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THE CANADIAN BEE JOURNAL

"THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER."

V. VI, No. 16. BEETON, ONT., NOV. 15, 1890. WHOLE No. 276

THE CANADIAN BEE JOURNAL

ISSUED 1ST AND 15TH OF EACH MONTH.

A. JONES, EDITOR-IN-CHIEF.
H. MACPHERSON, ASSOCIATE EDITOR.

EDITORIAL.

M. R. G. B. JONES has gone South, and writes: "Please send my C. B. J. to City Point, Florida; whither I am now on my way in hope of solving the winter problem. I am taking my bees South for winter to prevent them going into hibernation—consumption of honey, I mean." We hope friend Jones will give an accurate account of all the expenses, going and coming, and while there, and let us have a good report in the spring of his experience in migratory bee-keeping.

A novel advertisement that will be published by a Brooklyn, N. Y., company is being printed. They make a honey cough remedy, and have procured 12,000 of some exhibition hives, made of black walnut, and are placing them in drug stores to advertise their remedy.

W. Z. Hutchinson would find that he would not be continually pressed by his advertisers to take goods in exchange for space, if he was a supply dealer as well as an editor. We are never troubled in

this way. We defy any one to point out any way in which we have ever written down other people's hive or fixtures, to boot our own. THE CANADIAN BEE JOURNAL impartially treats all subjects presented in its columns, and is just as willing to permit good things to be said of hives and fixtures sold by competitors as to hear them said of our own.

It is reported that forty members of the Beekeepers' Congress, held at Fulda, Germany, were stricken with typhoid fever, four of them dying. This was on Sept. 21. How many have since died is not known. The doctors allege that the disease is the result of eating canned American lobsters.

It is proposed by some of the American bee-keepers to ask the government for a grant towards defraying the expense of importing foreign races of bees, from Africa, India, Ceylon, Phillipine Islands, etc. Prof Cook seems to think that the expense would not be very heavy. We have "been there" and can say that they will have more to do than they dream of, to successfully obtain in practical quantities, any of the bees from the places mentioned. We sincerely hope that they may take the matter up in earnest.

Our readers will enjoy the articles in the "International," which are begun in this issue.

GENERAL.

FOR THE CANADIAN BEE JOURNAL.

Judging and Other Matters.

NOTE what is said in the C. B. J. of the 15th inst., by the editor and a correspondent, on honey exhibit judging at shows. With very much of what both say I agree. With the rest I do not agree. As the disposition of the sweepstakes prizes at the late Toronto Industrial is referred to with disapproval, a few words in vindication of the guiding principle of the course pursued may not be amiss.

The JOURNAL "doubts the wisdom of splitting up prizes as they did it"—that is, the judges. Now, there may not be as much wisdom as justice about the proceeding. I mean the wisdom of policy. And how a just judgment can become a "bad precedent" would be hard to explain. Furthermore, if to do right is "evidence of weakness," a few people ought to be willing to continue in the weak state. And it is possible—indeed I think it probable—that the judges in the Apian Department at the late Industrial, instead of being "desirous of pleasing everybody," were simply desirous of doing justice to everybody. If both could be done at once nobody would be happier to do it. Let us look squarely at this matter of "dividing up prizes"—look at it from the standpoint of justice instead of policy or expediency, sometimes called "wisdom." Three judges find themselves examining say a dozen exhibits with say two prizes at hand for disposal on the best and the second best, or a second prize and third as the case may be. Of the dozen we will suppose they find four of just about equal merit. With justice holding the scales what are they to do? To my mind their course is perfectly clear. In fact there is but one course to pursue which has even the semblance of right. That course is this: If the judges are able to select two of the four similar exhibits and distinguish them at all in merit from the other two, between them the larger prize ought to be divided, and the smaller one between the other two. If the judges are not able so to distinguish, and the four exhibits are about equal in merit, then the sum of the two prizes ought to be equally divided among the four. This may not be worldly "wisdom," but it is homely justice. Whatever you call it I think it was the guiding principle of the honey judges at the late Fair.

Let us look now at the alternative course— at the "letter of the law" recommended as wise to follow. One of the four exhibitors is given

the larger prize; and who will say that is not a flagrant injustice to the other three? One of the remaining three is given the smaller prize; and who will say that is not a flagrant injustice to the other two? Nobody will say so, unless he has a hopeless moral squint. The two exhibitors left out in the cold, though as worthy as the others, get nothing—they are defrauded of both money and merit to which they are justly entitled.

That principle of invidiously selecting two for honor and reward out of four of equal merit is on a par with the old method of dividing the human animal from the lower ones of the Animal Kingdom. That method was that the one on this side the line of demarkation was a human being with superior intelligence, an "immortal soul," and all that; while the one just on the other side of the line, hardly a whit lower, was a "brute beast," with no reason and no soul. Modern science, however, has proved that from the very lowest form of life in the Vegetable Kingdom there is a gradual and almost imperceptible ascent up to the highest of the human family—that there is no break or great chasm between the lower and the higher animals. To fully perceive the utter absurdity of the old method of arbitrary division, let us in imagination suppose the whole Animal Kingdom, from the lowest to the highest, ranged in one line with the lowest form of life at one end and the highest human being at the other. No matter where you divide this line the two beings nearest your line of demarkation on either side of it will be so nearly alike that the difference would be quite imperceptible. True, if you took one out of the line here and another away up then a difference would appear; but any two immediately together anywhere in the line would be about alike. Now, here is where the absurdity of the thing comes in. This line is arbitrarily divided, and the one immediately on this side of the dividing line is credited with the human attributes and is immortal, while the one immediately on the other side of the line is a "lower animal"—a brute beast—devoid of reason, and "dies like a dog;" while the real truth is as between these two there is hardly any difference at all either in physical, mental or moral qualities.

Now, should this fact feel unpleasant to the pride and prejudice of some reader, and should he feel like opening an attack, I would remind him right here that I have simply stated a conclusion of modern science, for which I am myself in no wise responsible, and if he must attack something or somebody let him direct his attack to the right quarter.

CONDITION OF BEES.

Although August was too cool for a surplus yield of honey, the bloom was so abundant and the September weather so fine that brood rearing was well kept up. As there has been but little frost even up to date in this locality, (25th Oct.) and the fall unusually fine, the bees appear to be in fine condition, with a prospect of successful wintering.

ALLEN PRINGLE.

Selby, Ont., Oct. 25th, 1890.

—◆◆◆—
Taking Away Comb After Honey Harvest.

REGARDING your experiments as related on page 302 C. B. J., I have never tried the experiment of taking the combs away from a colony, as you describe your experiment, but in a modified way I have often seen the same thing you describe. Perhaps you have noticed that I have in some of my writings on bee culture mentioned as one of my methods of controlling undesirable increase the effective and simple plan of taking all the honey from colonies that I desired to dispose of, and leave the bees to take care of themselves. In these experiments I have always given the deserted bees some empty combs to cluster on and take care of, and in every experiment I have been surprised to see how long these deserted colonies have kept bright and clean without any perceptible income in way of stores. I don't remember of ever seeing one of these colonies perish outright till the first shock of winter overtook them. In my experience I don't remember in any case where a colony without stores as above described ever *survived* the first severe shock of winter. This is precisely what we would expect to see in such a condition of things. Food is necessary to excite animal heat in cold weather. I have often changed my plans and saved such colonies as I had thus condemned at the beginning of winter by supplying them with winter stores, and they have come through as well as any that had stores to consume all the while. I have often thought the plan of taking away their stores and thus preventing them from consuming it to no profit during the latter part of the season and then restoring it to them at the beginning of winter, might solve a question of economy not heretofore understood. I can't see that the difference between an empty brood chamber for the bees to cluster in, or a set of empty combs in the brood chamber would put any figure in the experiment. But I may be wrong about this, a matter easily settled by a little trouble and ob-

servation. The only difference I have observed when experimenting in this line, between colonies with queens and queenless colonies, is found in the fact that colonies put on short rations, having a queen, are more likely to "swarm out" than a queenless colony is. The reason for this is when the bees indulge in a general airing flight the queen becomes excited by reason of being left nearly alone, and if she takes wing with the bees there is no certainty as to what they will do. Generally it results in a case of "swarming out." In my opinion this is the true cause of all cases of "swarming out." But to return to the matter in hand. If the plan of taking the stores away from bees for a time in the latter part of the season, to be restored to them at the beginning of winter, should prove to be practicable, it would destroy the pet theory of many bee men that late brood rearing is necessary to best condition for safe wintering. The season for white surplus honey here was very satisfactory. My average yield of white honey—from white clover—was about 66 pounds per colony. The fall flowers were abundant, but unfavorable weather intervened, and our bees have done nothing more than made themselves ready for winter, and some colonies have hardly done that.

