulating feeder, being cheap and having the advantage of a good and steady delivery.—PHILANDER JOWETT, in *British Bee Journal*.

Honey as a Medicinal Agent.

WITH a view of bringing the virtues of honey, both as a natural and most efficacious medicinal agent, and as a wholesome, nutritious article of diet, before the general public, I am preparing a small book. It will be written in a popular style, and published at a very low price or distributed gratuitously. If any of your readers have any facts or figures illustrating either part of the subject, I shall be glad if they will kindly send them on to me, I will gladly undertake to return them, if desired, after I have either copied or otherwise made use of them. In the interest of the subject gen-

erally, and of bee-keeping in particular, I am wishful that the little work should be as complete as possible.—R. WARD, in *British Bee Journal*.

The Foul-Brood Bacteria.

TREATMENT OF FOUL BROOD* BY THE USE OF BETA-NAPHTHOL.

In the *British Bee Journal* for January 8, 1891, we have selected from a lengthy and very interesting article of Dr. Lortet's the following:—

[We have much pleasure in giving our readers a translation from the *Revue Internationale* of a paper by Dr. Lortet, who has for some time been making experiments and observations upon this disease. There are many points quite new, and which throw considerable light upon the subject, and the remedy proposed is simple and, from reports, encouragingly effectual. We wish our readers to particularly note that the naphthol is that known as beta-naphthol, and not the ordinary naphthaline. As it is perfectly harmless, there is no danger in its application.—Eds.]

In the digestive canal of dead or diseased brood, as well as of adult bees already infected with the disease, but in the digestive canal alone, a third kind of bacterium is found, which is without doubt one of the forms that have been examined by Mr. Cheshire. It is thin, and frequently extends in filaments. It thrives well in sterilised veal-broth, and it is therefore comparatively easy to obtain a supply of perfectly pure specimens for purposes of inoculation. In this nutritive element filaments appear in a few days, and after staining the fine granular elements of the formation become apparent owing to the differences in colouration.

In the digestive canal of the adult the bacteria appear to maintain their rod-like shape for a considerable period—perhaps, indeed, always; whereas in the digestive canal of the larvæ, probably owing to the influence of albumenoids, which pass by osmosis through the walls of this tube, the bacteria, as in the case of cultivations effected in unsalted veal-broth, are rapidly transformed into very fine, virulent granulations, which invade all the tissues, and soon bring about the disorganization and rapid putrefaction of the larvæ.

The adult bee, on the other hand, even when the foul-brood bacteria have taken possession of its digestive canal, seems to be able to live for a certain time. It is, however, none the less apparent, once the infection has taken firm hold, that the animal is diseased. The digestive can-

al, and especially the surrounding glands, end by being invaded by an enormous number of the rod-shaped organisms: the insect loses its vivacity, grows languid, and finally perishes after a more or less protracted interval.

Virulent granulations cultivated in salt veal-broth or on plaies of glycerated Agar-Agar produce bacillary bacteria, which, when given in food to the larvæ, undergo in their turn segmentation into virulent granulations, whereas in the case of the adult bees they still probably retain the bacillar form for a long time, though they do not fail in the end to cause its death.

The culture and transformations of the fowl-brood bacterium cannot take place in the honey; so much is certain. Still, I may mention that in diseased hives the honey and wax are always more or less infected on the surface by bacilli, virulent granulations, excrements' &c.

I have on several occasions succeeded in reproducing the whole series of phenomena mentioned above experimentally, and have, without difficulty, infected insects which had been perfectly healthy and vigorous up to the moment of the experiment. My mind is, therefore, quite free from doubt in the matter. It is the adult bee which is first infected in its digestive canal by a fowl-brood bacterium obtained from some unknown source. In feeding the larvæ it infects in its turn the digestive tube of this latter, and here, owing to the action of the albumenoids, the bacillar bacteria are transformed into virulent granulations, which invade the tissues and finally bring about the death of the insect.

Contaminated honey may be a cause of the propagation of fowl-brood in the sense that, being polluted by fowl-brood bacteria or by virulent granulations, the healthy adult bee which allows this substance to enter its digestive canal is rapidly attacked by the disease, and will even itself soon communicate the infection to the brood. Experiment in such cases gives the most convincing results. Still, in the case of fowl brood, as in the case of virulent affections which attack vertebrate animals, certain individuals seem to enjoy exceptional immunity, and resist the infection. Is this due to previous inoculations, or to some individual predisposition? This is a point which I am not at present prepared to decide.

