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THE CANADIAN
Bee Journal.

PUBLISHED MONTHLY.

NEW SERIES
VOL. I, No. 5.

BRANTFORD, ONT. NOV., 1893.

WHOLE No.
345.

Our own practical experience going hand in hand with the experience of other practical men is undoubtedly the condition under

which we can make the greatest progress in the VALUABLE INFORMATION. successful keeping of bees.

There are many men comparatively unknown, who rarely if ever write for bee-journals, who have a valuable experience and who possess valuable information, which can only be reached by personal contact.

For the last seven weeks the editor of the Canadian Bee Journal has spent the greater portion of his time, meeting at exhibitions and in convention, men who have ideas of value, some entirely unknown to the bee literature of the present day. We found the convention at Chicago especially fruitful in securing, in friendly conversation between sessions, information of value and we trust and feel that future numbers of The Canadian Bee Journal will be the better for attending these exhibitions and conventions.

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Those who act as judges as well as those who exhibit and closely observe the results of judging must often desire that we may have something more definite in connection with this work. The reading of prize lists are often abominable, conveying no definite and distinct meaning or if they do convey a meaning which does not harmonize with common sense. Some system should be taken in hand for improving this. Again in other

lines, judging is done by points, and there appears to be no good reason why a standard should not be arrived at in honey. Say in comb honey so many points for clear and neat wood, so many marks for the comb free from travel stain, so many for white and even cappings, so many for perfectly filled sections, so many for freedom from pollen, so many for neat comb honey cases. In extracted honey, so many marks for color, so many for body, so many for flavor, and so many for beauty of package. We were lately asked by a brother editor (of a stock journal) if we could score an Italian bee, is something in this direction not within reach of the practical. If it is, let us have it. Every one will be pleased. A perfect score card may not be produced at once but time will point out errors. Let us have the views of others.

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We have seen the honey exhibits at Chicago. The quality of Ontario honey exhibited is undoubtedly good. There was

probably no other case exhibited in which the comb THE HONEY EXHIBIT. and extracted was so

uniformly good. For this the province is indebted to the bee-keepers who contributed and to Mr. Allen Pringle, who had the unpleasant task to perform of withdrawing any honey of inferior merit.

Bee-keepers will expect us to express an opinion upon the display. We do not know who is responsible for the selection of the glass but the packages are too large to show the honey to best advantage. Th.

public, in an exhibit of honey, must be attracted by the eye. They are not educated to know that a large body of honey looks darker than the same quality in a smaller vessel. Some of the other cases have not nearly enough honey but that of Ontario has too much, and Mr. Pringle says with justice "had I put the honey in smaller vessels the case would not have held the honey at all". It is unfortunate that the names of those contributing honey does not appear on their goods for buyers coming through, unless they take special pains to find Mr. Pringle, of whose existence they may not be aware, cannot secure the address of these parties. Michigan, Ohio and some other states have the names of contributors on the honey. Mr. Pringle states these are his instructions, other states have broken the rule, and one cannot help expressing a wish that Mr. Pringle, in this case, had been a little *unruly*. We have made every effort to secure and publish in THE CANADIAN BEE JOURNAL the names of Canadians exhibiting honey at Chicago. Mr. N. Awrey, M. P. P. Ontario commissioner, has promised to send the list for publication, and, upon receipt, we shall be pleased to place it before our readers.

Mr. E. E. Hasty gives in *The Review* some friendly criticism of THE CANADIAN BEE JOURNAL. His comments are rather pleasing. We would like to quote the entire page which he devotes to this topic, but space forbids reference to more than one or two. He remarks:

"In editing he besprinkles his journal with short items in lighter vein—not a bad plan perhaps—but most of them have no connection with apiculture; and in this he is behind the times as compared with the best journals."

The first numbers have of course been brought out under difficulties. More matter foreign to bee-keeping has appeared than is the intention to continue. However, it is the thought to scatter a little "in lighter vein" through THE JOURNAL. We favor individuality of thought, of action

there is too much of the desire in us to do as others do, and it leaves us characterless. THE CANADIAN BEE JOURNAL is not attempting to do as others do, but seeks an individuality of its own. An occasional smile or even laugh will be appreciated, we judge, by our readers, and will aid digestion, just as honey alone is not best—it is too rich—but with bread it is very palatable.

For brief extracts elevating in tone, we think no apology is required. If any object we shall be pleased to have an expression of opinion.

Again Mr. Hasty says "First steps in bee-keeping" is editorial and seems likely to be one of the strong points of the paper" "Editorial answers to communications are especially good and show vigor of thought."

Thanks Brother Hasty.

THE TWENTY-FOURTH ANNUAL MEETING OF THE NORTH AMERICAN BEE-KEEPERS' ASSOCIATION.



largest convention of bee-keepers the North American continent has ever seen met at the Louisiana hotel, Chicago, Ill., October 11th, 12th and 13th, 1893. What made the gathering especially interesting was the fact that not only the states in the vicinity of Chicago were represented, but here

could be found bee-keepers from California, Colorado, Florida, Vermont, etc. From the province of Ontario there were fourteen, from the province of Quebec, one.

Among those present were such well-known bee-keepers as Doctor C. C. Miller, Doctor A. B. Mason, A. D. Cutting, Hon. Eugene Secor, A. I. Root, W. G. York, W. Z. Hutchinson, Mrs. L. Harrison, Frank Benton, C. P. Dadant, F. A. Gemmell, Allen Pringle, J. A. Foster, G. W. Demaree, Thomas G. Newman, C. F. Muth, O. L. Herscheiser, A. N. Draper, Crane Vermont, E. Kretchner, Henry E. Bliss, Doctor D. H. Besse, B. Taylor, J. A.

Green, M. M. Baldrige, Hon. J. M. Ham-
baugh, Theilmann, John Nebel, John Y.
Detwiler.

There was also present at one or more
sessions Prof. A. J. Cook, Doctor Riley and
Doctor Wiley, who, although not them-
selves engaged in bee-keeping, are identified
more or less owing to their work with the
industry, all expressed a determination to
advance, as much as lay in their power, the
bee-keeping industry.

There was an attendance of from 250 to
300, and the attendance very good, especially
so when we consider that the World's Fair,
with all its attractions, was there in close
proximity to the hotel in which the conven-
tion was held.

The following editors of journals were
present: A. I. Root and E. R. Root, *Glean-
ings in Bee Culture*; G. W. York, *American Bee
Journal*; W. Z. Hutchison, *The Beevee*; R.
F. Holtermann, *The Canadian Bee Journal*.
The president, Doctor C. C. Miller, Marengo,
Ills., occupied the chair. The meeting was
opened with prayer, after which G. W.
York appropriately delivered the address of
welcome.

Mr. President, Ladies and Gentlemen:

It is with a sincere feeling of pleasure that
I am permitted to welcome to our western
metropolis, and at present the Mecca of the
world, the grandest association of bee-
keepers this continent has ever known. As
a representative and resident of "Chicago,
the Peerless," I offer to you not only "the
keys of the city," that shall open the gates
to all its pleasures and wonders, but I also
extend to you a most hearty and cordial
welcome.

Many of those who are here before me
have come from distant climes, and are now
indeed in a "far country," but nevertheless
remember that you are still in your "blessed
homeland," and that the same God reigns
here as in the sunrise East, in sun-crowned
Canada, in the sunset West, or in the sun-
kissed Southland. I trust that during your
brief sojourn within our borders, you may
all feel perfectly "at home;" and when
your conventional labors are ended, your
inclinations for sight-seeing are fully grati-
fied, and you return once more to the loved
ones around your various hearthstones, per-
mit me to express the hope that you may
carry with you memories that shall serve as
an inspiration in future days to nobler and
better living, both for time and for eternity.

I realize that it is no small thing to wel-
come to our city the representatives of so
honored and ancient an industry as bee-
keeping; for ever since bees and honey were
found in the ribbed carcass of the lion in
the time of Sampson, until the present hour,

honey and its production have been the de-
light and profit of the sage as well as the
peasant; and to-day I know, from my own
experience with men and women, that many
of the very best people in all the world are
devoted to the honorable pursuit of apicul-
ture.

