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EDITOR,

R. F. HOLTERMANN.

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THE CANADIAN Bee Journal.

PUBLISHED MONTHLY.

NEW SERIES
VOL. I, NOS. 1 AND 2

BRANTFORD, ONT. AUG., 1893.

WHOLE No.
341 AND 342.

THE CANADIAN BEE JOURNAL ISSUED MONTHLY.

GOOLD, SHAPLEY & MUIR CO. L'td,
PUBLISHERS.
R. F. HOLTERMANN, EDITOR.

EDITORIALS.

Subscribers of The Canadian Bee Journal have already been made aware of the fact that Goold, Shapley & Muir Company, Limited, have purchased THE CANADIAN BEE JOURNAL. It is our intention to make it a first-class monthly in every way, one worthy of Canada and the bee-keeping industry. Unfortunately The Journal has met with a series of reverses, but we have now every reason to give our subscribers the assurance that it has found a permanent and prosperous home, and in making this statement we but echo what, from numerous and friendly letters, appears to be the impression of bee-keepers generally, who have learned of the change.

It is not our intention to lean for support upon the sentiment of patriotism, yet when word spread through the country that the entire plant of The Canadian Bee Journal had been destroyed by fire it was only too apparent that many felt painfully anxious lest it should mean the deathblow to a journal largely kept up by the patronage and co-operation of Canadian bee-keepers.

It is at such a time one feels that there is much which would make it difficult for any other publication to fill the place of our own Canadian Journal. While general principles are applicable to all conditions; climate, locality and flora make a vast difference in the experience of our best and most reliable men. There are our markets to consider, the best methods to permanently develop our industry, and many other questions arising from time to time which are of interest only to a nation. Bee-keepers should take more than one journal, yet if it comes to a question of deciding on one only that for Canadians should be The Canadian Bee Journal. The misfortunes through which The Journal has passed we feel confident will eventually be to its permanent benefit, in so far as it has brought out in stronger relief the importance of supporting by subscription and pen our own. We intend publishing a valuable journal, and to carry out that intention and to serve—if we may be permitted to make the statement—their own best interest bee-keepers should unite in assisting us in the many ways which will suggest themselves. Subscribe now. Use your influence—for every one has an influence—to get your friends to subscribe. Give us your experience, and if you have none write asking for such information as you may require.

The establishing of a Michigan State Experimental apiary is a step in the right direction. Bee-keepers have a right to ask

for assistance from the government in solving the many problems which confront

MICHIGAN
STATE
AGRICULTURAL
STATION

them from time to time.

This experimental work is in other agricultural lines conducted at the various experimental

stations and much can be said in favor of this method of working. However, all things considered, perhaps no better plan could be devised than that designed by the Michigan State legislature when the work is conducted by so able and so practical a man as the Hon. R. L. Taylor. The success of such an undertaking will depend almost entirely upon the appointment made in connection with the station. We trust the time will come when not only many States will follow this good example but we in Canada shall have one or more apiaries either in connection with the experimental stations now in existence or distinct. Stations at which careful experimental work will be conducted to advance the interests of the many apiarists who have now to learn by their own individual efforts and at a much greater cost. The CANADIAN BEE JOURNAL will watch this work with interest, also any other experimental work, and keep its readers thoroughly informed.

**

We would draw the attention of our

STRICTLY
BUSINESS

readers to the strictly business column and the offers which will appear there from time to time.

**

From The Bee-Keepers Review we learn that the Hon. R. L. Taylor, in the experimental apiary has tested the Langdon non-

THE LANGDON
NON SWARMING
ATTACHMENT

swarming attachment, to a certain extent. He states:

"Five of the attachments were adjusted to double the number of hives on the 22nd day of June since which time seventeen swarms have issued from those hives. In each instance thus far the queen was returned to her own hive and the swarm to the sister hive. although it quickly became evident that it was worse

than useless to do so." More may be looked for in this direction by others.

A description of the Pratt Hiver^{***} we believe, has not heretofore appeared in THE CANADIAN BEE JOURNAL. In the Sep-

THE PRATT
HIVER

tember number we will publish an extract from Gleanings in Bee Culture; also an improvement suggested in an article by the editor of C. B. J.

Our own experience in the apiary is that the self-hiver will do the work of hiving swarms to perfection. The swarm issues, the queen follows as far as the new hive, and being unable to follow, remains there until the swarm returns. For those having only a few colonies of bees, or those unable to watch their bees closely, we predict the self-hiver will be a great advantage. But there are disadvantages. The bees appear to incline to store honey in the comb below, in the new hive. We tried everything that could be thought of, first, eight combs in the new hive, making the number complete. The bees filled the combs with honey. Again we put in the combs spread, only four being left in the new hive. The bees filled them, and built comb between, filling it with honey; the same with no comb at all. We did not try comb foundation but there is no room for doubt, when large pieces of entirely fresh comb were built, that they would also draw out foundation. There is of course no loss in this when extracted honey is taken but with comb honey it will prove a drawback. A large number are conducting experiments with this self-hiver for the Ontario Agricultural and Experimental union. We shall in due time give results of this work, and we shall also be pleased to hear from others upon the subject.

The article from the pen of Allen Pringle,

ALLEN PRINGLE'S
REPORT
WORLD'S COLUMBIAN
EXPOSITION

Superintendent of the honey exhibit, Chicago, will be appreciated. It is perhaps unfortunate that it has not appeared earlier. The delay appears to be due to unforeseen causes.

Readers of THE CANADIAN BEE JOURNAL will have to bear with us in this issue. The number has been issued under great disadvantage, and owing to the short time allowed for preparing the August number there is not the amount of original matter it is our intention to have in the future.

**

As has been a wise custom in the past, we publish a copy of the prizes offered for honey and bee-keepers supplies. We think that exhibits of honey properly made may be one of the many instruments used to increase the demand for this wholesome sweet.

**

No fixed rules can be laid down for beekeepers in reference to the disposal of the

HOME
MARKETS.

honey crop. The various conditions to be found make a difference as to the best methods to be adopted. It is, however, safe to say cultivate your home market; dispose of all you can in your own vicinity without lowering the retail price. Rather lower the wholesale than the retail price. In the past the margin given to the retailer has not been sufficient to allow him more than a very bare living profit. The retailer is the man who can reach many customers, and an inducement should be offered him to handle your goods. Many argue thus: I would sooner cut the retail price from 12½ to 10 cents per pound than wholesale at 9 cents. This argument is wrong. No man can afford to retail honey through the county for 1 cent per pound, and you will at the above prices be finally forced to fall back on the wholesale man, and in the meantime you have yourself lowered the price in the market.