G. W. DEMAREE.

Christiansburg, Ky., Oct. 27, 1890.

Is there a difference as you say between them clustering on combs or without combs? Might there not be a difference in regard to them swarming out? Will bees clustered as a swarm in their hive be less liable to swarm out than those that have the comb without honey? We have never tried the experiment on a large scale, but we are now inclined to the belief that they *will* cluster in a bunch without combs, and be less liable to swarm out than they would with empty combs. They become, in fact, more like a colony that has swarmed out and taken up a new location, and they seem to settle down quite comfortably after they have commenced building comb. There is one grand feature about this experiment which, to my mind, is well worthy our consideration, and we believe that this may yet be one of the favorite modes of getting rid of foul brood. All the combs can be taken from a foul broody apiary and rendered into wax, and the combs made into foundation. Then put the foundation into clean frames and hives, and after the bees have disinfected

themselves they can be put on to the foundation, and the whole yard will be cleared of foul brood. Of course it would be necessary to have sealed stores to give them a little later on when being prepared for winter quarters, and if the owner of bees did not have them he would probably have to buy. Doubtless a request through THE JOURNAL would secure a sufficient number of the right size. It would not make any difference even though dark honey was used, and there are very many who would perhaps be very glad to dispose of combs filled with dark honey at a very reasonable figure.

We know that if bees are worn out when they go into winter quarters, even though they survive the winter in good condition, they are only left to enjoy a few flights in the spring, and a large colony of such bees will not live long enough to perform the work of replacing themselves by young bees, requiring about a month's time. If this plan of treating bees is carried out we do not know that it will entirely destroy the theory of having plenty of young bees for winter. By young bees is meant bees which have not worn themselves out by exertion, and which have not lost their vitality to such an extent that they are weak and unable to give an account of themselves in the brooding in the spring. Is it not a fact that bees which have clustered from the cessation of the honey flow until the time for winter packing will be nearly as strong as young bees which are reared after the honey flow is over? The former do little or no work, and are not nearer exhausted than bees would be after six weeks or less of ordinary labor.

Is it not reasonable to suppose that the nearer we can get bees to a state of quiescence immediately after the honey flow has ceased the stronger they will be to go into winter quarters. If so it is quite possible that we may yet learn a means of keeping them quiet so that the necessity of fall brooding may be done away with.

FOR THE CANADIAN BEE JOURNAL.

Uniting Bees vs. Destroying Them.

I HAVE been much interested in Mr. Hasty's article on uniting bees in the fall, (which appeared in THE JOURNAL for October

15th) so much so that, had I received THE JOURNAL before preparing my bees for winter I would have given his plan a trial; although, judging by my own experience, the united colonies would consume more honey than one ordinary colony, and be in no better condition in the spring; still I am willing to learn, and if there is the least advantage in such uniting I would rather do so than destroy those not needed, but, if as I expect, there is no advantage in it, but rather disadvantage, I would shuffle off the surplus colonies as I have done the past two seasons. The first five years of my experience among bees was with the large Jones hive, and each fall the colonies would be all sizes, from five frames up to ten, and I frequently noticed that the large ten-frame colonies would be mere nuclei in the spring, and would be beaten the following season by the five-frame colonies, while usually the average ones on seven or eight frames would be in best condition. Only last fall I put a colony into winter quarters which filled an eight-frame hive. It had not swarmed all season, and had been working in two upper storeys. That colony wintered in good condition, but was no better in the spring than many others which had no more than two thirds the quantity of bees when put away in the fall. Many bee-keepers claim that large colonies will consume very little more honey in the winter than an average one, but I believe where one colony contains twice the quantity of bees contained in another it will consume nearly twice the quantity of honey. I know a bee-keeper who placed a very strong colony in winter quarters one fall with over forty pounds of honey, and it starved before spring.

Just such things as this turning up every year compels me to pin my faith to good ordinary colonies, just such as are got by practising Heddon's contraction system, which I have done for the past four years. I wish to say, however, that I refer to indoor wintering altogether, as my experience with outside wintering has been very limited, although successful; but I am acquainted with bee-keepers who winter outside and who hold the same opinion. I should like to know if Mr. Hasty winters his bees inside or out, and also how much honey is required to carry one of his strong united colonies through from Oct. 15th to May 15th. I like all my colonies to have at least 25 lbs. of honey to cluster on, and after they are all prepared for winter I don't expect to see the inside of some of them for seven months, and to place them in winter quarters with four, or eight, or even twelve pounds of honey, as Mr. Hasty speaks of, I should consider a very wasteful method of de-

stroying bees. Of course I understand that Mr. H. puts fresh combs in as required, but in this cold country rather than fuss with them so much I would take Mr. G. B. Jones' advice, destroy all in the fall and buy afresh in the spring. I imagine there would be an advantage in uniting if the united colony was placed away from the old stands, as by this means many of the oldest bees could be got rid of, but of course that would not suit those who don't like to destroy a bee.

I noticed your article, Mr. Editor, on taking combs from bees in the fall and leaving them to cluster in the empty hive, and imagine if you were serving a whole apiary that way you would have a busy time attending to swarms, that is if they acted as one of mine did from which I took the comb with the intention of destroying it. Perhaps while I am sending you a few lines I might tell you how I destroy bees. None of the methods given in THE JOURNAL in answer to my enquiry for an "easy, cheap and quick way" suited me exactly, so I hit upon the idea of drowning them. I put three or four pails of water in a tank standing in a convenient place, bring the colonies to be destroyed to it one at a time, and shake the bees directly into the water from the combs. This is a quick way to get rid of them, and is a long way ahead of sulphur. An assistant is needed to keep the "porridge" stirred, and the bees must be skimmed off occasionally and buried. I destroyed over seventy colonies in this way this fall.

Mr. Holterman's article on "Uniting Bees," (page 292) exactly expresses my opinion. I should not want to change a word if I was going to sign my name to it. I started this article with the intention of giving you my opinions, Mr. Editor, on two or three other articles, more especially that of Mr. G. B. Jones', which appeared in issue of Sept. 1st, but I must forbear, as this is already more lengthy than I intended.

GEO. WOOD.

Monticello, Dufferin Co., Ont., Oct. 31, 1890.

FOR THE CANADIAN BEE JOURNAL.

The International.

A SMOKE WITH ONE OF THE DELEGATES.