Bee-keepers of America, while the horo-
loge of time is striking the eleventh hour of
the century, I bid you welcome to Chicago
—the eighth wonder of the world. Wel-
come, also, to the untold splendors and
matchless magnificence of the beautiful
"White City," within whose doors is the
most marvelous collection of the handi-
work of mankind that earth ever beheld.
Yes, welcome to all these, for *all things* are
theirs who believe.

Welcome, then, ye bee-folks, welcome!
To our cities grand and free;
May thy meeting prove as "blessed"
As thy little, busy bee.

GEORGE W. YORK.

Chicago, Ills, Oct. 10, 1893.

THE PRESIDENT'S ADDRESS.

The president, Doctor C. C. Miller, in
that happy vein so characteristic of him,
delivered his address. In his primary re-
marks he touched upon the importance of
the gathering, by remarking: "I could
count a quarter of a hundred, with anyone
of whom it would be a real pleasure to
spend a solid day in bee talk." Again, he
dwelt upon the social part of the conven-
tion, and expressed himself thus: "No
mean part of our enjoyment here, is the
cordial greeting and the hearty grasp of
the hand. Some of these present we have
known for years through the bee journals
without ever having seen them." Then,
the doctor does not forget the stirring men
who, for one reason or another, are well
up and often very successful men in
the bee business, of these he says: "Others
of whom we may never have heard, on ac-
quaintance will be found well worthy of
our friendship." During the entire address
the doctor judiciously avoided dishing up
apicultural truths of a high order, but the
effect of the address was undoubtedly to
make members in convention feel more
drawn to one another, and at greater liber-
ty to become informally acquainted.

SECRETARY'S REPORT.

The secretary, Frank Benton, Washing-
ton, D. C., gave his report in a letter from
Mrs. Jennie Atchley, Texas. That lady
suggested that the wintering problem
might be solved by shipping bees from Il-
linois, or the north, south and returning
them in time for the white clover harvest.
Mrs. Athley offered, should anyone wish to
experiment, to take care of such a ship-

ment for a small sum.

The treasurer, G. W. York, in his report, showed a balance due him of \$4.22.

Prof. A. J. Cook, formerly of Agricultural College, Michigan, now of California, gave the following address:

APICULTURE AT OUR EXPERIMENT STATION.

Bee-keeping has merits that very few, even of bee-keepers themselves, rightly appreciate. It not only gathers up a most wholesome and nutritious article of food, which would otherwise go wholly to waste, so far as man is concerned, but it confers an added benefit that is so great and far reaching that it is difficult even to compute it. There is nothing more certain than that the productiveness of very many of our fruit and vegetables, and those the most valuable, is often tremendously increased by bees in the important work of pollenizing the flowers. True, other insects aid in this valuable service, but in our northern land so many of our insects are effected by the rigors of winter, that in early spring when most of our fruit trees are in blossom, there are very few of these "marriage priests" to perform the great service of wedlock in the vegetable world; and so without bees, pollenization would be scantily effected. Here early flowering vegetables are imported, and so there are not the real insects to perform this valuable service and the bees, which are also imported, and which from their habits and man's wise and provident care do not succumb to the winter's cold, become the chief agents in this important work. They are on hand when the flowers first burst forth in earliest spring, and so celebrate the marriage rites without which the plants would be far less prolific.

Is not the man who makes the twin apple replace the single fruit of yesterday just as worthy as he who multiplies the grass production?

The importance of bee culture once appreciated and recognized, and it goes without saying that every wise person will not only see that this industry does not languish, but will use every reasonable endeavor to foster its development in every proper way. Thus, in urging such action, we need offer no apology; we are only doing what every wise statesman and well informed, thoughtful patriot would do.

What adds emphasis to this argument, is the exceptional precariousness of bee-keeping as a pursuit. Most kinds of business can face a single off year with composure. Even two consecutive seasons of failure

may be met with fortitude, unless they occur too frequently, but when three or even four years of failure confront the business man, it requires exceptional profits at other times, which bee-keeping is a stranger to, or else great love and enthusiasm for the business, which does characterize bee-keepers to an exceptional degree, to keep the ranks of such employment full. That there has been a great falling off in the business of bee-keeping of late is most certain. For the last two seasons the apple crop in Michigan has been very close to a failure. That it is wholly due to the absence of bees, I would not assert; but that there is an important relation between the two facts, cannot be truthfully denied.

To urge all proper means to stay this rapid falling off and its attendant evils, is the duty of every patriotic citizen.

Experimentation and experiment stations are a product of our nineteenth century civilization. The most advanced nations have done the most in these directions. Germany, to whom all other nations grant supremacy in all that pertains to education, progress and the real elevation of its people, is at the front in this important work, with France, the United States and Great Britain a close second. This very fact, were it not for the rich and stupendous results of experiment as exemplified in the work of such men as Koch, Pasteur, Lawes and Gilbert, Gray and Edison, would be proof enough of the value of experiment stations and their work.

There are to-day a few bee-keepers that know all about the business, and they are usually box-hive bee-keepers who have never read the journals and can tell you all about the "king bee." The most of us realize that this business, founded more upon genuine science than are most manual labor pursuits, is far from perfect, and that the wisest in the craft has yet much to learn, and that the business has yet unsolved problems of greatest importance. I think there is no question but this business, important as it is, has a very bright future before it. Yet how can it successfully face the repeated disasters of the past few years, except as by study and experiment we learn how we may bridge such disaster. That bright men, full of energy and enthusiasm, to man the experiment stations in the several great honey producing states could and would, with opportunity, accomplish great things for agriculture is true beyond question.

The United States Government, recognizing the importance of agriculture, and the added impetus given to any business as the result of wise experimentation carried

on by experts, has donated \$15,000 annually to each state and territory to be expended in carrying on experiments in agriculture. Forty-seven states and territories have organized under this act and have established stations, and have manned them with more or less efficient workers. Thus \$705,000, or almost three-fourths of a million dollars are spent annually by our country to develop new truths, and further the interests of apiculture.

From what I have said, it is clearly evident that apiculture is a very important branch of agriculture. To foster its interests is the height of wisdom. Wise experimentation cannot fail to very greatly aid this important industry. Yet in the face of all this, only four of the forty-seven states have done anything to promote the interest of bee-keeping; and in all these cases money has been given in such a niggarely way that very little could be accomplished. Think of it! Three-fourths of a million of dollars devoted annually to experiments in agriculture, and probably not two thousand, I think the amount is much less, not one three hundred and fiftieth of the whole given to aid apiculture. I say without fear of contradiction, that this is a stupendous injustice. I affirm with positive assurance that I am right, that the bee-keepers in every state where bee-keeping is an important industry might, in all modesty, claim \$1,000 to be expended annually in behalf of their pursuit. This, in addition to the proceeds of the station apiary, would serve to support one first class man, the best that could be found, whose time should be given entirely to this work. And can we doubt that rich results would attend such effort? Then \$40,000 instead of a scant two thousand would be expended for such experiments. Even then, apiculture would fall short of its deserts and would receive less than its exceeding importance might very justly demand.

But how can such action be secured? How can the Board of Directors of the several stations be brought to recognize the rights of bee-keepers and the importance of their vocation in this very practical manner? It is by no means as difficult an undertaking as would seem. If the bee-keepers will wake up to their rights in this matter, and demand recognition and justice they will receive them as certainly as the leaves fly before the gale. No Board dare disregard a just demand backed by any considerable number of the constituents of its members. I would suggest that each State Association appoint a good committee of live, wide awake bee-

keepers to wait on the Board controlling the station in their state, show the reasonableness of their demands, and press it with the unction that comes from knowing that one is asking only what is his unquestionably by right. Then this action should be supplemented by personal letters from a score or two of the most prominent bee-keepers to each of the Board of Directors. These will constitute a battering ram to raze to the ground the most inexcusable indifference, and secure action from the most conservative directors. These letters should be hand written and personal, not circulars. Of course, this takes work; but so does every undertaking that has in view any real valuable accomplishment. A third duty, and the most difficult of all, will be to decide on the right man to do the experimental work. He must be a keen, able man, full of energy, full of the spirit of genuine honesty and with natural tact in the direction of experimentation. Good-heartedness, needy circumstances, political affiliations, should all be thrown to the winds. Decide on the very best man in the state, and urge his appointment before the Board, with a force and energy that the excellence of the cause warrants, and a startling success will reward the effort.