**

THE CANADIAN BEE JOURNAL would not be fulfilling its mission did it not give its readers an idea of what the market prospects are. Reports sent in are far from complete, and in the next number we shall deal more fully with this question. We may, how-

PRICE OF
HONEY

ever, go so far as to say the yield throughout Ontario has been from clover exceedingly heavy, from linden light, from thistle, nothing. As a crop, a good one has been harvested, better than last year and of the very finest quality. The crop in Quebec has not been nearly so large, but of good quality. Up to going to press we have no reports from other provinces. It is a delicate matter to advise as to prices. We will defer this until the next number. Meanwhile, we see no reason why prices should differ very much from last year. Sugar is not honey, and enters into competition with honey in a very indirect way. At the same time, the prices of sugar being higher than last year, if it influences the honey market at all, must affect it favorably.

**

A good exhibition is a means of rapidly educating the people as to the advancement we make from time to time. The Toronto Industrial Exhibition has a well-earned reputation for good management and great success. We are in a position to say the present has greater promise than ever. There are a greater number of applicants for space and better grounds. The Western at London is a successful exhibition in the West, and under good management. Our own exhibitions have reason to congratulate themselves alongside of the great Chicago World's exposition when good management and general satisfaction is considered.

**

Bulletin XLVI., crops in Ontario, published by the Ontario Department of Agriculture, is to hand. We regret

CROPS IN
ONTARIO.

that no mention should have been made of the honey crop. All the sources of keeping honey before the public should be carefully looked after. It will eventually assist in increasing the demand for honey. Such information is also of value in enabling the bee-keeper to decide upon the best method of disposing of his crop.

WORLD'S FAIR.

(For The Canadian Bee Journal.)

I AM sure the many readers and friends of The C. B. J. will deeply regret the misfortune which has overtaken The Journal in being burned out; and no less do we hope it may rise again from the ashes to continue its mission to Canadian and American Bee-keepers.

My last contribution, sent some six weeks ago (and for the appearance of which I was waiting before writing again), was, it seems, laid over for a number or two for some reason, and hence met its fate in the fire. On learning this I now hasten to put myself again in communication with the readers of The Journal.

The honey exhibits here at the World's Fair were very slow in being installed owing to various causes. In fact the installation business is going on yet, and doubtless will till fall. The Ontario exhibit was, however, installed and in good shape several weeks ago, and the judging or first examination is now about over. Mr. Eugene Secor, of Forest City, Iowa, was the judge-elect of the apiarian department, and expects to get through with his work by to-morrow night, 6th July. Mr. Secor, with whom I spent a day in going over the Ontario exhibit, is well-known to the readers of the C. B. J. as one of the prominent bee-keepers of the U. S., and appears to be a man of not only good judgment, but high moral character—honest, upright and just—and I have not the least doubt that Mr. Secor will endeavor to discharge the duties of his responsible and honorable position in a thoroughly just and impartial manner.

The system of awards adopted (or being adopted, for it is still in hot dispute) here at the World's Fair is, so far as I can understand it, a peculiar one.

Under it there would seem to be no such thing as *competition* like that prevailing at our Canadian Industrial, Central and county fairs. Awards are to be made in the shape of medals and diplomas on meritorious articles without distinguishing the articles as to degree of merit. A gentleman named Thatcher is at the head of the Bureau of Awards, and this system is called the "Thatcher system." So objectionable was his system to most of the exhibitors, especially the foreign, that some weeks ago, failing to induce him to change it, some fifteen foreign countries withdrew their exhibits from examination. This forced the Bureau to make some changes in

the system to bring back the recalcitrants, but the contention is still going on, and for my own part I am quite unable to explain to the Ontario exhibitors definitely just what the system of awards is, and I do not think anybody else can explain it except possibly John Boyd Thatcher himself—and that even is doubtful. Judge Secor has been getting "instructions" from them from time to time, and to-day I asked him if he could yet explain just what the system of award is to be, but he could not do it. When it came to putting in my application on behalf of the various exhibitors whose exhibits are in my charge, the instructions I got from subordinate officials as to the form of application were so conflicting that I was obliged to force myself in to Thatcher himself before I knew what to do, and even then it seemed not a little doubtful how to proceed. There is no department of the Exposition in such a "muss-of-a-muddle-of-a-Jerry-cum-tumble" as the Bureau of Awards. We wished to exhibit collectively as a province (for let me say *sotto voce* that disinterested visitors pronounce my case the best single case display in the building) and we wished also to compete individually. This, it seems, was conceded by Mr. Thatcher to Mr. Awrey—that is, the collective exhibit—as many of the exhibits in other lines were bought up and owned by the Ontario government—but subsequently repudiated, perhaps owing to a changing system. It will thus be seen that the awards business is in a bad tangle and we can only bide our time and take what comes. This much I may, however, safely say, I think and that is that under whatever system that may ultimately be adopted in making the awards, we are bound to come out, comparatively speaking, in good shape and creditably. The first examination, which will be completed to-morrow, is of last year's product. There will be another examination of this year's product, in connection with what may remain of last, in September.