KEOKUK! What is it? Where is it? And what is to be seen and learned there? were questions that suggested themselves to my mind, when it was fixed upon as the next meeting place of the International. Keokuk floated about in my mind all the year through, accompanied by an indefinite notion of

its wh realouts and its attractions. My geographical knowledge of the country is so imperfect that I had not heard of Keokuk till named by the man who turns out the big piles of foundation. Undoubtedly it was his representations as well as his respectability that led the meeting to decide upon Keokuk as the rallying point for the bee-men of America in the year of grace 1890. Keokuk once decided upon, to Keokuk we must repair or forego the pleasure of attending the International. Prior to starting I provided myself with the time tables and accompanying maps of several railways supposed to run to or near the great "Father of Waters." I was bound to locate Keokuk if possible. My pencil point ran up and down the great river from St. Paul to St. Louis, and finally rested upon a speck situated on the west bank of the Mississippi, and on the boundary line between Iowa and Missouri. I had found the position of Keokuk. This settled, I turned out of bed one morning about the time the lark scars aloft and warbles her welcome to the coming day. Partaking of a hearty meal, I lighted my pipe, seized a slim grip sack in one hand and a stout stick in the other, and set out for Keokuk. My pipe was still alight when I reached the railway station, and laying myself back in the carriage I fell into a kind of reverie. (Smoking is conducive to this state of mind.) My thoughts preceeded me to Keokuk. I saw the bee-men assembled in great force—a sober, stately set—proof against the poison of bees and the tongue of slander, a body of men who if noted for one thing above another it is for an innate sense of their own respectability, and their more than ordinary intelligence. There they sat in my minds eye, struggling with the problems incident to their calling; some jolly big men among them thoroughly satisfied with themselves and their importance in the world of apiculture; there too, were the men of science; the men of business; men of the cotton fields of the South, and the corn fields of the West. There also were the apiaran cranks with "a bee in their bonnets," which covered little besies. I was roused from my reverie by my pipe giving out a sickly asthmatic wheeze, suggesting the necessity of refilling. This done I resumed my lolling posture when it dawned upon my mind that he who smokes is under a ban amongst the bee-keepers of the country to which I was going. I was consoled by the thought, however, that the real or assumed virtue of abstaining from the use of the weed, and of preaching a crusade against the habit of smoking, is a feature in the bee literature of no other country than that to which I was speeding. The pleasant recollection of

having met some of the most eminent bee-keepers of Britain and Europe—men of learning, probity and piety, men widely known and esteemed where known—nearly all of whom indulge in a "whiff," was a solace to me nearly as great as that afforded by my newly filled pipe. I remembered, too, that that country produces not only all the tobacco its people consume but a great deal of that which "demoralizes" the rest of the world, but could not recollect of anything being said of the sin of producing it. I thought of the time when Virginia had little else as a medium of exchange, when the taxes were paid in tobacco, and when her Legislature granted \$1,000 pounds of the same commodity to the ministers of the Gospel as a yearly stipend. I thought also of some of the great and good men of these and other days who smoked. The subject was assuming colossal proportions in my mind when my pipe again wheezed, but just then the engine whistle shrieked, and the brakeman in a stentorian voice announced "— station, twenty minutes for refreshments." Returning to my seat I passed the time with "Little Dorrit" till the electric lights of Chicago loomed up, and presently the train pulled into the depot.

It was Saturday night. The streets of the big city were crowded with vehicles and pedestrians. Elaborately dressed shop windows, brilliantly lighted up, are as common in Chicago as in other large cities. By the way, did it ever occur to you what instructive object lessons shop windows are? One may read in them the tastes, habits and worldly condition of the people. The presence of opulence, comfort and poverty, show themselves in their proportions in shop windows. If luxury abounds it is made manifest through the same medium. If fashion is carried to extremes it is seen through the glass. The season of the year and the climate of the country are visible in their displays. A world of information may be gleaned from what is shown in the shop windows of cities in every country.

In due time I "turned in" and slept the sleep of the wearied until Sunday morning dawned. What a revelation a Chicago Sunday is to a Canadian! The "sound of the church going bell" might be heard there as here, were it not lost in the rumble and roar of omnibus, cab, cable-car and hansom. Such know no Sunday in that wicked city. Strings of street cars tear over its thoroughfares as if by some magic agency. No motive power appears before or behind, above or below them. By a cunning contrivance they grip an endless cable, in endless

motion. Then they run with the running cable, and stop and start again at the will of the "grip-man." It is time I reminded myself I am writing for a bee journal and not for a newspaper, but Chicago is a great big hive, and is, so far, German. No colony of bees could manifest greater activity in a honey flow than Chicago does at all times, but it is specially industrious just now. The real estate market is particularly brisk, and the "boomers" are busy gathering in their harvest. In this business Chicago is not a whiff behind the smartest of smart cities. For twenty miles the country around—north, south and west—is staked out into building lots. In many places streets are graded and sidewalks laid away cut on the prairie, with not a house from one end of them to the other. Lots having 25 feet frontage on these are selling at prices ranging from \$300 upwards. This will go on for a time, but the last rocket that signals the close of the "Columbian Fair," of 1893, will pierce the big bubble, and there will be a mighty collapse. Meantime the land shark's will have gobbled up a great many fry.

A DELEGATE.

(To be Continued.)

FOR THE CANADIAN BEE JOURNAL.

That Experiment.

I HAVE had no experience with such as you describe on page 302 of the C. B. J. I have not much faith in it, and do not believe that it would work generally as you say it has done in this instance. In any case there would have to be a large saving of stores before I would be induced to turn my bees upside down in this way. I have been persuaded for some time that the less we can disturb the brood nest the better, and therefore never extract from such combs as are for the use of the queen and winter stores. I much prefer having always the same frames, (as much as possible) in the same hives, and in the same position, except when necessary to separate any to confine the queen in fewer combs. In the experiment you speak of there would be also considerable labor in caring for and restoring the combs again to the bees. I would much prefer keeping a few extra colonies to make up for what little might be gained in this way, even though there should be a gain, which I do not believe there would, for if you succeeded in handling them so carefully that they did not fill their sacs before removing, they would no doubt make up for it when returned. I do not see that the bees consume so largely of stores after breeding has ceased, but I may be

mistaken. However, in any case, I would not practice the plan.

Yours, truly,

G. A. DEADMAN.

Brussels, Oct. 30, 1890.

We would not advise any person to practice the plan generally without it has been further tested, only the thought struck us that there might be some good come out of sifting the matter to the bottom, and I believe that as regards the question of foul brood apiaries there is no doubt that it will enable those more or less affected with the disease to rid themselves of it by a very simple means. The healthy colonies could seal stores for the diseased ones, and the entire disease in any apiary could be wiped out at a stroke.

FOR THE CANADIAN BEE JOURNAL.

False Report.

IN CANADIAN BEE JOURNAL, Vol. 6, No. 18, page 307, R. F. Holtermann says: If the information I have received is correct, one of the exhibitors at the Toronto Industrial this year, hailing from Milton, has had foul brood in his apiary this summer. Now, as I was the only exhibitor from Milton, I am the person alluded to, and I emphatically deny having any foul brood in my yards, which Mr. McEvoy, Foul Brood Inspector, will prove to your satisfaction. Consequently I neither exhibited, sold, or exported foul brood honey in Toronto. R. F. Holtermann had better be a little more careful in reporting to bee journals about certain bee keepers having or reported to have foul brood in their yard, when there has been no symptoms of such disease. Would like to know where he got his information.

Milton, Nov. 12, 1890.

GEO. LAING.

By the same mail we received the following from R. F. Holtermann:

A CORRECTION.

Under the heading Foul Brood I mentioned that a party from Milton having foul brood in his apiary had exhibited honey at Toronto. I find that the parties who informed me were mistaken. The party in whose apiary the foul brood was found resided at Milton, and has the same surname, but is a cousin to the apiarist exhibiting at Toronto.

R. F. HOLTERMANN.

Romney, Nov. 12, 1890.

Report of the Business, Speeches and Discussions at the International.

(Taken From The American Bee Journal.)

The twenty-first annual convention of the International American Bee Association was convened in Grand Army Hall, Keokuk, Iowa, on Oct. 29, 1890, at 10.30 a.m.

Hon. R. L. Taylor, of Lapeer, Mich., president of the Association, called the convention to order, and C. P. Dadant, of Hamilton, Ills., occupied the secretary's desk.

Dr. C. C. Miller, of Marengo, Ills., formally opened the morning session with an invocation of the Divine blessing, after which occurred the reception of new members, and the payment of dues.