I had only once an opportunity of examining the queen of a hive infected with fowl brood, the property of M. Matthey, of Bassins.* The eggs of this insect were healthy, and contained neither bacilli nor virulent granulations. The queen herself was perfectly healthy, a point which I was able to place beyond a doubt by

means of a careful post-mortem. I hesitate to draw any conclusions from this isolated instance, though I confess that, judging from the course the disease takes, I do not believe that, as a rule, the malady can be propagated by the rearing of larvæ produced from infected eggs.

In my opinion, therefore, it is always the digestive canal of the nurse-bee which is infected, and it is always by the act of feeding that the adult bee infects the digestive canal of the larvæ, the death of which latter is the speedy result of such inoculation.

Therefore a knowledge of the above facts leads me to the following conclusions:—

1. The bacteria of the third form described, as already shown by Mr. Cheshire, are in effect the true cause of fowl brood. They are the active agents of contagion and of the propagation of the disease. Numerous laboratory experiments, too long to be described here, prove this beyond the shadow of a doubt.

2. Seeing that the fowl brood bacteria must necessarily kill all brood the digestive canal of which is inoculated by the act of feeding, it appears to be absolutely useless to endeavor to cure these larvæ, as all their tissues are rapidly invaded by the virulent granulations* into which these bacteria resolve themselves.

3. Adult bees, whose digestive canal is infected by the fowl-brood bacteria may frequently survive for a considerable period. Some even, owing to special circumstances, seem to resist the virulent stage of the malady. We must therefore direct our efforts to the digestive canal of the worker-bees, the feeders of the queen, if we desire to attack at its source the evil which may spread with lightning rapidity among the rising generation of larvæ, which is the sole hope of the colony.

IV. The treatment, then, ought to be internal and as energetic as our little patients are willing to allow. External treatment, by means of fumigations or sprayings of any kind, are (I do not for one moment deny) also helpful, since these methods contribute largely to the disinfection of the hives, combs, and tissues of the bees, &c. It is even possible, under certain circumstances, to succeed in diminishing the virulence possessed by the bodies of the larvæ after death during the process of desiccation. But I must repeat that such external treatment can only be useful

*I employ the word granulations purposely in preference to the term *spores*, which is used by several writers. I cannot bring myself to believe that true sporulation, similar to that observed under certain conditions in bacteria or anthrax and in that of blood from spleen, really takes place in fowl brood.

as an auxiliary, and I greatly question whether it has ever been successful in curing of itself a hive attacked by a well-authenticated case of foul brood.

The foul brood bacterium seems to be very fastidious with regard to the conditions of its existence. The media in which it can be developed are rendered sterile by the introduction of infinitesimal quantities of well-known antiseptic substances. We are, therefore, justified in supposing that these same substances, if the bees can be made to absorb them, will prevent the invasion of the digestive canal and the surrounding parts by the bacillar bacteria, will destroy those that may have already lodged there, and will thus prevent the infection from spreading to the brood in the act of feeding.

The space at my disposal is too limited to permit of a detailed description of the numerous experiments which led me to fix on an antiseptic of the first rank, introduced some years back as a valuable antiseptic remedy in the case of intestinal derangements in man. This substance is beta-naphthol, which owes its introduction into general practice to the valuable researches of M. Bouchard, professor to the Faculty of Medicine of Paris. This excellent antiseptic cannot injure the bees, and they take to it the more readily as it is not very soluble, and therefore is not easily absorbed by the intestinal walls. Notwithstanding this, even when administered in minute quantities, e.g., in doses of 0.33 grammes to 1000 of liquid, it effectually prevents all fermentation, decomposition, or other changes caused by the micro-organisms. The media most favourable for the development of foul brood bacteria are rendered perfectly sterile when treated with a proportional quantity of naphthol.