The intention was to sell the present exhibit about midsummer and replace it by the crop for this year. But while we have the liberty to remove the old to make room for the new we are not permitted to remove any till the other is at hand to take its place. The heat of the summer is a very unfavorable time, as every apiarist knows, to sell honey. Orders may be taken for later delivery, but very few actual sales can be made to advantage. But as most of the honey under my charge is still in good condition and likely to remain so, I do not propose to make a sacrifice of it on the market at an unreasonable time. And, as the present exhibit is largely extracted honey,

I propose to take in mostly comb of this season's crop, and make way for it in the exhibit by removing some for sales, storing some, and crowding up a little, though not at the expense of appearance. Some of the honey sent last spring of both comb and extracted, was not fit to place on exhibition at a World's Fair, and hence was not placed on exhibition. It will be sold along with the rest to the very best advantage and the proceeds returned to the owners. Last winter it was proposed to have an inspector appointed to examine all the honey sent by exhibitors, and place none on exhibition not fit. I submitted the proposition to the Ontario commissioner, advising such appointment, as I did not myself, as superintendent, feel like accepting one man's honey and rejecting another's; but the commissioner, while not actually refusing the appointment, suggested that that work was a part of the duty of the superintendent, and was done by the superintendents of other departments. Not wishing to shirk a single duty fairly devolving upon me, I consented to assume that one. The exhibitors will, therefore, bear in mind that I am of necessity the judge of what is fit to exhibit and what is not fit to exhibit. And in endeavoring to maintain the credit of the province I must use discrimination. There was not a great deal, however, in the large amount sent which did not come up to the mark. For that not installed, and that which may be removed from the case pending sale and to make way, and for any overplus which may be brought here next month or later,—for all of this honey there will be no storage charges made against it. Storage room is, of course, very high in Jackson Park, but I have this place which was placed at my disposal so arranged and utilized that I shall not have to store any out or pay anything for storage. This will answer some inquiries which I have received in that line lately. Now as to the coming exhibit, I may say here that I am already in communication with some of the best comb-honey producers in the province, and from others who may have number one clover or linden sections I would like to hear without delay, also from those who may have very nice extracted clover or linden. It is possible that some others besides those I am in communication with may have been getting out something fancy in the way of lettering or other devices in the comb honey line or in wax, and if so let such kindly communicate with me at once, telling what they have got, etc. Up to August 5th address me at 987, Wilcox avenue, Chicago, Ill. After that address me at Selby, Lennox county, Ont.

Chicago, July 25, 1893. ALLEN PRINGLE.

Reports of the Honey Flow

BEDFORD, QUE., July 18th '93—We are getting one of the lightest crops we have had in years in most parts of the province.

Clover has done nothing worth mentioning, apparently winter killed a great deal, and basswood is not doing anything as well as it promised—warm dry weather not favorable for it.

F. W. JONES.

LACOLLE, Que., July 27th '93—The honey flow in this section so far is light. As soon as the bees begin to get a surplus, (we have two hives with handles on), we place a platform scale between them and we weigh these every night when fine enough for the bees to work, so up to date we know just where we are—no guess work.

The bees began to store surplus June 20th. They gained, two, three and five pounds some days. On July 1st for one week we had splendid weather; temperature, 85 to 90. They stored eight and nine pounds per day. Everything looked booming, but on the 8th we had some heavy thunderstorms and lightning, cooling the atmosphere. The electrical discharges stopped the honey flow. Since that date the best day has only been three pounds surplus. The average from the 8th to the 26th has not been over one pound per day. About the 15th of July the basswood blooms here, and is generally good for 12 or 15 days. We expected a change then, but nix. We have had some splendid flows from basswood, having run up as high as 15 to 18 pounds per day. We may now say our light honey is done for this year. We have lots of white clover yet, but no honey in it.

Buckwheat is yet to come and that may be good. It begins about the 10th of August and lasts about a month. We get some great flows from this occasionally. One year we got from 80 colonies 7000 pounds, so we may get a good run on buckwheat yet. We have 110 swarms, and 100 of them with top stories ready for business. We do not let them swarm, with the exception of eight or ten to keep up our stock. You may ask, if the bees are strong why not swarm, or how do we prevent swarming? We manage it by giving plenty of room and good ventilation. We raise up the covers on hot days and close them down at night. We think we will have about 1500 pounds of clover honey. Three hundred has been taken off, the balance left to ripen until buckwheat may begin to yield.

Now, I will give you some reports from other yards. Some have taken off 500

sections, others three or four hundred. Some say none has been taken off, but lots about ready to come off. Such reports are from men who have from 50 to 75 hives, so you see the yield so far is very light.

I see you have purchased The Canadian Bee Journal. When you get started we will give you a helping hand here.

THOMAS PEARSON.

BEAUHARNOIS, Que., July 27—The honey flow begins to be very light. Not a very great success this season.

SAM BRABANT.

FUNNIBITS

The man who was dissatisfied with the menagerie said it was a beastly affair.—Binghampton Leader.

A Jersey City paper, speaking of an accident, says: "One man was killed and the other had his head severed from his body."—Sudge.

"One ob de penalties ob greatness," said Muncle Eben, "is ter be specially conspicuous ebry time yer makes a fool ob yerself."—Washington Star.

Immigrant inspector—Your nationality, please. Inmigrant—Oirish. Immigrant inspector—What is your occupation? Inmigrant—O'im a Frinch nurse.—Puck.

"Good-morning, Janet. I am sorry to hear you did not like my preaching on Sunday. What was the reason?" "I had three verra guid reasons, sir. Firstly, ye read yer sermon; secondly, ye didna read it well; an', thirdly, it wasna' worth readin' at a'!"—Judy.

Two little Quaker children were one day playing together, and some little differences arose. One grew quite angry, and said, passionately, "If thee doesn't take care I'll swear at thee." "Oh, oh!" cried the other, too much shocked to say more. "I will!" exclaimed the other. "Oh, thee little *you* thee!"—Exchange.

The Rev. Dlack, of the Barony Church, Glasgow, and another minister once spent a vacation in Cumberland, and on the Sabbath attended a little Scotch Kirk, sitting in a remote corner, so that the minister should not notice them. But the eagle eye of the minister detected them, and in the intercessory prayer he so expressed himself as to make quite sure of some aid from them. The good man's words were these: "Lord, have mercy upon thy ministering servants who have popped in upon us so unexpectedly; one of them will preach in the afternoon and the other in the evening."

FIRST STEPS.

"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.