If there is not a waking up, and a reform all along the line, it will be because bee-keepers are asleep to their own interests. There is not a case on record, where any considerable number have appealed for recognition and demanded earnestly their rights in any good cause, that success has not crowned the effort. Not always at first it is true but the delay is never long. This will be no exception. Bee-keepers will wake up to the importance of this matter; they will demand recognition; the Boards will, as they must, concede the justness of the demand and apiary stations will then be the rule, and not, as now, the exception.

A discussion followed, some advocating that bee-keeping was on the increase, others to the contrary. This diversity of opinion might be owing to locality. In some localities bee-keeping is on the decrease, in others in is on the increase. The general opinion was that bee-keeping was drifting more into the hands of the specialist.

A committee was appointed, consisting of Prof. A. J. Cook, Dr. A. B. Mason and J. A. Green to draft a resolution re experimental work in bee-keeping. They reported at a later stage, as follows:

Resolved by the North American Bee-keepers' Association, that we recognize the value

of experiments and experiment stations, and firmly believe that bee-keeping would be greatly aided in each state and province, where bee-keeping is a leading or important industry if the experiment stations in each state and province should secure an able apiarist to give his full time and energies to the work of experimentation, and if these apiarists should work together to advance the general apiarian interests.

Therefore we ask that the bee-keepers in all such states urge the importance of this matter before the directors of the stations, and ask such action as will secure the services of an apiarist in each station. And cease not to urge until success is secured.

A. J. COOK,
DR. A. B. MASON,
J. A. GREEN.

A discussion followed. Some doubted that less bees were being kept, some were sure more were kept, more honey was offered for sale; others stated that in their locality hardly a bee hive could be found. Everything considered, the evidence went to show that in some localities the keeping of bees was becoming a thing of the past; in others it was very much on the increase. This was owing to adaptibility of locality, inexperience of bee-keepers and other causes. Everything considered, bee-keeping, although on the increase, was not as much so as might be expected from the increased amount produced. Added knowledge resulted in larger and better crops of honey for the natural advantages offered.

2 P. M. WEDNESDAY.

The session was opened by the reading of a paper written by Mrs. L. C. Axtell, Roseville, Illinois,

WHAT EXPERIENCE HAS TAUGHT US IN THE PAST FEW YEARS.

Mrs. Axtell's remarks appeared to be in the direction of keeping bees with the least amount of care and attention. Large brood chambers were advocated to prevent swarming.

The topic, as handled, created a good deal of discussion. Mr. Wilcox thought the paper was particularly applicable to the locality of the writer. This again led to a discussion, the general drift of which appeared to indicate that the size of the brood chamber depended upon if comb or extracted honey is to be taken. If comb honey the chamber must not be too large, if extracted the same amount of crowing is not necessary. Again, for comb honey the brood chamber should be filled in time to prevent unnecessary bees from being

hatched, in other words bees which will not be able to assist in the honey harvest. Hon. R. L. Taylor wanted to know, if Mrs. Axtell objected to handling the combs, why she did not use the New Heddon Hive.

The editor of THE CANADIAN BEE JOURNAL thought if experience had taught us anything during the past five or ten years it was that the impression was an erroneous one that bees did not require care, attention and experience.

The idea that queens were more readily superseded when they swarmed was considered doubtful by C. P. Dadant. He found that in colonies in which the bees did not swarm for years the bees superseded their queens as readily as in others. A. N. Draper, in his terse and emphatic way, stated, "A small hive will do for comb honey but for extracted we want a large hive.

Another thought the question was not what system will allow us to give the least attention, but what hive and system will give us the best results. He knew of no occupation which gave good returns without work.

R. L. Taylor wanted all feeding to be done in the fall of the year as far as possible. He liked the Heddon hive if the bees could only fill a brood chamber to the capacity of five Langstroth hives in time for the honey flow. He gave them a shallow Heddon brood chamber with supers on top, and fed the colony sugar syrup for winter stores.

A number of votes were now taken to decide the preference of bee-keepers for hives. Although at one time fully 250 members were in the hall, a great many refrained from voting, yet some of the results are suggestive.

The president, Doctor Miller, asked which hive members preferred—the eight or ten frame Langstroth hive for comb honey. The eight frame men were in the majority; 16 favored the ten frame, 42 the eight frame. Only one had changed from eight to ten; 24 had changed from the ten to the eight frame.

It was thought that the capacity of the average queen was not up to the ten frame hive, and it would be better to crowd 20 to 25 per cent. of the queens than give 75 to 80 per cent. too much room.

Another wanted to know if a good bee-keeper would allow the brood chamber or queen to be crowded if the bees would be likely to mature in time for the honey harvest.

Hon. J. M. Hambaugh wanted all the bees he could get for fall flow. Another

had no fall flow, and did not care for more bees than required for wintering.

After the morning's recess a committee was appointed on exhibits, viz.: Hon. Eugene Secor, Allen Pringle, C. P. Dadant.

R. L. Taylor expressed a desire to have the committee examine the septums of some sections. For the purpose of making tests of different makes and weights and ages of section foundation, he selected eight of these sorts of foundation, partly light, partly heavy, and one sample two or three years of age. After this foundation was fastened in sections he put them in cases without separators, alternating them so that in each pair of cases each sort appeared several times. From one case he took one section of honey made from each sort and cut out the honey from these sections and shaved off the honey so as to leave the septum by itself as complete as possible. These septums he had brought with him for inspection.

Thos. G. Newman, manager of the Bee-keepers' Union and formerly editor of the *American Bee Journal*, read a letter from the Rev. L. L. Langstroth. Mr. Newman also gave a touching address on behalf of Mr. Langstroth and the duty of bee-keepers to the father of the movable frame hive. A collection was taken on the spot amounting to \$44. Anyone wishing to add to this fund can send from 25 cents upward to G. W. York, 56 Fifth avenue, Chicago, Ills. The amounts will be acknowledged in the *American Bee Journal*.

The question was then read: Have the Syrian bees any points of superiority to other races?

R. L. Taylor thought "the hinder point."

Frank Benton, who is probably the best authority, stated they were in no point superior to Cyprians. The latter had all the good points of Syrian, and were in some respects superior. The Syrian became easily irritated; they must be handled carefully and smoked but little; their temperament varies; on an average they are not as gentle as Italians. He thought by careful selection they might be improved in temper. The bees cap comb honey closely, making it unsightly; they are very prolific; this could be regulated. He did not think a pure queen could be found in America at present.

The discussion drifted to Carniolians. The Carniolian bees were slightly larger; they had silver grey bands. As to action, they did not run off the combs and drop as blacks do. If he had to use a veil, except in exceptional instances, he would not believe them pure. The bees could be shaken off as black bees. They are generally gentler than Italian, they produce beautiful white

capping and are very quiet in winter quarters.

HAS THE MATING OF QUEENS WITH SELECTED DRONES IN CONFINEMENT BEEN SUCCESSFUL PRACTICALLY?

Doctor Riley, entomologist for the U. S. government, Washington, D. C., in his remarks gave encouragement to bee-keepers. He still has hope of making a success of mating queens in confinement.

Doctor Miller remarked that Doctor Riley was leading bee-keepers to hope against hope, and they would watch with interest developments in this direction.

To the question—is there any preventative of severe swelling from bee stings, Doctor Miller thought the best way was to go on getting stung.

Mrs. Benton thought Cuticura would answer.

A good suggestion was advanced by J. E. Armstrong: Strongly heat the part of the hand, hold in hot water for ten minutes. If parts that cannot be held in water, bathe freely.

In reply to another question, 9 preferred a standing frame, 49 loose hanging frames, 29 had used other than hanging frames, 14 close end frames, 9 a perfectly closed end frame.

R. L. Taylor would not advise anyone to sacrifice very much in making the change from their frame to close end, but change as reasonable opportunity offered. Eight preferred the new Heddon hive.