Lastly, thanks to experiments made with some full hives partly attacked by the malady, which has been kindly forwarded to me by some of my correspondents, I have ascertained that a syrup medicated by a dose of naphthol in the proportions mentioned above is amply sufficient to rid foul broody bees from the parasites contained in the digestive canal. In cases where the infection has not laid too strong a hold of the parts surrounding the intestine, the cure seems to be speedy and complete. Even in captivity and under very adverse sanitary conditions, the insects soon regain all their old activity and liveliness. The treatment which I venture to recommend to the serious attention of apiculturists is as simple and rational as possible:—

In the early spring, before eggs are laid, administer to the diseased hives as large quantities as possible of sugar syrup contained 0.33 of a gramme of beta-naphthol. The naphthol should

be first dissolved in one litre of pure water, with one gramme of alcohol added to facilitate its solution. The liquid thus obtained is employed in making the syrup in the usual manner. I am quite certain that with this dose the bees will readily take to the syrup, which is in itself a powerful antiseptic. I need scarcely add that first-rate hygienic conditions are also necessary if we desire to give the bees the vitality and recuperative power which plays so important a part in enabling living organisms to resist the inroads of virulent microbes.

FOR THE CANADIAN BEE JOURNAL.

Separators or no Separators. Which?

IN your issue of April 1st, is an article from the pen of Mr. R. F. Holterman on the above subject, Mr. H. is evidently progressing, else he would not be asking this question, and it occurs to me it is just possible he may yet think after all, the wiring of frames, such as contained in Langstroth hives, manufactured by the firm he represents, is not a "needless and useless expense" in this increasing age of migratory bee-keeping.

To be sure, in endeavoring to answer him according to what experience has taught me, I trust no one will conclude, because it is the best for my locality, and my methods of working, that it is always the best in every instance, as some common sense must be used in this line as in every other course in honey production.

It is, however, amusing to note the changes that have taken place the past few years, with even some of our best authorities in all methods pertaining to apiculture, and the use and non use of separators is no exception. The result of such, being to a great extent, viz., so many changes in supers, the demands of the market, but especially because locations differ, resulting principally from late poor seasons. A few years ago it was no uncommon thing to hear separators condemned. Yes, even abused; owing in a great measure to the good flows of nectar, and the fact that the market did not then demand such even surfaces as at present; and the poor season following, instead of allowing anything in the shape of honey being offered, have only made matters worse, on account of so many bulging travel stained sections, a thing that could easily have been avoided by the timely use of separators.

It must, however, be remembered that all those who, even in poor seasons, can dispense with their use, but as the expense is so trifling, and no diminution of the crop perceptible, as a rule, it is therefore safer and wiser to use them.

With myself it is not desirable to give any

colony a full case of sections containing drawn comb of the previous year, or full sheets of foundation, as soon as more room is required to relieve the pressure of the brood chamber, as sufficient honey is not coming in to cause the bees to work uniformly throughout; hence the centre ones are just drawn out in a manner which requires the use of separators to prevent bulging and uneven surfaces, therefore, I prefer the giving of a half storey of drawn extracting combs to be used for the depositing of any surplus honey from the brood chamber, or that newly gathered from the fields, and by the time this is nearly filled it can be raised up and a case of sections then placed under it, or be removed from the hive altogether.

It appears to me that a very little of such manipulating will soon convince any one whether or not it is necessary to use them, yet, if objections are raised to the use of different sizes of frames in the apiary, the full size brood frames can be used above a queen excluding honey board, and as soon as their judgment decides, the bees can be shaken from such, and the combs used for other purposes, at the same time giving cases of prepared sections.

Now, this mode of procedure is about all I can at present suggest for those who cannot manage without their use. And yet with such seasons as we have had to contend with of late, I have not been able to wholly abandon them, and yet supply my market with an article in every way satisfactory to myself and customers. True, there are other things which go to assist in dispensing with separators, such as narrow sections &c., nevertheless, it will stick to them until the bonanza honey producing days return, or some new method such as friend Alpaugh has to dispose of, is made known, which, by the way, is to be put into the hands of some practical apiarist the coming season.

Should Mr. A. think me worthy of such a trial, and his figure not too high, I would be pleased to test his method of comb honey production, it being the particular part of apiculture I love most.

F. A. GEMMELL.

Stratford, Ont.

FOR THE CANADIAN BEE JOURNAL.

Siftings.

BY NO. 2

The contestants on the Punic war are resting on their arms.

The best hive for wintering is the hive that winters best. No puff.