Then followed the Address of Welcome by Mayor John E. Craig, who said he was not present to deliver a formal address, but as the chief executive officer of the city, to extend a cordial welcome to the convention and the delegates composing it. He welcomed the Canadian friends as heartily as the American citizens. Americans exhibited a cardinal pride in referring to the grandeur and greatness of this country, whenever an opportunity offered.

Mr. Craig then alluded to the scenery in the heart of the Republic; and said it equalled that of Switzerland. He promised that the people of Keokuk would be found hospitable, and that they would courteously try to make it pleasant for all while here. He thought that it was the part of wisdom to hold this International Convention west of the Mississippi river, as it would widen the field of labor, and would direct attention anew to the bee industry.

Mr. Craig concluded by saying that there was nothing so laborious as the bee, which was an illustration of God's handiwork that is followed by the American people, and especially those of Keokuk.

The response to the Address of Welcome by the Mayor was, by request of the President, made by Mr. Thomas G. Newman, who said:

Mr. President, Ladies and Gentlemen

On behalf of the International American Bee Association I would say that we accept the welcome so cordially

made to us by Mayor Craig. We can well afford to plant ourselves in this fair city, and indulge in a substantial time of enjoyment for the next three days. The two great saints of the calendar sit, one at the north and the other at the south of this city, and this is "the Gate City"—the gate between these Saints—St. Louis and St. Paul. It is also one of the gates to the great West, with its blooming fields and its treasures of hidden wealth, as well as to the vast honey fields of Colorado and California. Now, as representatives of the industry of apiculture, from the Atlantic to the Pacific Oceans, and from Hudson Bay to the Gulf of Mexico, we are met here to discuss the present status and the future prospects of the pursuit, and with much pleasure we witness the cordial welcome of this beautiful city to its visitors; and wish for it a glorious future.

The President announced, as the first topic on the programme, "Fifty Years' Progress in Apiculture," and called up on Mr. Thomss G. Newman to address the convention on that subject, which he did, as follows:

FIFTY YEARS' PROGRESS IN APICULTURE.

Of the Grecian poet, Pinder, it is said that the Muses were very shy with him until a honey bee alighted upon his lips; after that, his soul was filled with the most beautiful thoughts, and his voice poured forth the sweetest of poetry.

In order to give the merest outline of the subject assigned to me, and make that "simple history" interesting to you, I fear I shall need not only the bee to touch my tongue, but must have the Muse herself to plant a rapturous kiss upon my lips, for we learn that in Greek Mythology, the Muse was "one of the nine goddesses who presided over poetry, painting, music, rhetoric, and the liberal arts in general"—then I may speak words which may interest you.

In order to be able to determine what has been the progress of bee-keeping during the past 50 years, it will be necessary to ascertain where the ancients left it, at the date mentioned for my comparison to be made.

In "the misty ages of the past," superstition held sway over everything, and the bees were not exempt. The ancients saw apiculture only in its crude state. They had seen its great possibilities, as it were, only "through a glass, darkly."

In the time of Abraham and Samson, they had this "treasure in earthen vessels"—and, in fact, in Palestine and the East, to-day, they still keep their bees "in earthen vessels!"

Greek and Roman sages and poets caught only a glimpse of agricultural possibilities, and then the world was enveloped in the gloom of "the dark ages." Then ignorance and superstition

reigned supreme until the days of Huber and Bevan, of Dzierzon and Berlepsch, who cleared away much of the rubbish, letting the daylight in upon the pursuit. That is just where we find apiculture 50 years ago—plodding in the darkness, but with a small light ahead; it was but a dim, tallow rushlight, we grant you, which then shone—when compared with the resplendent rays of the bright orb which now shines upon the science of apiculture, in the closing years of the 19th century.

As all the "wants" were felt, they were fully supplied.

The first apicultural "want" in America was a simple and practical hive—and just then Nature produced that intellectual giant, whose name is ever honored by Americans—the Rev. L. L. Langstroth—and he gave us the hive that had long been needed, with its movable frames and surplus receptacles—revealing the mysteries of the bee economy, revolutionizing the methods before practiced, and sending old theories to oblivion!

A better race of bees was also needed, and Nature again produced "the men for the times," who supplanted the native black bees with the yellow race. Here a brief history will be in point:

In 1853, Alpine bees were introduced into Germany. Madame de Padua, of Mira, Italy, wrote to the Rev. Dr. Dzierzon, who resided in Lower Silesia, for a model of his bee-hive, and she sent him a colony of the yellow bees, which were the first seen in that part of Europe.

In 1856, Mr. Samuel Wagner, then of York, Pa., attempted to import a few colonies of Italian bees, but they all perished on the voyage. In 1890, Messrs. Wagner, Langstroth and Colvin succeeded in importing the yellow bees, from Dr. Dzierzon's apiary.

In 1859, Messrs. S. B. Parsons, of New York, and P. J. Mahan, of Pennsylvania, were the first to land Italian bees in North America.

Then importers grew in numbers, and queen bees from Italy, Cyprus, Carniola, Syria and Palestine followed in rapid succession, and Messrs. D. A. Jones and Frank Ben searched all over the Eastern Hemisphere for other races of bees, in order to improve our stock and produce our ideal bee—*Apis Americana*, which by a liberal translation means "the Bee of America." By careful selection and breeding for some years, many have now produced their ideal bee, and I am free to say that now *Apis Americana* is here in all its glory!

In deciding upon the merits of our ideal bee, five points are essential, and may be enumerated thus:

The queen must be prolific in order to have the hive full of bees at the proper time to gather the harvest of honey.

The bees must be industrious, to let nothing escape their vigorous search while gathering the nectar.

They must be docile, to allow the apiarist to manipulate them and the hive with ease, in order to be profitable.

They must be hardy, to endure the rapid changes in this very trying climate.

They must be beautiful, in order to secure the admiration of the fanciers of fine stock.

These five points are all essential characteristics of *Apis Americana*. "Our ideal bee" will

be present at the very moment, when the slumbering flower, under the penetrating dew, awakes to consciousness, and unfolds its buds to take in the first rays of the setting sun! It will welcome "Old Sol" at the very break of day; dip into that tiny fountain which distils the honey, drop by drop, and bear away the sweet treasure to its cells of wax, in its populous little home.

To reap the full benefit of the imported bees, it became necessary to be able to find an easy and safe method of changing the natives to the improved variety—to rear and ship "our ideal bees," and spread them over the whole continent. Then as if by magic these methods were discovered and put into practice, as well as to increase by "the division of colonies," instead of by swarming—and to control the fertilization of queens, so as to assist in the "breeding for good points," and the elimination of the undesirable traits of character.

Until then, but little thought had been devoted in this country to bee keeping as an occupation, and still less to it as a science. True; many kept a greater or less number of "gums" or "skeps," and a few (comparatively a very few) master minds had conceived any rational scientific views regarding many of the mysteries of the bee hive; some did to an extent comprehend the physiological history of the honey bee, but they were so very few that their wisdom was almost covered with disrepute by the ignorant and superstitious ideas of the masses, who kept bees as did their great-grandfathers, and whose comprehension had only kept pace with their improvements.

The master works of our Father Langstroth and the late M. Quinby gave rise to much thought and study, which in turn led to experiments, and these created the necessity for a periodical, in the columns of which new discoveries could be heralded, accepted theories be discussed, old prejudices be combated, and apiculture be elevated to its proper position among the progressive sciences.

In 1861, the American Bee Journal was started by the late Samuel Wagner. The Rev. W. F. Clarke ably edited and managed the Journal for about a year—and in 1873, it became the property of the present editor. That much progress has been made during the 30 years of the American Bee Journal's existence, all will acknowledge. Many doubtful problems have been solved, and new ideas promulgated; all the standard works on apiculture have been revised, over and over again; and published experience have proven to the several authors that their books inclined to error, and none but the most conceited have assumed that they know it all.