EVENING MEETING.

The question of a place of meeting was then taken up. St. Joseph, Mo., was advocated by Prof. Cook and A. I. Root; Toronto by Doctor Mason and R. F. Holtermann. The following places were also named: San Francisco, Los Angeles, Denver, Buffalo, Colorado Springs, Columbus. St. Joseph, Mo., received the majority of votes, Toronto standing second.

E. T. Abbott, St. Joseph, Mo., was elected president, R. F. Holtermann falling six votes behind Mr. Abbott. O. Hersheiser, Buffalo, N. Y., vice-president; Frank Benton, Washington, D. C., secretary; G. W. York, Chicago, Ills., treasurer, all being put in by acclamation.

Frank Benton followed with a carefully prepared address upon "How Can the Usefulness of the North American be Improved." Mr. Benton thought the society should be more representative; it was at present too local. This should be done by means of affiliation. There should be exhibits of honey and bee-keepers' supplies in connection with the convention. Those absent should be allowed by a system to have a vote.

The general impression was our population was too scattered to do anything with this, and that the society was doing very well as it was. By means of it bee-keepers and bee-journals gained valuable information.

10 A. M. THURSDAY.

The president, Doctor Miller, in the chair. R. F. Holtermann was called upon and gave an address upon

The Production of Comb Honey.

The production of a first-class article of comb honey becomes a subject of greater importance from year to year. The demand for comb honey is increasing, and those producing the article in the best condition will secure the best prices and readiest sales. There is no treating the subject except in detail.

There are a number of points to be considered: First of all, is the man fitted, for no man who is not thorough in his work, neat, intelligent, paying attention to detail, can succeed to the fullest extent. It is then a subject worthy of the attention of a man or woman of first-class ability. The locality must be considered, one in a locality generally poor cannot expect to compete in the production of comb honey with a bee-keeper in a good locality, by that I mean heavy flows are required rather than prolonged. The greater number of pounds of honey gathered in the least time the better the production of comb honey. Upon this we are all agreed.

THE HIVE.

Upon this subject I hardly consider it wise to more than touch. There is such a diversity of opinion, everyone must judge for himself according to conditions. At the same time I cannot treat the subject honestly and conscientiously without stating that I consider any material variation from the depth of the Langstroth frame, a mistake.

THE SUPER.

There is perhaps no super that will give us all advantages and no disadvantages. We must then select the one which has the greater number of advantages and the least number of disadvantages. I should like the super that would protect the four sides of the sections, also its edges as far as possible, but when we consider the difficulty, in fact impossibility of getting at sections the conclusion is forced upon us that something else must be looked for. The section supers with section holders

consisting of two sides and a bottom bar with separators, followers and wedges, is probably the super we are looking for, as it is not covered by patent, and everyone is at liberty to make and use it. The sections are protected as far as convenience in handling permits.

SIZE OF SECTION.

The size of section must be the next consideration. In this, we must keep in view convenience, demands of the market, and what the supply dealer makes. When we do this but few will fail to take the 4 $\frac{1}{2}$ x4 $\frac{1}{2}$ section. To decide upon the width is a more difficult matter. In Canada ninety-five out of every hundred use the 1 $\frac{1}{2}$ section, a few use seven to the foot, the balance 1 $\frac{3}{4}$, 1 $\frac{1}{2}$, 1 $\frac{1}{8}$ and 2 inches. The demand is for the thinner section, 1 $\frac{1}{8}$ or seven to the foot. In the United States I am safe in saying the demand is increasing for a thinner section, something more in the direction of what Canadians are using and that demand will be met.

BEES.

Next comes the bees. Upon this it is my intention here to touch very briefly as the subject comes up again under "General Management." Just let me say, beauty of comb produced, honey gathering qualities, and the queen, must be looked to rather than beauty of bee. I believe many of our queen breeders are bowing too much to popular opinion in the breeding of queens. They know a beautiful queen and beautiful bees will please as soon as the eyes rest upon them. We are apt to be carried away with them the moment we open the cage, while it takes time to manifest other and more practical characteristics.

MANAGEMENT.

And now comes management. The bees should have plenty of stores in the fall of the year, they must be wintered well, and every hive should have plenty of stores so the bees in the spring need never curtail brood rearing on account of shortage of stores. All that applies to the building up of colonies in the spring applies to the successful production of comb honey.

I take issue with the statement that bees can get strong too early, such a condition never was and never will be, the opposite, too weak colonies at the honey flow alas is too nearly the rule and reduces the number of pounds of honey we get per colony. If a colony gets crowded in the lower story and the time has not arrived when sections should be put on, I place an extracting

super with a queen excluder, (or without as I see fit), and at the proper time replace this with comb honey supers. With extracting supers on the hive there is at this season practically no excuse for swarming. All hives should be placed on secure stands and in every case a spirit level used. There is no serious objection to the hive leaning forward a trifle, sufficient to shed rain, but sideways they must be perfectly level. The greatest cleanliness should be observed, bottom boards, hives and top bars scraped and only such old stock as have bright, clean combs, run for comb honey. Full sheets of foundation should be used in the sections and the foundation as light as possible and of the best wax. I prefer wax made from cappings and taken by the solar wax extractor for this purpose, but in this matter the supply dealer is at the mercy of the bee-keeper and it rests with the latter what kind of wax shall be used. When I make the statement that light foundation should be used I am at variance with some leading comb honey men, but while it is a fact that the bees will thin down the foundation, there are seasons and times when they will not do this, and against this we must guard in order to avoid making the article unpopular. I used a bait (one of last year's sections) in the supers. I have also tried supers without but can find no great difference. Swarming is an important factor in the production of comb honey, and the longer one works for this the more confident one must feel that no one who wishes to make comb honey to perfection will ever care for any device to prevent swarming entirely. No apiary should be run for comb honey alone, and in running for comb honey the only object kept in view should be the production to perfection of this article. To do this swarming must take place. From clean parent colonies good comb honey may be secured, but rarely as good as from swarms. When the bees swarm they should be hived on the old stands and either on very narrow strips of foundation about half an inch deep or on full sheets. Localities undoubtedly vary as to the amount of pollen deposited in the combs, and in a locality in which the bees gather an undue amount of pollen I should say try and make the bee draw out and fasten to frames foundation early in the season, and hive the bees upon these combs. Failing this, use full sheets of foundation. The object of using these full sheets or combs is to assist in preventing pollen from being carried in the sections. Localities in which pollen is not troublesome the bees should be hived on starters and after allowing one complete day to pass after time of hiving, put supers on the hive,

I have not much faith in added energy through swarming but the bees have at the commencement no brood to care for and feed, and they give better results as to surplus. If sections on some old stock are about ready, it is a good plan to give these to swarms to finish. They will make very rapid work in finishing them. Now as to the combs which will be built from the starters, we know when a young queen is in the hive the bees will be less inclined to build drone comb, but is this condition practicable for a comb honey producer? I think not. The plan of requeening with young queens before the honey flow is not desirable from the loss of time resulting from introduction of new queen and taking out of the old one. The truly successful comb honey producer must be ever on the watch to improve his stock in this direction, he should know by numbers what supers have been finished by every colony, and when he notices section supers, with well capped comb and free from brace comb and propolis, (this latter characteristic should be especially observed), he should note that hive, especially if the amount of honey secured has been large. Next season he should breed from such a queen and so on, producing from year to year a better strain of bees. I am not saying a word against queen breeders. I am a queen breeder myself, but a comb honey producer should have a strain of bees which, although they may not be the best in the world, yet must be of sufficient value to him to cause him to replace them with extreme caution and only with something tried by himself. To prevent deterioration some new blood must be introduced each season, it is then impractical to have young queens with swarms, and often with such queens their will be an undesirable amount of drone comb. I have within the last two weeks seen the result of an extensive experiment conducted by S. T. Pettit, of Belmont, Ontario, under the following directions:

The swarms were given one or two combs entirely drone. The balance starters, with the hope that the bees would be furnished with worker comb, but they appear to have no power of reasoning and in every instance appear to build as much drone comb as if the first combs had never been given. For extracted honey I favor full sheets of foundation every time, but for comb honey my arguments for starters, unless in exceptional cases, are these: We are trying to get the most honey out of these bees and we want the best product, if we do not care for much increase, we can shake the bees from these combs after the season is over and destroy them. If we wish to winter them we can put them on

good combs and feed them on sugar syrup for winter stores. The combs built by the bees can be patched up to the best advantage, the old hive placed directly behind. The old stand can be treated thus, shake almost six days after swarming a good many bees from the comb adding them to the new swarms in front and either utilize the comb in another place or put the hives on new stands and let it build up for winter. I am never troubled with second swarms. The location of an apiary has much to do with swarming. In places where the air can freely circulate the amount of swarming will be reduced, the nature of the soil even will have an influence. I like the apiary on sod and the hives to be placed under the outer edges of the shade trees. I never give in the production of comb honey any upward ventilation, and herein lies an important secret towards securing white and clean sections. The bees resent such a current of air, and when given begin to propolize, and soiled sections are a result. A quilt should not be used unless a heavy cushion and a heavy lid be placed above to prevent the bees from pushing the quilt off. I like a honey board and a quarter inch bee space above the combs. Shade boards are used on top and even sides of hives. They are a great advantage. It is unnecessary to say that no one can engage in the successful production of comb honey with one super only, and yet there are many who think such a practical economy. Before the advent of the bee escape I drove bees out of the comb honey supers by spreading over them a cloth dipped in a weak solution of carbolic acid, the cloth being wrung almost dry before spreading. This works very well, but the bee escape still better. My system is to produce a certain amount of comb honey. This prevents cull sections, except in very exceptional seasons. Nothing has been said about any kind of feeding. To feed back extracted honey means to put upon the market comb honey which will quickly granulate and this will displease the customer, and is therefore undesirable. To feed anything else should never for a moment be listened to, never be even thought of. To practice it would surely bring swift retribution. Only a choice article should be aimed at even if we never exhibit, for by so doing we place ourselves to a certain extent out of reach of competition. We command highest price and a ready sale.

R. F. HOLTERMANN.

Brantford, Ont.

R. L. Taylor asked why hive on starters. Mr. Holtermann stated what he had in

view was to get the most out of the bees, the largest quantity and best article.

Mr. Taylor thought that we did not want to use starters for comb honey. He hived four swarms on foundation, four on starters, four on combs. Everything was weighed—bees, hives and all. The bees were hived the last week in June. They were weighed June 19th. The swarms were of different weight. Those on starters gained the least. As to upward ventilation, Mr. Taylor practiced it and did not consider it objectionable.

Mr. Holtermann thought such experiments of great value. At the same time one experiment could not be taken as absolute, neither would Mr. Taylor claim such to be the case. A swarm of 5 lbs. would not gain as much relatively as a swarm weighing 7 lbs as it took a certain number of bees first to keep up the requirements of the colony. Again colonies often gave very marked differences in results, when with present appliances there was no perceptible difference.

R. L. Taylor—A group of each one weighed 7 lbs., 7½ lbs., and 6 lbs.

E. Kretchner, Red Oak, Iowa—The honey flow makes a great difference.

N. D. Wert, North Middleburg, N. Y.—I agree with Mr. K's views as to length of season. A great deal depends upon how we hive the bees. I used to favor starters. If the season is full and short the bees first send the honey in surplus boxes. I hive now on five frames. The bees must go above. I have between four and five hundred colonies.

R. F. Holtermann—Our honey season is short. I never look for a fall flow.

Mr. Stewart—If I had lots of time I would use dummies. I used to favor starters. I take the sections from the hive from which the swarm issued, whether partially worked out or not.

R. L. Taylor—I divided the time into three periods. The result was on starters the bees gained least the first week, the second they did better, and the third they gained most.

Mr. Abbott thought there was no necessity for bringing in such accurate work. The greatest objection to the experiment was that the work of bees varied so much.

Doctor Mason spoke very strongly in favor of Mr. Taylor's work, so did Mr. Holtermann. The latter thought bee-keepers did not value experimental work as they should. They were not sufficiently alive to their own interests.

Chas. F. Muth, Cincinnati, O.—I believe no one underestimates experiments. They

are very valuable.

The committee on Prof. Cook's address reported as follows:

Resolved by the North American bee-keepers, that we recognize the value of experiments and of experimental stations, and firmly believe that bee-keeping should be greatly aided in each state and province where bee-keeping is a leading or important industry. If the experimental station in such state or province should secure an able apiarist to give his full time and energies to the work of experimentation, and if these apiarists should work together to advance the general apiarian interests. Therefore, we ask that the bee-keepers in such state or province agitate for the recognition of the industry and a money grant to carry out the work, and cease not until the object in view has been accomplished.

Mr. J. W. Pender, of Australia, was then called upon to give some information regarding Australia.

Mr. Pender—I represent the Hunt River District Bee-keepers' Association. It is the only one doing any work. Our membership fee is 60 cents. Our object was to try and introduce the new system of keeping bees. The old system (box hive) was in vogue when the society began. Much work has been done. The American system has been adopted, and the Langstroth hive is in use. We have a fine country for the production of comb honey. For nine months in the year the bees can gather honey. There was no fact in the statement that bees on that account remained idle and did not store surplus. We had mostly black bees, but we are now getting Italians. At one time no bees could be mailed, but now the government permits queens to be transmitted in the post. We are purchasing queens from America.

The sources of honey are white clover, alfalfa, or lucerne. Of these we have thousands of acres. We produce mostly extracted honey. The country is very warm and comb cannot be shipped well. The trees are all gums, hardwood. They are great sources of honey; it is of good quality, and we attempt to grade it.

We have an average of 224 lbs. per colony. One man increased from 17 to 90 colonies, producing 7,000 lbs. of extracted honey in twelve months. Most of the honey is taken in May and June.

Patten Beni apiary took 7,000 lbs. from 30 hives, old stocks besides increase, and the honey that increase produced.

My own Drumfin apiary of 40 colonies yielded in 14 days 16 60-lb. tins, making 960 lbs. A letter at a later date from my son informs me 40 hives have yielded 3,700

lbs., and in another two weeks he expects to extract 2,000 lbs. more. The wholesale price of honey is 8 cents per lb. He had been delegated to see what he could do in London, England. He found what they wanted there was a sweet, mild-flavored honey. The average attendance at their convention was good. The meetings were once in four weeks, during the evening, and parties rode long distances to attend.

A discussion was now taken up upon the subject of "Fixed Spacing and the Prevention of Brace and Burr Combs."

Nine did not care if they had a few burr combs. A large number, however, objected to them.

Mr. L. Taylor asked if it was desirable to prevent these combs at the expense of space by putting in a heavy top bar. Thirty-three thought it was. He thought if one handled hives and frames much they should be free from brace and burr combs. Queen breeders, for instance, required to handle much. Generally, however, bee-keepers were giving up handling bees in the brood chamber, therefore they could stand brace and burr combs.

Mr. Muth wanted a top bar no thicker than required to keep it from sagging.

A discussion followed upon the V shaped top bar. Quite a number objected to it. Others again did not find them objectionable.

A member favored handling frames frequently, he could obtain better results.

Mr. Taylor admitted that he had used thick and thin top bars with the thick. There were less brace and burr combs, he however objected to the loss of space.

Thirty-nine thought some kind of a honey board necessary between top bars and sections. Fifty-seven thought to the contrary. Mr. Pringle stated a good many bee-keepers used a sheet of metal for a queen excluder.

The president remarked that a great change had taken place in public opinion. The time was when Mr. Heddon made the statement, when a brick could be thrown in the air without coming down, then bee-keepers would dispense with the honey board.

AFTERNOON SESSION.

At the opening of the afternoon session the representatives of the different states and provinces were counted. Only five states had a larger number of representatives than Ontario, the latter having 14.

The discussion on burr and brace combs was continued. Jacob Alpaugh, St. Thomas, Ont., in reply to a question answered a proper bee space was scant one quarter inch between either horizontal or perpendicular surfaces nothing would

entirely prevent these combs.

Twenty-one found this to work to their satisfaction. A member made the statement that a top bar $1\frac{1}{4}$ inches by $\frac{3}{8}$ inches deep would answer with one quarter bee space.