Give the starch-box-man the credit for devis-

ing the lock-jointed, dove-tailed corner. It was not Columbus discovered America—it was Gen. Grant.

The editor of the *Horticulturist* misunderstood the action of the O.B.A. We are with him as to the proper time to spray fruit trees. The Minister of Agriculture understands it too.

Two questions are now agitating the minds of American bee keepers: One is a bounty on honey, the other the grading of comb. The first they will not get—the second they will not agree upon.

Editors of bee papers indulge in frequent "taffy-pulls." They greatly relish it when outsiders bedaub their lips and pens with the filthy stuff. To cleanly disposed people the game seems a dirty one. I want to set up an "Argyle Post" at each office door, and save them the necessity of mutual back-scratching.

Is there only one Ernest, and one A. I. in the world? People who read Dr. Miller's writings will think so. What a pleasure it must be to be "big folk," and have the world ambitious to claim familiarity with them personally. The Dr. ought not to disparage the many others who were blessed at their baptism by being given like eminent Christian names. May be there are some such in the ranks of American bee-keepers outside Medina. The *Review* may take a hint, and stop short of drifting into fulsome-ness.

Here is one of the Dr's "straws"—
 "Did the windmill spin faster—
 At sight of its master?
 Did the cabbage forth shoot
 When it saw A. I. Root?"
 And here is the reply of some ill-disposed wag:

No, its big sail just flopped
 When the good man first stopped
 In sight of its wabbling arm;
 The Flat Dutch then tumbled,
 For the cut worm fumbled,
 And prone lay the best on the farm.

"Three Tailors in Tooley Street," London, were bred,
 Who issued a mandate which pompously said:
 "We, the people of England will let the world see,
 We'll change laws and customs to what they should be."

We have prototypes of those three tailors today,
 Two Doctors, three Editors, over the way,
 Put their big heads together and mutually swore,
 The old North American to run evermore.
 The scheme they concocted was simple and grand,
 It only required three dollars on hand;
 And this they procured without much ado,
 Now, the great corporation its debtors can sue.

Those modern tailors, of Tooley street grand,
 Who proud on their corporate dignity stand,
 Fling their flag to the breeze, with this motto so bright
 "Not available"—"darkness is better than light!"

From American Bee Journal.

A "Find" of Beeswax.

WE have received from H. C. Farnum, of Aristotle, N. Y., the following concerning a mine of beeswax on the Californian coast. We know nothing of it, but perhaps some of our correspondents on that coast will be able to give us some light on the subject. We are inclined to think it a *fishy* yarn, but there may be some foundation for it:

No one has ever been able to give an authentic account of how such enormous quantities of beeswax came to be deposited on the beach near Nehalem, Calif. Specimens are found along the beach in various places, but it is most plentiful near the mouth of the Nehalem.

As the sea shifts the bars, pieces of it are washed ashore, and large quantities are found by plowing in some of the low land near the beach. There are spots where the sea has never reached in the memory of the oldest settlers, and which are covered with a good sized growth of spruce, where deposits of the wax may be found by digging.

Specimens of the wax may be found at the house of any settler on the beach, and to all appearances it is genuine beeswax. Several tons have been unearthed, and one man shipped a large amount to San Francisco once, for which he received \$500.

In quality it is as good as any in the market, and has retained its familiar odor through all its rough usage and age. It is supposed by some, and so stated, that it came from the wreck of a Spanish vessel over a century ago. Others say it came from a wrecked Chinese junk.

These traditions in regard to the wrecks came from the Indians, and are not reliable. It is possible that this beeswax is really a "Lost Treasure" which the people are digging for on the Nehalem.

If there is anything in the latter part of the story, the product is probably what is known as "Chinese wax" (*ceryl cerotate*), which is a substance bearing a physical resemblance to refined beeswax, and is also known as "white wax."

It has hitherto been supposed to be the inspissated exudation of certain species of trees in China; but an investigation conducted on behalf of the British Government by Alexander Hosie, 1890, shows it to be a secretion of an insect, *Coccus pe-la*.

According to the report made by Mr. Hosie to the science department of his Government, the Chien-Chang valley in the Chinese province of Sze-chuen is the principal breeding place of the *Coccus pe-la*.

These insects appear first in March in great numbers; they are of almost microscopic size, and are inclosed in pea-shaped excrescences called "scales," on the branches of a species of privet, the *Ligustrum lucidum*.