DURING the month of August many a novice lays the foundation for failure in bee-keeping. In explanation it would be well to say that at this time of the year work is often undertaken with bees which had better be left alone, as eventually that very work must be undone. Special reference is made to the practice of taking more honey away from the bees than they can spare. With the hives which are generally used there is rarely any occasion for taking honey from the lower story or brood chamber. It is better for the novice to begin with the understanding that all the honey in the lower combs belongs to the bees. Although handling a large number of colonies for years the writer finds rarely indeed any occasion for the removal of honey from the lower combs. The rare occasions crop up only when the lower story has been queenless and during the honey flow as the young bees hatch the workers fill up the cells with honey. Under such a condition (an abnormal) there is every likelihood of too much pollen and honey being in the combs, and it is well to remove two or three frames and replace them with good empty worker comb, or combs with hatching brood. This gives the new queen a chance to lay and places the entire colony in practically a normal condition at the earliest possible moment. Thus far reference has only been made to honey in the lower story. The practice into which beekeepers are drifting of taking more comb honey will have the effect of forcing more honey into the brood chamber during the honey flow. This is done in the following way. In taking section honey it is necessary to crowd the bees more in order to secure a well-finished section. With extracted honey it makes no difference as far as the quality of honey is concerned whether the combs are full or not at the close of the season. Less room being given above with sections, as they fill a larger proportion is stored below, and often at the close of the honey season enough honey is left to carry a colony through the winter. With the novice in the past it has too often been the practice to work the "Stand and Deliver" plan at any time during the honey

season, and then the "Root hog or die" system follows. It is safe to say as long as there is room in the hive bees need no incentive to work. They are faithful and if they do not store the honey it cannot be secured. The edict that they must secure sufficient honey for the winter or starve does not give them a source from which honey may be obtained and as a result too often the novice's ardor is quenched by the extermination of his bees from starvation. When running for extracted honey, owing to reasons already given, the bees are less liable to have sufficient honey in the lower combs for winter. An excellent method is to leave in one or more upper stories sufficient honey for winter use; an average of two full combs of honey for every hive in addition to what they already have is likely to prove sufficient. This should be kept until there is no doubt the bees have sufficient for winter, when the honey can be extracted and found none the worse for having been kept a little longer in the combs.

If comb honey is taken entirely an extra super for extracting should be taken, or as early during the honey flow as opportunity offers, full combs of honey should be taken from the lower story. In the next number the writer proposes to say what shall be done with these combs of honey. There is no doubt a great deal of loss has been occasioned, in fact fully half the winter and spring losses have occurred through insufficiency of stores. How best to feed colonies stores will be treated in the September number, also why bees sometimes perish through winter with an abundance of stores and how to guard against it.

In conclusion permit the suggestion that any laboring under difficulties on account of inexperience in keeping bees send their questions with or without names. They will be answered in this department by the editor.

Ques.—Will you spare me a few minutes to state how I should proceed to move my bees to a new stand, nearly 200 yards distant from my present place of abode, without loss of bees returning to the old stands. The place I have been occupying I have to vacate. F.

Bees can be moved any distance, short or long, few if any of the bees returning to the old stand. Prepare your hives in the usual way for shipment as regards ventilation and securing of combs. Move your bees in the morning, so they will get a thorough shaking up just before they fly. Then as the entrance is opened, lean

a board directly in front of the hive so the bees can fly out at either side. They will note the change, which combined with the shaking, will cause almost every bee to relocate itself.

SURREY CENTRE, B. C. f July 21—I am somewhat puzzled about an Italian queen, which I purchased from you a short time ago. I introduced her into about half a hiveful of bees. She has started laying so nicely that she sometimes lays as high as five eggs in one cell. What would you advise me to do with her.

WILLIAM C. BOOTHROYD.

Young queens, if very prolific, are liable to do so. It is not a fault; rather the sign of an extra good queen.

Up in the east end of the Agricultural building, under charge of Superintendent A'len Pringle, there is an exhibit which makes the heart of the small boy sigh for cold weather and buckwheat cakes. This is the Ontario honey exhibit, and here again excellence seems to have been the rule in selecting the exhibit. An experienced grower of honey himself, Mr. Pringle takes more than ordinary interest in the product of these industrious little workers. The various grades are all set apart and labeled. For instance, this dark honey down on the lower shelf of the cabinet, Mr. Pringle says, is made from the buckwheat blossom and does not rank in flavor with the honey made from the linden tree flower or from the flower of the thistle. The honey taken from the clover blossom is regarded as about the best, both in color and flavor.—Chicago Inter-Ocean, July 12.

A boarder at Kennebunkport writes us that she went to the circulating library and asked if they had the "Letters of Jane Welsh Carlyle," and received the reply: "You will get 'em at the post office.—Boston Transcript.

Foreigner—Well, by Jove, don't tell me again that you Americans are not foreign-worshippers. Townsman—Why so? Foreigner (pointing to the Worth monument)—Look there! The idea of raising a monument to a French milliner—bah!—Life.

Not his Ideal.—Patent Medicine Doctor—Take some of my preparation and you will be cured. Patient—And then will I look like those men whose pictures appear in the papers? Doctor—Er—yes, I presume so. Patient—Then I don't want to be cured.—Puck.

THE HONEY BEE IN RELATION TO PLANT LIFE.

It seems almost remarkable that we appear to strive after that which is not within reach, and that which is ours, if we but nod our head, is spurned as unworthy of our notice and of our attention.

What more interesting study can those of us who live in rural districts desire than the study of plant and animal life. How many years did I and many others pass in the country, and the things about us were a closed book. And how the first glance astonishes, dazzles and yet delights. Youth can have no greater safeguard except the divine, be it in the country or city, than to become interested in the study of the habits of plants and insects, and the relation the one bears to the other. One so interested would, without doubt, appreciate to a greater extent the advantages, yes, with all its drudgery, the beauties of rural occupations. And you need not be interested alone; those of us who have reached a mature age will find this a study well worthy of our attention during our hours of comparative leisure, and withal, we can derive from this study solid financial benefits. I propose to just lightly touch upon the honey bee and its relation to plant life.

To many of us the characteristic of the bee essentially valuable is that we can, in a manner, domesticate it and turn it to the gathering of surplus honey. But is this the reason we have the honey bee, or is the storing of honey only a secondary matter. There is every evidence to show that as in our own lives working for our daily bread is only a secondary matter, and the object of our existence is far above and beyond that, so the object of the existence of the honey bee is primarily not to store honey, but to assist plant life in reproduction. Darwin and a host of others have shown that the honey bee plays no mean part in the reproduction of plant life. Some plants are only partially dependent on insect life for fertilization, others are entirely so. A peep as it were into the plan of nature will be of interest, and perhaps lead to further research.