It was pointed out that the length of frame would influence the thickness of the top bar. E. R. Root, Medina, O., thought that brace and burr combs could be prevented almost entirely. He was inclined to think that thickness of top bar, irrespective of sufficient strength, had to do with the question.

H. R. Boardman—Close spacing only partially prevents these combs.

N. D. West thought one should be careful to have comb built in centre of frames and they should be perfectly true.

Thomas G. Newman, manager of the Bee-Keepers, Union followed the discussion with an address upon:

SCOPE AND WORK OF NATIONAL BEE-KEEPERS' UNION.

At the last election of officers for the union, amendments to the constitution were adopted, which allow the union to exert its influence and devote its resources "for any purposes in the interest of the pursuit of bee-culture, when such are approved by the Advisory Board."

This amendment defines "the scope" of the Union most fully. Its powers are circumscribed only by its available funds, and the "interests of the pursuit."

It remains with the Advisory Board to determine "its legitimate work." But that board should always "feel the pulse" of bee-keepers generally, remain within the limits of the work sanctioned by their sentiments, and thus "keep in touch" with the spirit of "the everlasting present"—the times in which we live.

Prominent among the later suggestions as to a field of operation, in addition to the defense of the pursuit of bee-keeping when assailed by the ignorant and prejudiced, is that the Union should assume the aggressive, and prosecute adulterators of honey.

Much as we may approve this sentiment, it must be admitted that there are difficulties to be encountered, because of the diversity in the laws of the several states. What is needed most is a general law enacted by the National Congress of the United States or provinces against the adulteration of all kinds of food, applicable alike to every state, province and territory. Then something may be accomplished in that line which will be beneficial—until that is done I fear that we shall "labor in vain," except perhaps in isolated instances.

Another difficulty is that the analyzation

of honey by chemists of even national reputation cannot always be relied upon for proof of sophistication. This has been proven by many samples of absolutely pure honey having been by them pronounced "probably adulterated." The reason for much of this confusion lies in the fact that the honey from localities varies in consequence of the diversity of the soil, climate and atmospheric conditions.

I am glad to notice that the professors themselves are endeavoring to overcome these difficulties by attaining more definiteness in this matter. We must await their further investigations and the adoption of a test which will be "infallible" before we risk the money of the Union on the prosecution of the scoundrels who practice the adulteration of our sweet product.

Another phase of legitimate work for the union is to make its influence felt in legislative halls—in preventing unjust enactments, which are sought in the interests of rival pursuits, or those who are ignorant of the advantageous service of the honey-bee in the economy of nature. In this line the Union has already done noble service, but that is capable of much enlargement.

Test cases, in every state, where suits against bee-keepers for maintaining a "nuisance," are desirable, and these can only be obtained by an organization like the Union, for the costs would be too much for individual efforts in that line.

The "moral effect" of the existence of the union is something wonderful. Lawyers, judges, juries, as well as quarrelsome neighbors, are all influenced by the fact that there is an organization ready and able to defend the pursuit against injustice and maliciousness. The strength of a body corporate is wonderful when it is exerted in the defense of a righteous cause.

Organization is the "one thing needful" to-day. Apiarists must learn to act with and for each other. Then they can make their influence felt! Then they can secure "their rights," and command respect at all times and under all circumstances.

In an existence of only eight years, the National Bee-keepers' Union has gained victories to be proud of. It has compelled the courts of the land to render just and fair decisions in cases where the keeping of bees was involved, and has won from the highest courts precedents which will be pointed to as long as "law and order" shall endure. Cases are now common where judges "refuse to interfere with a business which the courts recognize as legal"—that is, the keeping of bees!

In preventing trouble, the Union is just as successful as it is with a case in court. It is always on the alert, with well-directed

guns, and "keeps its powder dry."

The National Bee-keepers' Union is now under the fostering care of the North American Bee-keepers' Association, and I trust that it will endure for "the ages to come," and will bless all coming generations. We must not take the selfish view that as individuals we are safe from annoyance, and may never require its services in our own behalf. We should consider that we are "building" for posterity, and rearing a "tower of defense" which shall last long enough to be used by our children's children.

The Union's "legitimate work" is to follow in the line already marked out, and to grapple with any foe which may hereafter present itself—forming a "place of refuge" for the unborn millions of the twentieth century of the Christian era.

The Bee-keepers' Union has already won a glorious record in the defense of apianian interests. It is true its numbers are not as numerous as they should be, but the organization has made itself felt in every state and territory, either directly or indirectly. If this has been done with a few hundreds, what might be done with several thousands? If a small company of "soldiers" have thus caused the rights of the pursuit to be everywhere respected, what may be accomplished by "an army" equipped for war?

Rise! for the day is passing:
While you are dreaming on
The others have buckled their armor,
And forth to the fight are gone;
A place in the ranks awaits you.
Each man has some part to play—
The past and the future are nothing
In the face of the stern to-day.

Stay not to sharpen your weapons,
Or the hour will strike at last,
When from dreams of a coming battle
You may wake to find it past.
Your future has deeds of glory,
Of honor, God grant it may!
But your arm will never be stronger,
Or the need so great as to-day.

Doctor Wiley, chemist department of agriculture, Washington, D. C., was called upon. In his remarks he dwelt upon two great points towards success Production and market. Some kept bees for pleasure, but many for profit. To hold their markets he wanted to help bee-keepers. From actual test he knew bee-keepers had been cheated out of a market. By many purchases he found that much of the honey in the United States was adulterated. There was at present no absolute method of detecting all falsifications. He regarded pure honey as nectar gathered from flowers and stored by them. One method of adulteration was to feed bees with mixture of invert and not in-

verted sugar, say 10 to 20 per cent. of the latter. Another method practiced in Europe was to artificially invert sugar, with samples such as mentioned he would hesitate to pronounce an opinion as to purity. Again, the exudation from plant lice would be difficult to tell from pure honey. But it was his intention to pursue this subject and assist bee-keepers. He had no doubt that science, by improved methods, would be able to keep abreast with those who practiced adulteration. A discussion followed upon some of the work of Doctor Wiley, especially the analysis of a sample of honey with the label of C. F. Much. upon it found adulterated. Doctor Wiley stated he thought if some one was adulterating Mr. Muth's honey or getting up a label, a fraud on Mr. Muth, it was in that gentleman's best interest to find it out. The discussion brought out that no one suspected Mr. Muth, but that some one had attempted to trade on Mr. Muth's good reputation.

After recess the following paper was brought before the convention:

SWARMING AND THE PREVENTION OF SWARMS.

THE CAUSES OF SWARMING.

can be traced to several sources. First of all, we must consider it is a natural instinct of preservation whereby young queens are secured, new homes are formed, and bees fulfill the supreme command, "Go forth and replenish the earth."

Next the conditions of locality, the honey seasons and resources have much to do with the act of swarming.

But when we come to the action of a man in relation to the control of swarming, we find the foremost reasons why bees are allowed to carry out to the full this natural disposition of theirs, is negligence. Let them have irregular brood combs with plenty of pop holes, and queen cell are constructed where otherwise none would have been found. Then allow the brood nest to be crowded, not necessarily with bees or brood, with too large proportion of the combs choked with honey, and pollen in particular, then the queen is soon conducted to another site, and another colony established. In this connection too the negligent bee-keeper is sure to be careless as to the removal of his aged queens, and he suffers in consequence.

On the other hand we have a more careful and far-seeing class of bee-keepers, and what is it they do towards

PREVENTATION OF SWARMING?

The usual process where comb honey is be-

ing worked for, is to put on the sections before the swarming season has been reached, thus giving room in advance of the bees' requirements; but this is only partially successful: the brood nest becomes crowded with both brood and pollen, and a great many swarms issue. Therefore, as a farther aid to prevention while working for

COMB HONEY

the bee-keeper will be compelled to relieve the brood chamber with the extractor? Oh no, that will not remove the pollen; but, by occasionally withdrawing the two outer combs, and at the same time inserting near the centre two frames with guides only. Mind, these two frames are not to have empty combs or foundation, or they may be choked up at once to the exclusion of the queen.