What the further history of the insects would be, if left to themselves, we have no means of knowing; but for commercial production they are transported, toward the end of April, before leaving the "scales" to the district of Chiating 200 miles from their native valley.

These insects and the wax product was fully described on page 775 of the Bee Journal for June 11, 1891.

The value of the wax is due to its high melting point, 160°, Fahr., as opposed to 95°, for tallow. The introduction of kerosene has much reduced the sale and production of this wax in China.

We think some of our Canadian friends would like very much to strike a beeswax mine similar to the above, as beeswax is very scarce.

A Curious Ceremony

A CURIOUS ceremony is mentioned by a clergyman who lives upon an estate in Switzerland, as having been lately performed there with the bees. He says:

The proprietor of a large domain not far from the mouth of the Rhine died. As soon as life was extinct, one of the relatives went to the beehives and attached a piece of crape to each hive, saying to each, "The master is dead."

On the day of the interment the same relative again visited the hives; took off the crape, and carried to each hive some cake and some wine, which had remained from the collation.

Dipping a piece of cake in the wine, he placed some at the entrance of each hive, each time repeating, "In the name of the Father, and of the Son, and of the Holy Ghost."

He said that if it had not been done, the bees would not have recognized their new master, but would have left.

A Swiss, however, informs me, that the custom is general among bee-keepers, but the belief is that if it were neglected the bees would die instead of migrating.

We do not have to go as far as Switzerland to find similar instances. I well recollect when this was a common occurrence with a certain class of people in Canada, who kept bees, and we believe there are some who practise it yet.

We find as a query in the A.B.J., page 444. (1) Do bees carry propolis on their

legs as they do pollen? (2) If not how do they carry it?

We thought everyone knew that they carried the propolis on their legs the same as pollen, but perhaps fewer know how they get it off their legs. We have frequently watched the operation putting it on, and taking it off, but the latter seemed the most interesting to us. After passing into the hive and up in the comb among the bees, in the usual way instead of putting their legs down into the cells with their loads of propolis then putting down their front legs and pushing the propolis off like they do pollen they walk about over the combs when the bees will be observed walking up and with their mandibles taking a bite from the little loaf on their legs and backing up as it were from the bees, we have sometimes noticed it stringing in a fine thread from one to two inches before the pollen in their proboscis was entirely separated from that on the bees legs then another bee would move up and take a bite and back up and as soon as they got it separated would walk off to place it, in this way they would continue until all was taken off. Now these little strings, or fine threads of propolis when they would break loose from the lump on the bees legs would sometimes break near the bees proboscis, other times in the middle, and again near the pockets, but in almost every instance as the thread would drop down on the combs it would stick there. We think this the way in which the propolis is got with bees wax because in rendering the combs it melts the same as wax but may be separated from it in the way as indicated in clarifying wax. Now as the bees take hold of it with their mandibles and back up, they seem to know enough not to step on it, and it is amusing to see them backing up or on an angle until the little thread is drawn up and they can raise their heads high enough so it does not touch the combs. A lady who was once watching with us remarked that it reminded her of a little dog carrying a big bone holding up his head for fear it might drop. With a powerful microscope on new combs outside of the hive and the frames in various places may be found these fine threads of propolis scattered about.

The reason the bees do not step on it

is, it would interfere with them in traveling.

Things To Remember.

I AM afraid that three honorary members of the bee-fraternity are fixing to lose sleep over the cost of the production of honey. Now, brothers, listen to a sister just this once, and remember the loss of too much sleep tends to destroy our best thoughts; also that those three "head-lights" should be kept brightly burning, for by them we all see better. Some things to be remembered: 1. That adulterated honey seldom, if ever, bears the name of the producer. 2. That it is seldom the bees that fail, but the "beeist," instead. That all honey has more or less pollen in it. 4. That we had the coldest spell ever known in March, in Texas a few days ago.

JENNIE ATCHLEY.

Floyd, Texas, March 24, 1892

Kind words from Exchanges.