Many other excellent apicultural periodicals are now published, and there is a host of good books for bee keepers, but time would fail me to mention them all, or in the few moments allowed me, to do justice to their excellence. One thing is certain, however, that the progress and intelligence displayed in the pursuit of bee keeping, shows that much is due to the liberal use of "printer's ink" in the excellent periodicals and books devoted to this pursuit—

For printer's ink has built its throne
Where minds their tributes bring,

And God's most gifted intellects
Shout "printer's ink is king!"

In every clime, in coming years,
Will men proud anthems sing,
And round the world the echoes float,
That printer's ink is king!

Perhaps nothing has been more potent, in developing the best thoughts, the most practical methods, and the advanced ideas of those devoted to our industry, than the congregating together of apiarists in County, District, State and National Assemblies to consult and advise about every advancing step in apicultural progress.

Grand exhibits of bees and honey at the various agricultural fairs all over the country, have done much to inform the masses about honey and its uses, and, by good natured rivalry, have raised the standard of excellence, and enhanced commercial values.

By planting for honey bloom; and providing continuous pastures for the bees, from early in the spring until late in the fall, more honey will be produced, and bee keepers will become general benefactors—

For generous bloom in all the dales,
And mountain sides will grow;
And rooks and hills, and brooks and vales,
With milk and honey flow.

The old way of mashing pieces of comb taken from the breeding apartment of the hive, and "straining" out the honey from the bee bread, dead brood, etc., was so very undesirable that a new method was demanded. Centrifugal force applied to the combs furnished the desired process.

Major Hruschka's little boy, with a tin pail containing a piece of honey, which he swung around for fun, gave to the world the honey extractor. The Major noticed that on the further side of that honey comb the honey was gone. He turned the pieces of comb over, and told the boy to swing the pail again; and then the comb was empty.

That little circumstance was the father of the honey extractor, which is now so universally used to take the honey out of the comb—giving honey, minus the wax, as the choicest food for man—and returning the combs, minus the honey, to be refilled by the bees, without waiting for new comb to be built—saving much valuable time for the bees, and tons of honey to the producer.

A peculiar knife for uncapping the combs before placing them into the extractor was an absolute necessity. An edge like a razor was needed to cleanly cut off the cappings, and leave the combs intact, ready for immediate refilling. The steel uncapping knife was then produced, with a beveled edge, a sharp point, and as keen as a razor, in just the nick of time to completely fill that want!

To control the bees while manipulating the hives, and prevent them from stinging, was greatly desired—and that "control" was bestowed on mankind by the invention of the bellows smoker, just when it was needed most.

Left to "their own sweet will," the bees will build drone comb and produce multitudes of drones—"consumers of honey." Some way to

prevent this was much desired, and was found in the invention of sheets of wax with corrugations on either side, which the bees readily accept, build out into work cells, and fill them with honey or eggs as required—preventing the undesirable excess of drones, and greatly increasing the amount of surplus honey.

Stronger combs were needed for the safe transportation of honey in the comb, and the timely invention of thin comb foundation fully supplied that want.

To cut out comb, filled with honey from the breeding apartment, was undesirable because of its leaking—and the invention of the small sections for comb honey came to the rescue, by giving the purest virgin comb for table use, a clean and marketable package, filled with heaven distilled nectar, valuable alike for food and medicine, and enticing, by its neatness and simplicity, consumers of the sweet product.

Jars, cans, kegs, etc., serve the same purpose for honey out of the comb—and add to the commercial value by placing it within the reach of all consumers.

So much has been accomplished in the past 50 years; but we are by no means satisfied with "present attainments"—we shall "press onward," for the grand possibilities of the future have as yet hardly dawned upon us. New inventions are just beyond our ken; grander truths will soon be unfolded; and the loftier altitudes will yet be reached!

Where in the realm of Nature do we see,
A worthier study than the honey bee?
What curious instinct dictates every art,
Whereby the little creature acts its part?
How do the marvels of the hive combine,
All other insect wonders to outshine?

America, the brightest gem in the diadem of the world, is the mother of the grandest apicultural inventions, and has perfected and put to practical use some of those which were simply conceived in other lands, but then left in an undeveloped state.

Already she produces the most delicious honey from her myriads of nectar-bearing flowers! She has shown to the world the finest bees, carefully bred for business as well as for beauty! And in modern methods, practical management, available tools and implements, and the perfection of supplies and fixtures—she now leads the world.

THOMAS G. NEWMAN.

Dr. C. C. Miller remarked that he was reminded of the time when he first began to keep bees. He caught a swarm on the 4th of July, years ago, put them into a barrel, and saw chips at the bottom, and wondered what they were. He was surprised to learn afterwards that it was the cappings gnawed off by the bees.

Remarks were also made, and some questions asked by Dr. Oren, Rev. W. F. Clarke and others.

Mr. Newman, by request, replied to all in a happy vein.

Several then spoke of the "beauty" in bees, and agreed with Mr. Newman, that the best bees were those that were

"bred for business as well as for beauty."

Mr. McKnight said there ought to be some standard for excellence. He believed in beauty and utility combined. The beauty of a bull-dog is real ugliness! The points at competitive shows were all stated as to horses, cattle, poultry, dogs, etc., and it ought to be also stated for bees! These should be competitive points. He said that the address of Mr. Newman, just listened to, was measurably above criticism, but he would like the points mentioned to be settled by somebody authorized to do so. The beauty of a bee was in its temper. If it could be handled and manipulated without receiving stings, it would be put down as good in that respect.

In reference to the Mayor's Address of Welcome, he desired to thank him for his kind references to Canada and its representatives present. The United States had been represented as a wooer, and Canada as the coy, bashful damsel. But there would be no marriage of the two—for her mamma would object. She must say, in characteristic language, to her admirer—"I will be a sister to you," and that is all.

(To be Continued.)

Order your Spring Supplies Now.

How many of our customers were vexed almost beyond all patience, waiting for their goods—ordered just a few days before they need them? Why should we have all the blame, because we did not put in a stock big enough to rush out all orders as fast as they came in! Three years ago we did just this very thing, and we carried three-fourths of the stock—amounting to thousands of dollars—over till the next year and this coming together with some serious financial losses, cramped us up pretty closely for the next year or two. The lesson we learned that time was a severe one, and as "a burnt child, etc.," we have been very careful since. Then, too, we have usually been shut down a good part of the winter, and many orders which came in had to wait until we could run to get out the goods to fill them. This winter we will, however, be in a different position, as we shall, after another week or two, be running right along every day, and we intend getting out such a lot of hives, sections, etc., that we will not be so likely to be caught. But to reduce the chances to a minimum, we are going to offer special discounts for winter orders, to make it an object to order now, instead of waiting till you really need to use the goods. For these discounts see the advertising pages. We will issue a new and revised catalogue and price list about December 1st, which will be mailed on application.

CAPPINGS:

CUT FROM A VARIETY OF COMBS.

Ants on the Lawn.

On page 224, a correspondent asks how to dispose of ants in the backyard and house, and he has replies from our host of special correspondents. Prof. Cook's reply was good, and was in part like the following, which we clip from *Insect Life* (October, 1890). The article is by Prof. C. V. Riley, and he suggests:

"Kerosene, pyrethrum, or bi-sulphide of carbon. Where the nests are outside, nothing is easier than to find them and destroy the inhabitants with kerosene or bi-sulphide of carbon, he says: The nests are almost always in the immediate vicinity of the house. The ants are peculiarly susceptible to the action of pyrethrum in any form, be it Persian or Dalmatian powder or bicach, and a free and persistent use of this powder will accomplish much. The best means of trapping ants consists in placing small bits of sponge with sweetened water in the spots where the ants congregate, collecting the sponges once a day or so, soaking them in hot water and then replacing them. Small bits of bread and poisoned molasses, or small vessels of lard in which are a few drops of oxalic acid, have also been recommended, as well as the free use of brax, so often advised for roaches. A much larger black or brownish ant often builds its nests in door-yards so close to the houses that it becomes a great nuisance. A case was brought to my notice two years ago in Washington, where a large colony was completely destroyed by the use of bi-sulphide of carbon. A teaspoonful was poured down each of a number of openings, and a damp blanket was thrown over them for a few minutes. Then the blanket being removed the bi-sulphide was exploded at the mouth of each hole by means of a light at the end of a pole. The slight explosions drove the poisonous fumes down through the underground tunnels killing off the ants in enormous numbers. This is rather dangerous, however, as carbon-bi-sulphide is very explosive."