PREVENTATION WITH EXTRACTED HONEY

has generally been a far more simple matter where the bee-keeper will only keep on hand plenty of empty combs and extra sets of hive chambers that can be tiered up freely when the good time comes. The brood nest is not cramped, and the bees are never allowed to have all the combs completely capped before the honey extractor relieves the surplus combs of their accumulating stores.

But after all prevention is not always secured with such unlimited space. For one reason bee-keepers keep queens until they are too old, and worse than that, such as are reared at quite the wrong time of the year to ensure the best results,

YOUNG QUEENS

reared in autumn will top all that has been urged so far as aids to prevention of swarming, though, as a matter of fact, such queens will always be found at the head of far stronger and more capable colonies than any with ordinary swarming queens.

The young queens should be reared in nuclei towards the latter part of the season, by the side of the respective stocks, and unite them before the general clearing, or where you expect a later harvest shortly before that occurs. Try it once, you follow it always.

But above all, and in connection with the last named condition, the

FOREMOST METHOD OF PREVENTION

it has been my lot to discover, is the placing of an empty chamber under the usual stock chamber before the latter becomes crowded. The frames of this lower chamber have $\frac{1}{2}$ inch guides only. The surplus is worked as usual above the stock chamber, when no combs are completed below,

even if left without attention the whole season, providing the former receive due care. There are no traps and no constant shifting of heavy weights; the bees feel that their brood combs are never complete, and the natural desire for swarming is lost.

Before the plan is tried, the frequent query is "How can I possibly get the bees to work in the surplus chamber with so much room below?" I have never found the least difficulty. When working for extracted honey, with plenty of combs above, there can be no difficulty. And, when is there anything in the way of bees going up into the sections? Only when you do not use full sheets of foundation in sections; and who in these days can afford to use anything less than full sheets? If you use only

STARTERS IN THE SECTIONS

then the combs are finished off with drone cells in many cases, with its coarse, irregular capping. The drone comb there has been the only inducement for your queens to go up and brood among the nice combs of honey; then some of you felt you must use the queen excluder zinc, with its added expense and inconvenience. Use nothing but full sheets of foundation in the sections, give empty frames below the stock chamber, and you will find perforated zinc one of the greatest shams ever put into a bee hive.

NATURAL VS. ARTIFICIAL SWARMING.

We next come to the question, "whether it is advisable to prevent natural swarming in all cases." Decidedly, yes. It is opposed to all the first principals of scientific breeding, and in northern latitudes we do not want our queens reared at the usual swarming time, as already shown. We want at all times to keep our bees well in hand that we can make our increase at the time it is going to interfere the least with the main work of honey gathering; and we just want every single queen reared and mated by selection.

IN SOUTHERN LATITUDES

I should still want to control the swarming impulse, but whereas in the north but limited increase is desirable, in tropical and semi-tropical climes, the highest results are only to be obtained by swarming artificially.

It is impossible in the latter case to keep up a sufficiently large and continuous working population to secure the enormous amount of honey generally abounding throughout a lengthened season, with a judicious process of increasing, which shall do away with the pollen-bound

combs, while allowing the queen unlimited space in newly built cells.

Old queens, with much drone comb built in consequence, and an excess of pollen have much to do with the meagre results reported from some lands enjoying almost continuous sunshine; and where a boundless wealth of bloom would lead us to expect a harvest of ten times the quantity.

IN CONCLUSION

I would request the necessity of working without disturbing the economy of the hive, that the desire to swarm does not exist; making increase when desirable by division as the most profitable method to follow. Use only young queens reared in autumn. Allow plenty of room under the brood nest, which being also a cause of better ventilation, permits of more continuous work being carried on, and at the same time does away with continual shifting of heavy weights as well as useless clay-traps.

SAMUEL SIMMINS.

Mapassa Villa, Seaford, England.

This brought out quite a lengthy discussion. The best bee-keepers are certainly in America not in favor of artificial swarming.

Mr. Boardman had, some years ago, been in favor of the prevention of swarming, but he was not now in favor of such. When he wanted to prevent swarming he shook the bees out of the hive upon empty combs. If after he gets the surplus honey, he wants no increase he returns the bees to the colony having the young queen.

To the question, "For the best results in comb honey, is it desirable to prevent swarming?" 31 said yes it is, fifty-two said no. So it will be seen opinions were pretty well divided. Byron Walker thought the season, its length, had much to do with it, if it had been short it should be prevented.

Mr. Boardman, an extensive bee-keeper, had swarms on scales. He estimated that bees did better after swarming.

Mr. Aiken was so sure better results could be had, either for comb or extracted honey, by preventing swarming by means of dequeening that he challenged the best man in the convention to get as good results from swarming. Upon putting the question to a vote, 49 favored nonswarming for the production of extracted honey, two desired swarming.

It was pointed out that the season, its duration, &c., would make a very great difference. If the season is long and the colonies strong, swarming would give the

better results, if short the prevention would word to better advantage.

Mr. Boardman had during the past season secured 100 pounds of comb honey from swarms and 50 pounds of honey from the old stock.

In reply to a question Mr. Boardman stated he put his new swarms on the old stand.

Byron Walker, in his locality, had 100 pounds of comb honey per colony and get 3,000 pounds of honey from the late flow. Swarming had paid him.

Mr. Jacob Alpaugh, St. Thomas, Ontario, being questioned, did not believe in giving an empty hive underneath the brood chamber. He had practiced this method extensively one season with no good results. In a large number of cases the bees did not accept of them. He would prefer putting the empty chamber above, and so on, this largely prevents swarming. He liked new swarms for comb honey. He lived on a contracted brood nest, spacing the frames very closely. If section supers are on the old hive, he puts them on the new hive with a queen excluder between. If the old section contains no partially finished sections he gives the new swarm new sections at the time of swarming. A slatted honey board may or may not be put between, about this he is not very particular. He hives on starters and puts on a surplus arrangement at once. Mr. Alpaugh has had 100 pounds of comb honey from a swarm and another 100 pounds of extracted honey from the old colony. He hive on a new stand. Mr. Alpaugh made a point which should not be forgotten, one upon which it is our intention to touch upon in an editorial. The statement was: "If one hived on full sheets, one may have re-swarming; if the bees are hived on starters there will be no re-swarming."

EVENING SESSION.

Mr. Muth gave an address on the grading of honey. As the paper has some valuable suggestions in it: we give it in full:

GRADING OF HONEY.

Should there be any change in the ruling adopted at the last International Convention?

The arrivals of shipments of honey in good condition are many times of the same importance as the production of a good crop. After the industrious bee-keeper has put to the test all of his energies for nine or ten months of the year, in order to get his bees in a proper condition by the time that his season begins: and after a good crop has been harvested, the honey is generally sold to dealers in large cities. The safe

arrival of his honey is now the first and greatest factor in the success of his enterprise.

His disappointment would be great upon learning that his honey had arrived in a damaged condition. He would know at once or imagine that the profit of his year's labor is lost. He has no idea of the vexation and disappointment caused to the dealer who also loses money and valuable

(To be Continued.)

FIRST STEPS IN BEE-KEEPING.

"Keeping Everlastingly at it Brings Success."

Questions Sent in Bearing Upon First Steps in Bee-Keeping Will be Dealt With in This Department By the Editor.

IN WINTER QUARTERS.

NOWING that "toddlers" and advanced bee-keepers will find something of interest in the report of the North American Bee-Keepers Association, I propose making my remarks in the November issue brief.

PACKING.

Bees have of course been packed if it is the intention to winter on summer stands, if not do not lose a moment. The wear and tear to nerve power, from the knowledge that the important work has not been done, will be worse upon your system than if you make an extra effort do the work and get it off your mind. We are often overwhelmed with work, confused in fact and begin to fret. But drop fretting and go to work and by doing it with system we find things are not so formidable after all.

Top packing should be put on all hives the latter part of this month.

CARRYING BEES.