WE have received from the publishers the 1st No. of Vol. 8, of the Canadian Bee Journal, edited by D. A. Jones, issued semi-monthly at Beeton, Ont. The Journal is neatly gotten up, and illustrated with a splendid frontispiece, with electros of Allan Pringle, Selbi, Rev. W. F. Clarke, Guelph; R. McKnight, Owed Sound; S. Corniel, Lindsay. The reading matter is of vital interest to all bee keepers, and especially to the farmer "whose bees don't pay." To those desirous of obtaining practical information in regard to bees, no better investment can be made, we think, than a dollar spent in a subscription to the Canadian Bee Journal.—Bolton Enterprise.

CANADIAN POULTRY JOURNAL

and

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*Leading Poultry Journal
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ISSUED 1ST AND 15TH OF EACH MONTH

D. A. JONES, - - - EDITOR

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BEETON, ONT.

EDITORIAL.

Advertisers say "it pays to advertise in C.B.J." Just try an ad. and see.

We have on our table a nicely printed catalogue from E.F. Fingley, Unionville, Miss.

In our last issue on page 3 there was a typographical error "Mr. Henderson" should have read Mr. Hutchinson.

Messrs. Colwick & Colwick have favored us with their neatly gotten up catalogue address Norse, Texas.

Send us the names of any neighbors you have who are interested in bees. We will send them a sample copy of C. B. J.

Any person having No. 24, Vol. VI of the C.B.J. will kindly forward to us and we will allow 10 cents each for three of them.

We have received Dadant's catalogue with samples of brood and section foundation, bee veils etc. It is very neatly gotten up, containing 28 pages. The Dadant's are known to be one of the largest and best comb foundation makers.

Last issue contained electros of Messrs. A. Pringle, S. Corneil, R. McKnight, and Rev. W. F. Clarke, who have kindly consented to contribute articles to the JOURNAL. This issue contains the electro of the father of the movable

comb hive, Rev. L. L. Langstroth. The name is so familiar to every bee-keeper that it is unnecessary to make any further remarks.

We clip the following from the American Bee-keeper:

"There are certain parties in the queen and supply business whose advertisements appear in some of the bee journals whose business careers will soon come to an ignominious end unless they reform, and reform quick. We shall certainly publish them if their present course is continued." "Honesty is the best policy."

Reports through other parts of the province state that the past has been a very hard season on bees. Farmers in this vicinity, that we have been enquiring of, say that so far they seem to have lost but few hives. Of course some of the weaker hives may yet starve out before there is sufficient food for them to pick up.—Paisley Advocate.

We have reports from some localities where losses have been quite heavy, but from most sections reports thus far show that bees have wintered well, but the hard time is yet to come in northern localities. It behoves our friends to look carefully after their bees to see if they are kept warm, and have plenty of food. Let us hear from some more.

The American Beekeepers are trying to get cheaper rates for honey. We have succeeded in getting good rates and have no trouble in inducing our Railway Companies to give them to us. Of course it is always advisable, when you want to make an impression to make it so that it will be of some service to you, and in order to make a lasting impression on the agents it is advisable to furnish each one, in authority, a nice sample of honey to put on their table trusting it will give them a pleasing recollection of the matter when it comes up before the board. When they find by testing it that honey is much nicer for table use than any of the syrups that are manufactured, that it takes no more room in a car, is as easily handled as syrups, why should they insist on us paying two or three rates. It is only necessary to educate the proper parties in the right way and justice will be done.

The American Bee-keeper says that from five to ten inches of drone comb is sufficient for a hive. We prefer no in-

ches as in most of our hives there are always a few of the cells around the edge that will answer for that purpose, and when we find special colonies with valuable queens that we wish to breed from, we prefer to breed from them drones, from others queens, and we do not care to have any drone combs in these hives to allow drones to be bred from every queen in the yard. We do think it in the interest of the apiarist that drones should be as carefully or more carefully bred than queens because they exercise the greater influence on the colony or progeny. I would much prefer to have an ordinary queen crossed with a superior drone than to have a valuable queen crossed with a poor drone. Now friends if your colonies that have special valuable characteristics for honey gathering, non swarming, etc., should breed your drones from some colonies in large quantities then breed your queens from some other colonies having special valuable characteristics, and see how soon you will be able to notice a marked difference in the value of your apiary.