FIRST CLASS PASTE.

Take a quart of water and dissolve in it a teaspoonful of pure powdered alum. Stir into this enough flour to make a thick cream. Break up every little lump of flour until the mixture is smooth. Stir in next a teaspoonful of powdered resin. Now pour in a cupful of boiling water. Stir it all well. For your nosegay mix in a few drops of oil of cloves, or wintergreen, or saffras, as you prefer. When the mixture has thickened from cooking by the boiling water, pour into an earthen vessel—not a tin can. Cover it up and keep it in a cool place. Whenever you want to use any portion of it, take what you need and soften it with a little warm water.

A USE FOR PROPOLIS.

A Mrs. Burr, of Braceville, Ill. has found a use for propolis,—she saves it to seal jars of fruit with. She puts up gooseberries, currants, and other fruit, put in jars. Any ordinary cover will do. Seal around the edge well with propolis. A. I. Root, in whose journal the above appeared, asks if it never gets soft in very hot weather.

MANUM'S BEE ESCAPES.

A. E. Manum describes in *Gleanings* his method of making bee-escapes. In answer to a question, "What is this for?" pointing to a block of wood, he says:

"That is a block with which I make my bee-escapes. This block has been in use over 15 years. You see it is simply an inch hole bored in this block of hard wood, and this is the 'punch,' made cone-shaped so it will fit the hole loosely. I now cut common window wire screen into three inch-square pieces, lay a piece over the hole, and with the wood punch I press the screen into the hole which forms the escape, making it cone-shaped, and then with the point of my knife I cut two of the wires at the tip of the cone crosswise—thus, x—and with an ordinary lead-pencil passed through the x, the opening is made just the right size to allow one bee to pass through. Then I tack the escape over an inch hole at the gable ends of my hive-caps; and by placing my sections of honey under the caps, the bees will very soon pass out through the escape and can not return."

A HOT HOUSE HIVE.

A new use to which a colony of bees may be put is to use them as a furnace below a hot bed, just the same as a wheel-barrow full of manure. A. E. Manum uses his ordinary hive—the Bristol—and he uses a shallow box, just the size of the brood chamber, and in it he puts about four inches of earth, sows the seeds, and places the box over a spring colony early in the spring, and then above all he places a glass roof cap. He figures it out that the warmth from the bees at the bottom, and the heat from the sun at the top will cause the seeds to germinate very soon; and the warmth from the bees will prevent the plants from suffering on cold nights. In this way one can have as many hot beds as is wished for.

MCINTYRE'S UNCAPPING BOX.

What appears to be an excellent thing in the way of an uncapping box

appears in *Gleanings*. "The method of making is described as follows :

" It is 2 feet wide, 2 deep, and 6 long outside, made of 7/8 lumber dressed on both sides. The bottom is two inches lower in the middle than at the sides, and is lined with tin to keep it from leaking. Eleven pieces of wood 1x1x22 inches, are laid across the bottom about 6 inches apart to support the screen which the cappings fall on. This leaves room below the screen for the honey to run to one end, where it passes out through a tin pipe. Two pieces, 7/8x3x72 inches, are nailed on the top edge, one on each side, to contract the top of the box to the same width that a Langstroth hive is long inside. Two pieces, 7/8x7/8x18 3/8, nailed one on each end between the two last mentioned, bring the ends up even with the sides. One piece, 7/8x3x18 3/8, is fixed across the top of the box about 14 inches from one end, with an iron pivot sticking up through it, 1 1/2 inches high to rest the combs on. When uncapping you set one end of the comb on the pivot, uncap one side, whirl it around, and uncap the other side, and set the comb in the end of the box, as in the diagram. When we have a surplus of combs we often hang them in the other end like B, in the diagram. C is cappings, and D the space for the honey to run out.

The bottom of the box is 7 inches from the floor, which leaves room for the honey to run into the strainer illustrated on page 248. This makes the top of the box about 32 inches from the floor, which is about the right height for me to uncap easily. A shorter person might make the box a little shallower, or lay a plank on the floor to give the right height, which is the way I do when my wife uncaps. I know most people will think this box unnecessary large. I will tell you why I think it is not. When uncapping over a round can like Dadant's, the cappings fall on top of those taken off earlier in the day; and when the can is half full the honey has to pass through such a pile of cappings that it takes a long time to all run out; and when you put the cappings in the sun extractor they are heavy with honey. With this box, when a pile of cappings accumulates under the knife we take a four-tined fork and pitch them over to the other end, where they may drain for four or five days. There is a small stream of honey running out of the box all the time, day and night, during the extracting time; and when the cappings go into the sun extractor they are almost dry. I think it pays well for the extra space in the box, because all the honey which goes into the sun extractor is spoiled for the market."

BASSWOOD AS DARK HONEY.

The November number of the *Canadian Grocer* contains the following editorial regarding the present status of

the honey market in Canada. We wish all that it says were true, especially that portion of it which relates to the grading of the various classes of honey. To the initiated it will be patent at a glance that the article was not written by any one having a practical knowledge of the business, else that ridiculous statement regarding basswood honey would not have been made. The idea of calling basswood an "inferior grade." For the information of the *Grocer* let us say that dark honies are very seldom gathered early in the season. Any such found in the combs being the remnants left over from the winter stores. The first yield of any moment each year comes from clover and this is a nice bright honey. Next comes basswood, which is a shade darker, and stronger in flavor, but is one of our best commercial honies, commanding the top prices. Following basswood comes thistle, which is as bright in color as clover, and is, to our mind, even more delicate in flavor. After these come buckwheat, then fall flowers, and it is probably the first of these which the writer of the article has confounded with basswood, as buckwheat honey is dark, and very strong, and of little value as an article for table use. This honey is mostly used in baking and curing processes, and is usually sold at a price three to four cents lower than either clover, basswood or thistle. If not asking too much, we could wish that the publishers of the *Grocer* would give these explanations as much publicity as has been given the article, wherefrom wrong impressions will be drawn—impressions which may do some harm, to basswood honey especially :

"The extent to which this year's crop of honey will be affected by the yield, has already been indicated in these columns and in our market reports. The yield has been neither large nor small, but prices will be apt to keep, throughout the next twelve months, the firmness that is usually caused only by a shortage. What will operate to this effect in the absence of a notable shortage is the scarcity of fruit. Part of the unsatisfied fruit-consuming capacity of this country will be added to demand of the honey market. Prices, however will be affected by the policy of the producers to some extent. These have not combined, but there is an understanding now ruling among them, that has for its ob-

jeet a more marked discrimination of price between superior and inferior grades. The effect of this is not to increase the price of any grade, but to reduce the price of the lower grades. Heretofore the slight difference between any given grade and the one a single degree below it almost invariably threw the choice of the buyer on the better one. Where there was but one cent of price difference to correspond with one grade of quality difference there was usually less of the inferior quality sold than of the superior. So it happened not uncommonly that the stock left over in the late part of the year showed a greater proportion of medium and poor honey than of prime. The beemen have concluded to widen the gap between grades, and throw the popularity on the side of the lower grades, running these far enough down the price scale to make the low grades easily available. Consequently a grade that was last year only one cent lower than another given grade will this year in some cases be three cents lower than that given grade. The difficulty always had with the low grades will therefore now be ended, and what is left towards the close of the year's trade is unlikely to be hereafter the poorest of the gathering. A system of rice grading is now made possible by the methods of the honey producers. They now extract four or five times during the season of production, the interval between drafts being a time of transition from one bloom to another. Under the old mode all the honey was left in the hive until the bees ceased to work, and then the product taken off was a mélange of all the flowers that bloom. This made the grading of prices difficult, and made it impossible to specialize flavors. Now, the bee-keeper extracts at the close of the season of the basswood bloom and gets an unmixed grade of inferior honey. Again, at the close of the thistle bloom he extracts and gets a pure grade of better honey. Also, at the close of the clover season, he separates the flow from what comes after, and thus has the best and the worst at their respective ends of their series, with the intermediate grades also separated. This makes the adjustment of prices a matter that can be secured with exactness.