The parts of a flower are calyx, corolla, stamens and pistils. The calyx is the cup or outer covering of the blossom, and is usually green and leaf-like. The corolla is the inner set of leaves of the flower. It is very seldom green as the calyx commonly is, but is "colored" other than green, and of a delicate texture. It is the most showy part of the blossom. The stamens constitute the male portion of the flower, and are divided into filament and anther. The fila-

ment is the stalk, the anther is a little case or hollow body, borne on top of the filament. It is filled with a powdery matter called pollen. The pistils are the bodies



FIG. 548.

in which the seeds are found. They belong to the centre of the flower. A pistil has three parts, at the bottom is the ovary which becomes the seed vessel. This is prolonged upward into a slender body called the style. And this bears a moist, generally somewhat enlarged portion, with a

naked, rough surface (called the stigma). Upon this stigma some of the pollen, or powder from the anthers, falls and sticks fast, and thus somehow enables the pistils to ripen seeds that will grow. A perfect flower contains both stamens and pistils, but we find some plants with stamens only and others with pistils only, and then two may be borne by the same plant and blossom. Sometimes a plant bearing both stamens and pistils cannot fertilize itself, as the two mature at different times, preventing self fertilization.

I am largely indebted to Cheshire Cowan and others in the remarks about to be made on this subject.

Sometimes the stamens and pistils are arranged in different positions in the flower. The stamens and pistils always being different in length in each flower, the honey bee, when taking the nectar, gets dusted with pollen on the head, thorax or abdomen, according to the height of the stamens, and when the bee visits other flowers in which the relative position of the pistil is similar, the pollen comes in contact with the stigma, thus bringing about cross-fertilization. The same effect is brought about by many other devices. This is an excellent provision of nature, just as the queen is not fertilized in the hive, but flies out on the



FIG. 549.

wing to prevent the likelihood of impregnation with a drone of her own blood. Again, we know in the reproduction of stock on the farm, in and in breeding cannot be followed to a great extent or the progeny lacks in vigor and is otherwise defective; this rule applies equally well to plant life. It is desirable that the pollen from one flower be taken to the stigma of another, instead of the stigma and pollen from one flower coming in contact. There are very many varieties in which we find the anthers and pistils maturing at different times.

The garden nasturtium (Fig. 548 and Fig. 549) is an excellent example.

Here the nectar is contained in a long spur. When the flower first opens the style is short and the stigma immature and unresponsive, the anthers also are quite unripe, but soon one or two, as seen in Fig. 549, begin to rise from their

first position beneath the flower until they stand just over the stigma, so that a bee entering could not fail to get dusted in the breast with pollen (now beginning to be shed), as the tongue is stretched out and the head pushed forward to reach the sweet secretion in the spur.

The anthers continuing to reach maturity, follow their leaders, one by one, and during the time that their pollen is being liberated by gaping of the pollen pouches, they stand in front of or close to the stigma. This process occupies from three to seven days, after which the anthers begin to drop off, and the filaments to shrivel and droop.

But the style meanwhile has grown longer, and the pistil now adhesive and receptive, assumes the position in relation to the rest of the blossom, which the anthers before occupied (see Fig. 551). A bee flitting from flower to flower, loading her legs with pollen and her honey sac with nectar, passes, with a well-powdered breast, from the younger condition (Fig. 549) to the older, (Fig. 550), and of necessity presses the pollen grains she carries on to the stigma, and cross fertilization is accomplished, the only possible fertilization since

the two genders do not co-exist, the blossom during the latter period being only female.

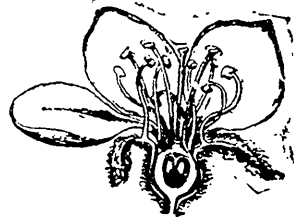


FIG. 552.

narrow slips which are turned so as to stand nearly upright. These refuse contact with water, and perfectly protect the nectar from dilution by rain, as may be easily seen by sprinkling water heavily upon one of the flowers: they also compel the visiting insect to keep the thorax sufficiently up to rub off its load of pollen upon the stigma.

Looking at the blossom now in front, we see the lines on the several petals, according to a beautiful and general law in the floral world, point to the cavity in which the nectar lies, so that these beautiful lines are guides to the insect visitor.

The order of development noticed in the blossom just passed is sometimes, though far less commonly, reversed, as in figwort (Figs. 550, 551 and 553), which is a great honey plant. The flower is both male and female, but as before, the two genders are never actually co-existent. In this case the stigma is first mature.

When the corolla opens the stigma already adherent and receptive, presents itself immediately over the front lip (Fig. 550), and bees—having been dusted by pollen in their visits to older flowers, and in a manner we shall presently see—as they reach in after the abundant nectar, transfer this pollen from their hairy breasts to the sticky surface of the stigma. Cross fertilization having been secured, the stigma shrinks and dries, and the style droops, while the anthers, which previously had been hiding in the pouch-like form given to the front of the corolla cup for their accommodation (see Fig. 550), now rise in view (Figs. 551 and 553), take the place whence the stigma has retired, and begin to shed their pollen.

The anthers completely occupy the space over the lip, arranging themselves in two

It is well deserving of notice that the three lower petals (one of which has been removed in the figure) have their edges cut into a number of



FIG. 553.



FIG. 550.



FIG. 551.

parts, so that, in getting the nectar, the bees must reach across if the flower is approached in front, whilst the height of the back lip is such that it is impracticable for them to steal the honey from behind.

As the fertilizing dust is carried off for the benefit of the younger blossoms the yield of nectar diminishes and the corolla cup at last drops. There are other blossoms in which male and female parts mature at the same time, but the female are so arranged that an insect visiting them would come in contact with the female part first, thus securing cross fertilization if the bee carries the pollen from another flower, which is extremely probable. We have another set of flowers in which the male and female organs are in one blossom, but in some the anther is most exposed, in others the stigma. In these the blossom is able to fertilize itself, but experiment has shown that, to secure the best results cross fertilization is desirable, and also that pollen, placed on the stigma of the flower from whence it has been derived, would be rendered powerless by subsequently adding pollen from the complementary blossom.

(To be Continued.)

Ignoramuses.

Sensible people sometimes make very odd mistakes, which a little reflection would have enabled them to avoid, while people who are not sensible take very startling views of things generally. At the Centennial Exhibition two country girls stood before a copy of the Fleming artist Paul Potter's great masterpiece, and one of them read from her catalogue, "The Young Bull, after Potter."

"Yes," said the other, "there's the bull, but where's Potter?"

"Don't you see him," asked her companion, pointing to the figure of the herdsman behind the tree?"