* * *

Quite a few of our friends say they are troubled with their bees robbing this spring, the ordinary preventives have not produced the desired effect in every instance; they wish to know what they had better do. Well, friends, just lay a few sticks or a little fine brush at the entrance, then pile on hay, straw, or grass, say a foot deep, this keeps it up from the entrance, and forms ventilation by which the bees can get sufficient air. Then take cold water and sprinkle on the grass, wetting it thoroughly. You may do this in front of the hives that are robbing as well as those being robbed. As they crawl out through this wet material their thorax, wings, etc. become dampened as well as their ardour and their disposition to rob seems to cease at once. Sometimes it will stop them all right to put it over the hive that is being robbed, and as the robbers come out and encounter the wet material in passing through, they don't care to return. Those who pass through it, lose all disposition to fight, and a pint of bees in a hive so arranged will guard their entrance against all intruders. Sometimes the robbers will attack the next hive when they find they are prevented from robbing the one just fixed.

We have occasion sometimes to protect several hives on each side of the one being robbed before the depredations are ceased; but by ascertaining the hive or hives that are doing the robbing, and protecting them as we have stated, the whole difficulty will be surmounted in a very short time.

* * *

We are sorry to learn from the A. B. J. that the senior editor Mr. T. G. Newman has been obliged to take some holidays, as the following would indicate :

"The Editor's health has been so much impaired by three annual attacks of La Grippe, that if some radical improvement is not made very soon, a collapse is imminent. His physician prescribes "a complete rest and change of air." Accordingly, he will leave the city next week for a month's rest. The drudgery of desk-work has brought on neuralgia and brain troubles. A vigorous constitution, and strong will-power have contributed in no small degree to his holding out so long against the insidious working of that dire disease and its result.

We know how to sympathise with him as we had La Grippe for three winters in succession ourselves, and have been quite unable to attend to the editorial department of the C. B. J. on that account. Mr. Somers proprietor and manager was also confined to his room so that the entire work of the last Journal devolved on some of the office hands, and articles appeared as editorial which were written by them. Mr. Somers has quite recovered, and with his increased staff will now be able to look after matters carefully.

* * *

In going through the apiary we lifted off the lid, and noticed one of our strongest colonies was only occupying four combs, while some of the others, apparently not as strong in flying out at the entrance, were occupying eight. This, the assistant could not understand. And the explanation was quite easy. When I examined them I only found brood in three combs while with less bees I found brood in six combs in another hive near, it and eggs in the seventh. I thought it was a good opportunity to point out to him the advantage of having combs close together the difficulty was that this strong colony had the combs spread so far apart that the honey was capped about two inches thick. In order to carry on the brood rearing so many had clustered between one row of comb

to prevent the cold from chilling the brood, there were no bees left after filling the four spaces. "What is to be done?" asked the assistant I took a honey knife and shaved off about one-half inch of the capped honey at the top of the combs and dropped it down behind the division board at the back of the hive then I placed two more worker combs in the brood nest. In one week the result is that we had seven combs with eggs and brood, they no longer could crowd into the four spaces or even six and they are now filling eight spaces between the combs and keep it as warm as they were previously doing. It is a great mistake to have combs far apart in the spring the bees should have barely room enough to get up between the combs for breeding purposes. One row of bees between each sheet of comb if placed a proper distance apart is just as good six if they are spread and as bees are usually scarce in the hive early in the season it behoves us to make the best disposition possible of them until they become strong in numbers. In midsummer when the weather is very warm the difference is not as great, but early in the season by careful attention to this point one third more breeding may be carried on by the same number of bees. In using the Heddon hive we recollect finding a colony with very few bees which had so much brood in proportion to their numbers that the assistant suggested we shake in some young bees from some of the stronger colonies or they would swarm and leave their brood as they would be unable to protect it, but I pointed out to him the fact that this was an experimental hive, that the bees were only about one and a quarter inches thick, the top bars about three-quarters, and the result was that so few bees were required to protect the brood that they succeeded in building themselves up with wonderful rapidity, and it was surprising to see the difference between it and a colony with combs spread the ordinary distance apart and those spread from one-quarter to one half inch farther apart in order to test the matter. But you must bear in mind that where frames have no fixed distance they must be very accurate or it is impossible to get them close as is desirable for the best result in early spring, but in spacing your combs care should be

taken to crowd them up as much as possible, this is where straight combs tell. When I find combs bulged I endeavor to straighten them even though I have to cut a small narrow strip off but if they are warm it can usually be done without. Where combs are not built straight, by running a thin bladed knife up the side of the frame the combs may be pressed back in the frame and if it hangs true this will be a decided advantage.