FLOUR AS A PACIFIER.

A correspondent to the *British Bee Journal*, in commenting on the above subject, says:

For several years I used scented syrup when uniting bees, but for the last two years I have substituted camphor, placing a small quantity under quilt and on floor-board a few hours before uniting. I found the latter plan the best. Seeing in the *Journal* flour had been successful-

ly used, I tried peaflour, with no fighting. I believe the latter to be better than wheat flour, as the bees would use it for pollen.

MICE AND BEES IN WINTER.

At the Keokuk Convention, it was asked if mice and rats were injurious in a winter repository for bees. The answer was emphatic and proper—Yes! In last week's *New York World* we notice a similar question from a correspondent in Ohio, which is answered thus. "Mice are a decided nuisance in the apiary, and consequently must be guarded against. They will often enter the hive standing out of doors when not excluded, and make extensive depredations. Sometimes cutting a space in the combs, they will make their nests. The animal heat created by the bees makes a tempting place for their winter quarters. The entrance to the hives ought to be sufficiently contracted to keep mice from entering. Rats are fond of honey, and when this is accessible, will eat quantities of it. The entrance to hives standing out of doors are too small to admit a rat. When the bees are wintered indoors too great care cannot be exercised to keep the apartment clear of both rats and mice, as their running over the hives, even if prevented from entering them disturbs and irritates the bees.—*American Bee Journal*."

We have experienced considerable annoyance from this cause on many occasions. Mice are a very great nuisance, and our remedy for the trouble is a mixture of equal parts of flour, sugar and arsenic, which we scatter around, and which generally rids us of the little pests.

A GOOD SEASON.

Bro. Brown writes us from Chard in reference to his season's honey crop, which he appears well satisfied with. He says:

Commenced the season with forty hives and increased to eighty; got 2,250 lbs. extracted, and 50 lbs comb honey. For the little experience I have had in bee-keeping, I think this season an extra good one, and but for a light frost that cut off the supply of late buckwheat, and fireweed and some other tender fall flowers, extracting would have been kept up much longer. I put bees in winter quarters yesterday and to-day, and find they have consumed a great quantity of food since the honey flow stopped, consequently quite a few go into the cellar light in weight.

WILLIAM J. BROWN.

Chard, Nov. 7, 1890.

* * Clubs of five, at one time, to any address for \$3.25; ten at one time \$6.00; 20 at one time \$11.00; 50 at one time \$25.00. This is an excellent opportunity for associations.

* * If you require catalogues, circulars, note books, envelopes, or anything in the line of job printing give us an opportunity of estimating.

Queries and Replies

UNDER THIS HEAD will appear Questions which have been asked, and replied to, by prominent and practical bee-keepers—also by the Editor. Only questions of importance should be asked in this Department, and such questions are requested from everyone. As these questions have to be put into type, sent out for answers, and the replies all awaited for, it will take some time in each case to have the answers appear.

Full Sheets vs. Starters.

QUERY No. 285.—Opinions differ as to the use of foundation in the brood chamber. (1) Do you advocate the use of full sheets as preferable to "starters"? (2) Will there really be any more time saved in the end?

EUGENE SECOR, FOREST CITY, IOWA.—That's an unsettled question. There are two sides to it.

G. A. DRADMAN, BRUSSELLS, ONT.—All things considered I prefer and use full sheets of foundation.

DR. MILLER, MARENGO, ILL.—(1) I like full sheets. (2) may be not, but it will be straight (especially if wired) and it will be all worker.

R. MCKNIGHT, OWEN SOUND, ONT.—(1) Yes, when you can afford the money to try it. (2) Yes, certainly.

A. B. MASON, AUBURNDALE, O.—(1) I always use full sheets in wired frames, and if I didn't think there was a saving in it I should not do it.

J. F. DUNN, RIDGEWAY, ONT.—Five years ago I used full sheets, but have been using less every year, and this season I have used a starter 1 inch wide.

H. D. CUTTING, CLINTON, MICH.—I have used full sheets, half sheets, and two inch starters, prefer full sheets, if you have young queens, you can use starters to good advantage.

PROF. A. J. COOK, LANSING, MICH.—Yes, except as I wish to get bees into sections, when it may be better to simply use starters below. Otherwise I think it pays to use full sheets.

G. M. DOOLITTLE, BORODINO, N. Y.—I prefer the starter when hiving swarms, when used to take the place of full frames taken out, use full sheets, and thus avoid drone comb.

JAMES HEDDON, DOWAGIAC, MICH.—I believe all depends on circumstances. Mine have been such that I have always used, and am still using, full sheets of foundation wired, but I can readily imagine such conditions as would lead me to use starters.

J. K. DARLING, ALMONTE, ONT.—I prefer nearly full sheets. I don't know if there is much saved in time, but I get too much drone comb built on starters. I experimented quite largely one

year and was so much dissatisfied with it that I did not repeat it. Some of the colonies would have been ruined if I had not watched them.

J. E. POND NORTH ATTLEBORO', MASS.—(1) I invariably use full sheets instead of single starters. (2) If I did not believe "more time would be saved," I should not do so. Localities, however, differ, and a method that would work well in one section might not in another. The only way for individuals to decide is to test thoroughly, and be governed by the tests made,

G. W. DEMAREE, CHRISTIANBURG, KY.—O, say! I did not know that "opinions differ" on this subject. I do not advocate the use of foundation, I simply use foundation in full sheets because it pays me a good profit in dollars, over the old plan of using starters only. Does this not answer the question? There was a time when I used starters only, because I could not do better then. I then had a distressing surplus of drone comb, I now use full sheets of foundation because I can now get it, and I now have nice all worker comb.

A. PRINGLE, SELBY, ONT.—Yes, I do advocate it and practice it. By using full sheets there will not only be "time saved in the end," but trouble—much trouble. It is only under certain special conditions that you can get worker comb built from starters. Only the few professionals can manage this, and even they fail sometimes, I therefore advise the multitude to use full sheets of foundation. But when the foundation gets low it is well to know how to get worker comb from starters. Never try to do it with old queens. Use those just fertilized. Give bees room above for storing, crowd queen a little for brood combs, and give your starters from time to time as they become drawn out and filled with brood.

BY THE EDITOR.—Full sheets in second stories, starters in brood chamber.

Burr Combs—What Thickness and Width of Top Bar will Prevent Them.

QUERY No. 286.—What thickness of top-bar, and spaced how far apart, do you consider a preventive for burr or brace-combs. The authorities are conflicting. In other words, what thickness top-bars do you use, and are you troubled with brace combs?

G. M. DOOLITTLE, BORODINO, N. Y.—Consider brace comb of a greater advantage than disadvantage, hence do not try to avoid them.

R. MCKNIGHT, OWEN SOUND, ONT.—I use bars $\frac{3}{4}$ and top bars $\frac{3}{8}$ inch, have not noticed any difference in the matter of burr comb.

H. D. CUTTING, CLINTON, MICH.—I use top bar $\frac{3}{4}$ and $\frac{3}{8}$ inches, five-sixteenth space above frames am not troubled much with burr comb if I attend to sections.

J. K. DARLING, ALMONTE, ONT.—Have never experimented. I use the Jones frame about $\frac{7}{8}$ square, two corners bevelled. Some brace combs are built, some colonies are worse than others,

J. E. POND, NORTH ATTLEBORO', MASS.—I use a $\frac{3}{4}$ inch top bar. See No. 282 for particulars, I am not troubled with brace combs, when using this method.