Two others were admiring a statuette of Androma, which was labelled "executed in terra-cotta." "Where is Terra Cotta?" asked one of them, with probably some vague idea of Terra del Fuego.

"I'm sure I do not know," was the reply, "but I pity the poor girl wherever it is."

A man, after gazing at a photograph of the Three Graces, exclaimed: "What fools women are! Those girls have not money enough to buy themselves clothes, yet they spend the little they have in having their photograph taken."

Two boatmen on the Ohio river were talking about the cold weather and of a certain severe winter. "It was just awful," said one of them. "At Cincinnati the river was froze tight, and the ther-

mometer went down to twenty degrees below Cairo."

"Below which," asked his puzzled companion.

"Below Cairo, you blubber-head! You see, when it freezes at Cairo it must be pretty cold, so they they say so many degrees below Cairo."

But a light was breaking in upon the other. "No, they do not!" he exclaimed eagerly. "You've got it all wrong—its so many degrees below Nero. I do not know what it means, but that's what they say when it's dreadful cold."—Harper's Young People.

Exactness in Observation.

"Gentlemen, you do not use your faculties of observation," said an old professor, addressing his class. Here he pushed forward a gallipot containing a chemical of exceedingly offensive smell. "When I was a student I used my sense of taste," he continued, and with that he dipped his finger in the gallipot and then put his finger into his mouth.

"Taste it, gentlemen, taste it," said the professor, "and exorcise your perceptive faculties."

The gallipot was pushed toward the reluctant class one by one. The students resolutely dipped their fingers into the concoction, and with many a wry face sucked the abomination from their fingers.

"Gentlemen, gentlemen," said the professor. "I must repeat that you do not use your faculties of observation; for if you had looked more closely at what I was doing, you would have seen that the finger which I put in my mouth was not the finger I dipped in the gallipot."—Traveller's Record.

Worth Repeating.

IT is not learning, nor eloquence, nor generosity, nor insight, nor the tidal rush of impassioned feeling, which will most effectually turn the dark places in men's hearts to light, but that enkindling and transforming temper which forever sees in humanity, not that which is bad and hateful, but that which is lovable and improvable, which can both discern and effectually speak to that nobler longing of the soul which is the indestructible image of its Maker.

BISHOP POTTER.

Western Fair Prize List, Sept. 15 to 24

THOS. A. BROWNE, SECRETARY, LONDON.

HONEY AND APIARY DEPARTMENT.

Entries Close Thursday, September 7th—Entrance Fee, 25 Cents Each Entry
—Rules and Regulations same as Toronto.

CLASS 56—BEES, HONEY AND APIARY SUPPLIES.

Queens and colonies cannot compete for more than one premium.

THE ONTARIO BEEKEEPERS ASSOCIATION HAVE KINDLY DONATED \$10.00 TOWARDS HONEY SECTIONS.

Sec.	1st.	2nd.	3rd.
1 Honey, Best general display of Comb and Extracted, and Wax, etc., arranged in the most attractive manner, the product of the exhibitor.....	\$20	\$10	\$5
2 Honey, Display in Comb in most marketable shape, product of one apiarist in 1893, 200 lbs.....	8	6	4
3 Honey, Display and Quality Extracted, in most marketable shape, product of one apiarist in 1893, 200 lbs.....	5	3	2
4 Honey, Comb 20 lbs., quality to govern.....	3	2	1
5 Honey, Extracted, 40 lbs., in glass, quality to govern.....	3	2	1
6 Honey, Best Granulated, in glass, 20 lbs.....	3	2	1
7 Honey, Crate Comb 20 lbs., in best shape for shipping and retailing.....	3	2	1
8 Display of Queens, to be put up in such a shape as to be readily seen.....	3	2	1
6 Beeswax, 10 lbs.....	3	2	1
10 Comb Foundation for surplus honey.....	3	2	1
11 Comb Foundation for brood chambers.....	3	2	1
12 Honey Vinegar, 2 gallons.....	3	2	1
13 Maple Syrup, 2 gallons.....	3	2	1
14 Display of Apiarian supplies exhibitor's manufacture.....	Silver Medal.		
15 Comb Foundation Machine, making best foundation for brood chamber on the ground.....	Bronze Medal.		
16 Greatest Variety of Queens, put up in same shape as for display of Queens.....	Diploma.		
17 Bee Hive for all purposes in the apiary.....	Diploma.		
18 Best Bee Hive, for extracted honey.....	Diploma.		
19 Best Bee Hive for comb.....	Diploma.		
20 Honey Extractor.....	Diploma.		
21 Wax Extractor.....	Diploma.		
22 Foundation Mill.....	Diploma.		
23 Foundation Press.....	Diploma.		
24 Best One-Piece section for honey.....	Diploma.		
25 Best Dovetailed.....	Diploma.		
26 Package for retailing Extracted Honey, labelled.....	Diploma.		
27 Bee Smoker.....	Diploma.		
28 Bee Feeder.....	Diploma.		
29 Largest and best display of Honey-bearing plants, properly named and labelled.....	Diploma.		
30 Queen Cage such as is admitted to the mails by postal laws.....	Diploma.		
SPECIAL PRIZE GIVEN BY W. A. CHRYLER, ESQ., CHATHAM.			
31 For the newest and most practical invention for use of Apiarist.....	2,000 Sections, value \$7 00		

Toronto Industrial Exhibition, Sept. 4-16

HONEY AND APIARY SUPPLIES.

COMMITTEE.—Mr. R. J. Score, (Chairman), Ald. Orr, Ald. J. K. Leslie, Mr. F. A. Gemmill and Mr. Geo. Vair. Address H. J. Hill, Secretary Industrial Exhibition, Toronto, Ont.

All honey exhibited must be the production of the exhibitor.

The quantities specified in the various sections are the amount of honey on which the award of the prizes is to be made, but this rule does not apply to Sec. 15, in which the quantity is not limited.

Exhibitors selling honey during the Exhibition (for which right a small fee will be charged) will not be allowed to make any removal from their regular exhibit, but may have a special supply at hand from which their honey sold may be taken.

Exhibitors offering comb honey for sale will not be allowed to cut the sections, but must sell whole sections put up securely in manilla or pasteboard boxes or bags, and purchasers notified not to eat it in the building, and in the solicitation of customers no unseemly noise will be permitted.