* * *

The Delegates to the Industrial met in Toronto on the 2nd inst., for the revision of the prize list. The following changes were made in the Apiarian Department:

Section 1. Best display of extracted granulated changed from 200 lbs. to 100lbs; and the prizes were increased from \$10 for first, \$5 for 2nd, \$3 for 3rd, to \$10, \$6, \$4, and \$2—increasing the 2nd and 3rd and adding a 4th.

In Section 10—Apiarian Supplies—1st prize a silver medal, and \$10 to the 2nd. \$5 was added to the Bronze Medal.

Section 13—new inventions—the prizes were increased from \$5, \$3 and \$2 to \$8, \$5 and \$3 and a 4th prize of \$2 was added.

Section 16—most tasty display—was changed from \$35, \$15 and \$10 to \$30, \$20 and \$10.

Candy For Bees.

TWO pounds granulated sugar. Boil until it will crack when dropped into cold water. Then take off the fire and stir in one pound of good extracted honey. Then stir until it creams and you will have candy that the bees can use in every kind of weather.—American Bee-keeper.

Queerest of Races

PIGEON fancier in Hamme, in West-pualia, made a wager that a dozen bees, liberated three miles from their hives, would reach it in better time than a dozen pigeons would reach their cot from the same distance. The competitors were given wing at Rhybern, a village nearly a league from Hamme, and the first bee finished a quarter of a minute in advance of the first pigeon, three other bees reached the goal before the second pigeon, the main body of both detachments finishing almost simultaneously an instant or two later, says the "Cornhill Magazine." The bees, too, may be said to have been handicapped in the race, having been rolled in flour before starting for the purpose of identification.—Exchange.

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I HAVE about 24 dozen honey knives and a lot of honey gates I will sell at a price either en bloc or separately.—**E. T. STRANGWAYS**, Beeton. b-24-ft

WE have several bound volumes of Clark's "Birds Eye View" of Bee-keeping will mail on receipt of 10c. **CANADIAN BEE JOURNAL**, Beeton, Ont. b-24-ft

WANTED—A practical bee hand, or one to learn the business. I will have some bees for sale this spring, in fine condition and very cheap. Write for prices.—**J. ALPAUGH**, Box 704, St. Thomas, Ont. b24ft

HONEY,—1,000 pounds No. 1 Extracted Honey, in 60 lb tins. Will deliver F. O. B. Kingston for 8c. Sample sent on application—**R. A. MARR SON**, Midland, Central Apiary, Inverary, Frontenac Co. Ont. b24ft

FACTORY REBUILT.—Send for catalogue and special prices for early orders. Don't delay. The best goods at lowest prices. Send your name and address anyway Address—**W. A. Chrysler**, Box 450, Chatham, Ont.

FOR SALE.—House, barn, three lots, 60 colonies of pure bred bees, honey extractor, 6 six cwt. cans and other bee supplies. Magnificent bee pasture. Satisfactory reasons for selling. **MRS. D. BAIRD**, Glen Williams. 23-st.

I HAVE bought from the D. A. Jones Co. the following sizes sections, which I offer for sale at 1.00 M., f. o. b. in Beeton. All of them will fit the 8 or 9 frame Jones' Hive—Double slotted:—4 1/2 x 4 1/2 x 1 1/2, 4 1/4 x 1 1/2 x 1 1/2, 4 1/2 x 2 x 2, 3 1/2 x 4 1/2 x 1 1/2, 3 1/2 x 4 1/2 x 1 1/2 —**E. T. STRANGWAYS**, Beeton. b-24-ft

100 COLONIES of bees for sale or exchange for small engine and boiler, watch; shot gun rifle, stock of any kind or anything I can use. If you have anything to exchange let me hear from you. Queens for sale. **JAS. ARMSTRONG**, Cheapside, Ont b 1-5t.

MY BEE-KEEPING FRIENDS. If you have any wax you wish made into foundation I am your man. Ten years a maker and not one dissatisfied customer yet. Satisfaction guaranteed. For further particulars address **W. ELLIS**, St. Davids, Ont. Express office: Niagara Falls, O. t. b 23 ft.

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