PROF. A. J. COOK, LANSING, MICH.—I use $\frac{3}{4}$ or $\frac{1}{2}$ inch top bars, and a slatted honey board. We do have some brace combs, but with a properly spaced honey board, not very many.

A. B. MASON, AUBURDALE, O.—For a good many years I have used top bars $\frac{3}{4}$ of an inch thick, and of course I have been much troubled with brace combs. Am trying some of Root's dove-tailed hives, with thick top bars $\frac{3}{4}$ of an inch apart, and so far have no brace combs.

J. F. DUNN, RIDGEWAY, ONT.—With the exception of one hive my top bars are all $\frac{3}{4}$ inch thick. I have been troubled with brace comb in correct bee spaces, but have no trouble since using the Heddon slatted honey board. It is a jam in the apiary; try it if you don't believe it.

DR. MILLER, MARENGO, ILL.—I have used top bars 1 inch wide, $\frac{3}{4}$ deep, and I am troubled with brace combs. I'm in hopes some day to have such thick top bars as I first saw in Canada. I have always had a spite at J. B. Hall for making me discontented with my top bars. It's a big job to change them by the thousand.

—EUGENE SECOR, FOREST CITY, IOWA.—This question is having a "run" like the measles, "Authorities" will always be "conflicting," Possess your soul in patience. Probably in a year from now you will hear nothing about it. As for myself I don't prevent them. I don't know why they are worse some seasons than others with the same management. "One swallow doesn't make a summer."

G. W. DEMARBE, CHRISTIANBURG, KY.—I use the ordinary Langstroth top bar, which is about $\frac{3}{8} \times \frac{1}{2}$. O, yes! bees will build brace comb, but it depends very much on the management of the surplus department of the hive as to how much brace and burr combs are built, when practicing the tiering up system. If the manipulations are properly and timely done, the brace combs are not serious. Such is my experience.

G. A. DEADMAN, BRUSSELLS, ONT.—My top bars are $\frac{3}{4}$ inch deep, but vary in thickness from $\frac{1}{2}$ to $1\frac{1}{4}$ inches. When the $1\frac{1}{4}$ are used in the brood chamber they are alternated with the $\frac{3}{4}$, but all are spaced as nearly as possible $\frac{1}{8}$ from centre to centre. This makes the spaces between the frames $\frac{1}{2}$ inch when the $\frac{3}{4}$ are used, or $\frac{1}{4}$ when alternated. What difference there may be, is in favor of the narrow spacing, but I notice very little, both are bad enough.

JAMES HEDDON, DOWAGIAC, MICH.—Twelve or fifteen years ago I experimented largely upon deep top bars or thick top bars, varying the width horizontally at the same time. I have no

hesitancy in saying that no kind of top bars will prevent brace combs to any practical extent. Break-joint honey board does it, and this break-joint honey board has come to stay, and those who are trying to do without it now will come right back to its use. Do not forget to keep me on record for this statement, and I beg that when time proves that I am right, you will remember my declaration.

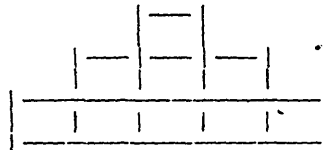
A. PRINGLE, SELBY, ONT.—As I use different styles of hives I use various frames, and different thicknesses of top bar. The one I prefer, however, and am making of late exclusively, is one inch wide and one inch thick or deep. It is composed of two pieces each scant $\frac{3}{8}$ thick, with a space between of about $\frac{1}{8}$. This makes the bar one inch deep. I space them about an inch and half apart from centre to centre. Every one to his liking, but this is the top bar which I consider best. The depth together with the open space or passage in the bar prevents brace combs, and besides, this space constitutes an excellent passage way for the bees in winter over the top from frame to frame. Such a top is also proof against sagging.

Packing Bees on a Barn Floor

JOHN STUMPF.

D. A. JONES,

Dear Sir—Allow me kindly to ask you, I want to pack my bees on a barn floor where there are no cattle or horses in the barn; would it do to pack them like the following, in sawdust, in three rows on top of each other:



Would it do to have the sealed rags or cloths on, or should I take new cotton, I will leave the fly holes open. Mr. Edwards, here gets your Journal, he leaves the sealed cloth on; he said they didn't get mouldy packed in sawdust in a little bee house.

They might be packed in the barn in single rows, but I would not care to pack them three deep, as it would be difficult to get at them for examination towards spring when it is necessary to see that they have stores. You could not leave them in that position until they marked the location in the spring, if you did you would lose bees when you set them out. Of course if you allowed them to set there all summer and fly out it might do, but we would prefer to pack them in a clamp in the yard where they were expected to remain during the summer season. If you packed them in the barn they would have to be set out very early in spring in order to prevent a loss of

bees in those that had marked the location in returning to their winter quarters again. Any old boards would do for a bottom or sides of the clamp, in fact, we have known some to use rails for the sides of the clamp by simply driving down stakes solid in the ground, putting straw net to the rails, then sawdust or chaff between the straw and hives. You would only have to put a few boards over the top to keep them dry. This is a very cheap and simple way to pack, and gives excellent results; the bees may be left in this clamp until fruit bloom.

THE CANADIAN BEE JOURNAL

ISSUED 1ST AND 15TH OF EACH MONTH.

D. A. JONES, EDITOR-IN-CHIEF.
F. H. MACPHERSON, ASSOCIATE EDITOR.

BETON, ONTARIO, NOVEMBER 15, 1890

On page 303 the name of "L. Seigwan" should have been L. Seigmann.

R. McKnight and Rev. W. F. Clarke, were the only Canadians present at the International Convention at Keokuk.

The issue of the THE CANADIAN BEE JOURNAL for Nov. 1st, did not leave the office for a full week after the first of the month, owing to a breakage of the big press which prints it. We are catching up again, however, and will be out nearly on time this issue.

By some means our friends who publish *Gleanings* have overlooked us in sending out their A, B, C of Strawberry Culture, but not intentionally we are sure. Perhaps we mention this matter from selfish motives, because the writer is somewhat interested in strawberries himself, and likes to get all that is new in that line.

The demand for honey continues good, and we are having no trouble in disposing of all that comes along. We can take 10,000 or 15,000 lbs., if it offers, and we are increasing our trade offer by one-half cent per pound. We are not buying for cash, finding that an abundant supply comes in to keep our trade going in exchange for supplies.

On bended knees we apologize to Bro. Hutchison for the oversight to which our attention has been called on page 178 of the *Review*. We certainly marked the credit of Mr. McKnight's article to the *Review* on the copy, but it was in

pencil, and the pencil mark was rather dim when we came to look it up, and so it escaped the eye of the compositor. We always do try to give credit, and we are always willing to do the *amende honorable* in the matter when we err.

Mr. J. B. McLean, of Toronto, the newly elected Sec. Treas. of the Ontario Press Association, is the publisher of several trade papers, the chief among these being the *Canadian Grocer*, the November issue of which is a model in its way. A vast fund of useful information is to be found in its pages for business men, and the small price (2 cents per copy) will not debar the wise merchant from making it his "guide, counsellor and friend." Of course we do not agree with all its teachings, as will be seen by reference to page 332.

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SAY! BROTHER

Bee keepers, and readers of the CANADIAN BEE JOURNAL, and especially those who failed to get one of those FIVE-BANDED Golden Italian Queen Bees, and, to those who doubted my word about them in the following issues of this journal, I will let you see a few samples of my letters from those who VENTURED TO GIVE THEM A TRIAL. Oh, by the way, do you take *Gleanings*? If so read G. M. Doolittle's opinions under an article headed "Syrian Bees," in the Oct. 15th issue, and see what he thinks of the GOLDEN BEAUTIES. Doolittle was one of my customers. Remember the address is

JACOB T. TIMPE, GRAND LEDGE, MICH.



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