Exhibitors must not accompany or in any way attempt to influence the Judges in the execution of their duties.

Exhibitors must have their exhibits arranged by the time stated in the general rules.

A breach of these rules will forfeit any prizes that may be awarded.

Entries positively close August 20th.

SEC.	1st.	2nd.	3rd.	4th.
1. Best display of 100 lbs. of extracted granulated Honey in glass, \$10	\$10	\$6	\$4	\$2
2. Best display of 500 lbs. of liquid extracted Honey, of which not less than 250 lbs. must be in glasses, quality to be considered	20	15	10	5
3. Best display of 500 lbs. of Comb Honey, in sections, quality to be considered	25	20	13	6
3. Best display of 500 lbs. of Comb Honey in sections, quality to be considered, that is to say clean sections and best filled	10	6	4	2
5. Best display of 100 lbs. of extracted liquid Linden Honey, in glass, quality to be considered	8	5	3	..
6. Best display of extracted liquid Clover Honey, in glass, quality considered	8	5	3	..
7. Best Beeswax, not less than 10 lbs. (manufactured of comb foundations excluded)	6	4	2	..
8. Best foundation for brood chamber	3	2	1	..
9. Best foundation for sections	3	2	1	..
10. Best Apiarian supplies	1st, Silver Medal and \$10 ; 2nd, Bronze Medal and \$5.			
11. Best style and assortment of glass for retailing extracted Honey	1st, Silver Medal ; 2nd, Bronze Medal.			
12. Best section super for top story and system of manipulating, product to be exhibited in super as left by the bees	3	2	1	..
13. Best and most practical new invention for the Apiarist, never shown before at this Exhibition	2	5	3	2
14. Largest and best variety of domestic uses to which honey may be put, prepared by the exhibitor or a member of his household, illustrated by samples of the different things into which it enters as a component ; for example, say one or two samples each in canned fruits, cakes, pastry, meats, vinegar, etc.	8	5	3	..
15. For the largest, most tasty and neatly arranged exhibit of Honey in the Apiary department, all the Honey to be the production of the exhibitor quality to be considered. Beeswax may be included in the exhibit : \$25 of this prize is given by the Ontario Beekeepers' Association	40	20	10	..
16. To the Exhibitor taking the largest number of first prizes for Honey at this Exhibition, 1893	1st, Silver Medal ; 2nd, Bronze Medal.			

THIRD ANNUAL FAIR.

Provincial Agricultural and Industrial Exhibition

CITY OF MONTREAL, QUE.

From Monday, 4th, to Saturday, 9th September, 1893.

Exposition Company's Office: 76 St. Gabriel Street, Montreal. S. C. Stevenson, Manager and Secretary.

HONEY AND APIARIAN SUPPLIES.

CLASS 64—OPEN TO ALL BEEKEEPERS (AGENTS EXCLUDED).

(Entrance Fee, 25c. each entry.)

SEC.		1st.	2nd.	3rd.
1.	Best display of 200 lbs. of extracted granulated honey in glass.....	\$10	\$5	\$3
2.	Best display of 500 lbs. of liquid extracted honey, of which not less than 250 lbs. must be in glass, quality to be considered.....	12	8	4
3.	Best display of 500 lbs. of comb honey in sections, quality to be considered.....	15	10	5
4.	Best display of 2½ lbs. of comb honey in sections, quality to be considered, that is to say, clean sections and best filled.....	8	5	3
5.	Best display of extracted liquid Linden honey, 100 lbs in glass, quality to be considered.....	8	5	3
6.	Best display of 100 lbs extracted liquid clover honey, in glass, quality to be considered.....	8	5	3
7.	Best bees wax not less than 10 lbs (manufacturers of comb foundations excluded).....	6	4	3
8.	Best foundation for brood chamber.....	3	2	1
9.	Best foundation for brood sections.....	3	2	1
10.	Best apiarian supplies.....	Medal.		
11.	Style and assortment of glass for retailing extracted honey.....	Medal.		
12.	Section super for top story and system of manipulating, product to be exhibited in super as left by the bees.....	4	2	1
13.	The most practical new invention for the apiarist.....	5	3	2
14.	Largest and best variety of uses to which honey may be put, illustrated by individual samples of the different things into which it enters as a component, for example say one or two samples each in canned fruits, cakes, pastry, meats, vinegars etc.....	6	4	2
15.	For the most useful Queen nursery cage.....	Medal.		

"How about the rent of your house, Jones? Doesn't the landlord ask a good deal for it?" Jones—"Yes; he often asks five and six times a month for it."—Puck.

Hotel clerk (to new bell-boy)—"Did you wake up No. 44?" Bell-boy—No sah. Cuddent wake him up sah, but I did the best I cud, sah. "What was that?" "I waked op No. 45, sah."—Harper's Bazar.

This story is about Philadelphia twins. The nurse was giving them a bath. Later, hearing the children laughing in bed, she said, "What are you children laughing about?" "Oh nothing," replied Edna, "only you have given Edith two baths and haven't given me any."—New York Recorder,

A difficult language.—"I wish you would tell me the meaning of an expression I have noticed in the newspapers," said a Frenchman who was studying the English language. "Very well," replied the American; "what expression do you refer to?" "One of the newspapers said there was a 'nigger in the wood-pile.'" "Oh, that's an idiom. It means there is 'a snake in the grass.'" "Nigger in the wood-pile means there's a snake in the grass?" said the inquirer with a puzzled air, "Well, both the expressions are synonymous with 'the milk in the cocoanut' and 'an axe to grind.' Understand?" But the foreigner scratched his head and walked away with an expression of despair on his countenance.—Judge,

ARE HYBRID AND BLACK BEES WORTH IMPROVING.

I WAS greatly surprised to see, in the answers to Query 867, how many there were who said, in effect as well as in words, "Let well enough alone." I would have little fault to find with those who take the drift of the enquiry to be whether or not the bees have degenerated, or are likely to degenerate or "run out" through close in-breeding.

Although in-and-in often produces bad effects with other animals I do not think it is probable that bees under ordinary circumstances will breed so closely within a certain strain that deterioration will result. Nature has guarded against this by providing that the mating of the queen and drone shall take place in the air at a distance from the hive.