In the last number of THE CANADIAN BEE JOURNAL is an article by that successful bee-keeper, Mr. S. T. Pettit, read it carefully. Bees should be carried in on a day

when the temperature is above freezing and the greatest care should be observed that the hives are not jarred. If held against the body every step will disturb the bees. The task is difficult, but I make a point of carrying the hives clear of the body into the cellar. Doctor Miller I believe described in *Gleanings* an excellent contrivance for carrying hives. It is simply two pieces of rod bent over with the ends about six inches apart and each end again bent or sharpened so as to catch under the bottom board at the side. At the first bend is the handhold and a pair are required. Two carry the hive between them to the cellar. Between 20th of November and December 1st, is probably the best time to cellar bees.

CELLAR.

I have the bottom hive at least ten inches from the cellar floor, put them as Mr. Pettit directs, three inches higher at the back than front, the back of hive $\frac{3}{8}$ inch (not $\frac{1}{2}$ inch as owing to a misprint stated) from the bottom board.

The stronger and heavier hives should be at the bottom. The lightest on top. Place your hives in such a position that if necessary you can without disturbing colonies, clear the entrance from dead bees. Bees should clear the entrance themselves but they will not do it under all conditions. As before stated if you have been quite successful in some other way, go slow to make a change.

QUESTIONS.

What is a good distance between frames for summer and winter? $1\frac{1}{8}$ inch from centre to centre.

How do you make ventilation in wintering bees in a dry cellar. Do you let the entrance open or closed in winter? See above; entrance open full width.

Is honey and pollen mixed good food for bees for feeding? Bees if healthy and wintering well will not digest pollen in any quantity. As stored by them in the combs it is not dangerous to a healthy colony. It is an open question with the bulk of bee-keepers if the entire absence of pollen or its presence is liable to do the greater harm.

Which is the best hive for wintering an eight or nine frame hive? It depends greatly on the strength of your colony and the place you winter. If the bees can cover a nine frame fairly well, otherwise an eight frame. Generally we think eight frames will answer better. In a damp cellar all stores should be fairly covered by the bees.

Laws for Bee-Keepers.

Please let me know through THE CANADIAN BEE JOURNAL what the law is in respect to keeping bees in incorporated

villages. Some parties are talking of putting my bees out of the village.

Ontario. F. C. F.

I am a beginner in bee-keeping and a subscriber to THE CANADIAN BEE JOURNAL for five years. I wintered ten colonies and with one exception they were all in good condition last spring. They gave me six swarms this summer and my crop will be about 700 pounds of extracted honey. I like bee-keeping very much and I should like to continue to keep my bees, but I am in a bad position. Last spring I bought a little piece of ground in the village, with a house and other buildings or it, and I put my hives there. Unfortunately my neighbors wife was stung by the bees and she became so angry that she brought an action against me for damage. Not to be obliged to go before a court of justice I consented to pay \$15. I have no other ground where I could place my bees and I do not want to be exposed to the same unpleasantness again. Is there any law in Ontario of other places, so a bee-keeper can keep his bees unmolested in his own grounds. If there is such a law anywhere would you be so kind as to let me know how I could have a copy of it.

C.

Quebec.

We have had several other communications in the same line during the past few months. At the outset we would say the Bee-Keepers Union has clearly established the fact that there is no law BINDING which will prevent the keeping of bees in a country in a village (incorporated or otherwise) in cities or towns. The Union has lost cases in lower courts, but when taken to a higher court, the Union has in every case won. A law prohibiting the keeping of bees is not worth the paper it is written on. There is no doubt about this. More Canadians should belong to the Bee-Keepers Union, if not a member, take steps to become one. Address Thomas G. Newman, manager, 147 South Western Avenue, Chicago, Ill., U. S. A.

This is the legal aspect, but we are not in favor of law. In the next number of THE JOURNAL we propose giving some methods to prevent law. Bee-keepers are sometimes, but not always to blame for unpleasant words with neighbors. A good many may say no, but wait until we explain in the December number.

Ed.

WILL EXCHANGE

One second-hand 6 inch Foundation Mill good condition for 200 pounds of Clover Basswood honey.

H. C. FREEMAN, Newboro, Ont.

Kind Words.

Having received THE CANADIAN BEE JOURNAL for August and September, and finding a great improvement over the former numbers, I beg to congratulate you on having got control of it. I am ready to do anything to assist you in making it a really first-class journal.

A. D. ALLAN, Marlbank, Ont.

Allow me to say that I like THE CANADIAN BEE JOURNAL well.

JAMES E HOLT.

I like the CANADIAN BEE JOURNAL first rate.

CHARLES F. CONNOR.

Strictly Business

You studied the multiplication table some years ago, I doubt not, so will be able to appreciate this argument, viz.: 400 (subscribers in arrears) x \$1 = \$400. As matters now stand, the noble four hundred is carrying around four hundred dollars that belongs to us, and the question is how to get it transferred to our pocket.

* * *

Wouldn't it seem funny if every man of this select company, and a few women, acting on a righteous impulse, each sent in his or her dollar by the next mail after receipt of the November number. I wonder what the postmaster would say? I wonder how we would feel? But don't hesitate about sending it along, for we are prepared to stand all the consequences.

* * *

Now, honestly, my friends in arrears, don't you think we deserve at least fair treatment from you? Are we not making a pretty fair Journal, and if so, why not show your appreciation by a prompt remittance?

* * *

Some lady editors of great mental power can tell the characteristics of their contributors by an examination of their hand writing. I think a publisher can also tell something about his subscribers from their standing on his books. Are you one of the happy-go-lucky kind who intend to send your money to-morrow and then forget all about it for months? I won't say more. I am as tired of the subject as you, but there is a sure method of closing my mouth on the subject, why not try it?

* * *

We expect old subscribers to stick by us, but we want more people to profit by THE JOURNAL, so we make a very special offer, viz.: For 25 cents in stamps or silver we

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Yours,
STRICTLY BUSINESS.

Convention Notices.

The First Annual Meeting of the County of Prescott Bee-keepers Association will take place at the Town Hall, at Plantagenet, on Monday, the 27th of November, at the hour of one o'clock p. m. All invited to attend. Jos. Charbonneau, Secretary-Treasurer.

A Correction.

EDITOR C. B. J. : I see that a number of errors have occurred in my article in the October number. I thought to let them all pass, but there is one that should be corrected at all events. It is erroneously stated that the back end of hives in cellar should be blocked up three quarters of an inch from the floor (bottom board), but it should read three-eighths of an inch. Please insert and oblige.

S. T. PETTIT.

Belmont, Ontario.

THE

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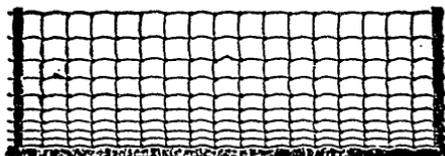
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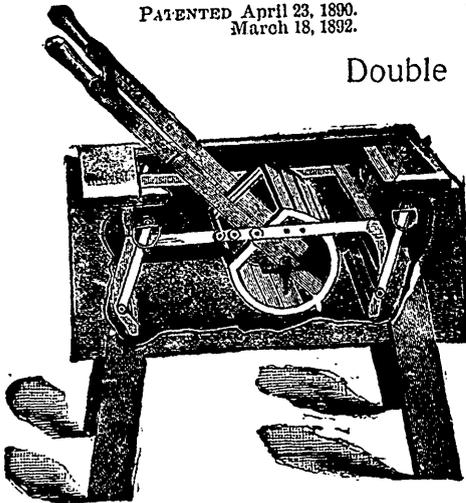
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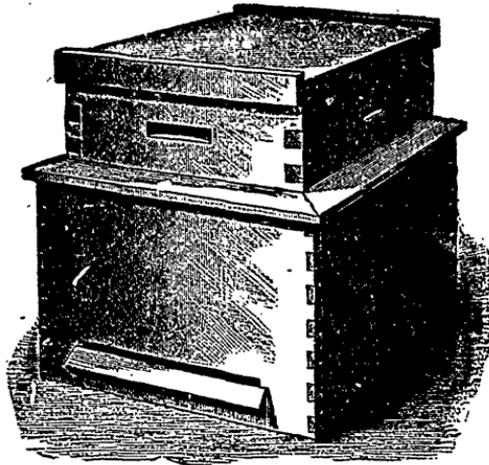
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