I think it is an entirely unwarranted assumption that the bees in question have re-queened themselves for years from their own progeny. All of the queens might have been reared by the bees themselves, but the drones with which they mated may have come from several miles away. It is for this reason that I would not apprehend any degeneracy from in-and-in breeding. Still, it is often the case with bees as with other animals, that an infusion of new blood gives renewed vigor. This is especially the case when different varieties are crossed.

What I specially deplore in these answers is the advice to "let well enough alone." Where would the world be if men had been satisfied to work on this principle? There is scarcely an animal or plant that man makes use of for his pleasure or profit that has not been greatly improved by breeding or selection. Within the memory of the present generation, careful selection, crossing and breeding have greatly improved our domestic animals, and added millions of dollars to our national wealth.

The long, lean, slab-sided, razor-backed hog of a few years ago was considered good enough by his owner, but the modern hog is a far more valuable and profitable animal.

See how the cow has been improved as a producer of milk and butter as well as beef.

Witness how the standard of horses has been raised, both for speed and draught animals.

The same improvement may be noticed all along the line of our domestic animals, to say nothing of fruits, grains and vegetables. Are we to conclude that any mongrel breed of bees are "good enough?"

It would seem, from the language of the querist, that he has paid little or no attention to the breeding of his bees. It is a fair inference that he has had no bees of improved strains with which to compare them. How, then, is he to know that his bees are as good, comparatively speaking, as he thinks they are? He says they are prolific, healthy and good workers. This may be truthfully said of almost any lot of bees, but a trial of them in comparison with the best bred strains might show that as compared with these they were very inferior.

"Every crow thinks his own crowling whitest," and the owner of live stock of any kind, if it is only a yellow dog, is very apt to consider it about as good as there is. The men who are wedded to such ideas as that must expect to be left behind in the march of progress.

The bee-keeper has the advantage over the breeder of stock of almost any other kind in that he may make a comparative test for himself of the different varieties, at only a trifling cost. If the breeder of cattle or horses should wish to make a complete change in the breed of his stock, he must go to a great deal of expense in disposing of every animal and getting others in their place. If he adopts the usual plan of "grading up," he must still go to a considerable expense for pure-bred sires.

The bee-keeper can make a complete change in his stock at comparatively small expense, and have every bee of the new variety within less than three months. With a money outlay that is really insignificant, he can have all of his bees reared from superior stock, and having nearly all the good qualities of the improved race. For two or three dollars, or less, he may test improved varieties for himself alongside of his old ones. In this way he may gain knowledge from practical experience, which is always the best of teachers.

The best way for the inquirer to do would be to procure from some reliable breeder one of his best breeding queens, and rear queens from this. It is almost certain that that stock would be an improvement on what he has, so he would probably be safe in rearing from them enough queens to supply his whole apiary. Unless he is certain that his breeding stock is desirable in every way, it might be safe for him to buy two or three queens of each of several breeders, and, after a thorough test, get a good breeding queen of the stock that suited him best.

If he can afford the money better than the time required to rear the queens, let him get from reliable breeders several dozen queens, which, at the proper season, may

be procured at very low rates. Then let him rear all queens from selected colonies. or, if he prefers to let the bees rear their own, keep drone-traps on all undesirable colonies, which will somewhat reduce the chances of impure mating. To keep an apiary pure when there are other races within bee-flight requires a constant struggle, but the bees of almost any apiary may be much improved by a very little trouble in the way of selection and rejection.

As to race, there is really but little question. The Italians have fairly won the right to be considered the best variety of bees cultivated. Although a few good beekeepers think very highly of the Carniolans, all the other races that have been introduced, some of them with much blowing of trumpets and highly imaginative recommendations, have proven undesirable, and have been discarded. In this connection be it observed that the so-called "Golden Carniolans" are not Carniolans at all.

The beginner is specially warned against spending his money for any novelties in bees unless he wishes to test them in comparison with what are recognized as the best, and can afford to spend money for that purpose.

The Punic bee fiasco should be a sufficient warning to go slow in this direction. It might be a great misfortune to beekeepers at large to have an inferior race of bees scattered broadcast over the country, especially if they were put into the hands of those who knew nothing of better races, or who would become disgusted with the unsuccessful experiment of improvement and make no effort to repair its evil effects.

In selecting that which all recognized as good, there is little opportunity to go astray. To replace or cross the bees in question with Italians could hardly fail to improve them, and the advantage would be great as compared with the cost.—James A. Green, American Bee Journal.

The oyster is an humble creature. It is content to begin life at the bottom.—Yonkers Statesman.

Good for his health.—Brown—Is Brown as lazy as ever? Jameson—No. Since the birth of his child he has been in the habit of rising with the son.—New York Herald.

In a French School—Teacher—What is the matter, boys? You are all covered with mud. Pupils—Oh, sir, we've only been playing the Panama Canal game.—Journal Amusant.

PERSONAL.

The daughter of J. E. Frith, secretary of the Oxford Bee-keepers' association, Princeton, Ont., died suddenly shortly after receiving a sting on the temple from a bee. Mr. Frith is known personally or by reputation to many bee-keepers, and he and his family will have the sincere sympathy of many in this sudden bereavement.

J. T. Calvert, Medina, Ohio, well-known as the son-in-law of A. J. Root and business manager of Mr. Root's extensive business at Medina, paid the editor and Gould, Shapley & Muir Company (L't'd) a flying visit recently. Mr. Calvert had been at the Christian Endeavor convention, and was on a bicycle trip, a mode of locomotion which appears to be very popular at the present day.

Bee-keepers must rejoice to learn that the important duty of making the awards on honey at the Columbian Exposition lies with one held in such high esteem as the late president of the North American Beekeepers association, the Hon. Eugene Secor, of Forest City, Iowa. No one dare doubt the desire of Mr. Secor to deal justly with all, and there is no question of his ability. Mr. Secor is one of many able bee-keepers who can fill that position with credit to himself and his country.

George Laing, Milton, Ont., an able beekeeper, intends to make an exhibit at the Toronto Industrial exhibition.

William McEvoy, foul brood inspector, Woodburn, Ont., paid a visit to the county of Brant recently. We believe not a case of foul brood was found in the county. This was the inspector's first visit to Brant.

Enough.—He was a young lawyer, and was delivering his maiden speech. For two weary hours he talked at the court and jury, until everybody felt like lynching him. When he got through, his opponent, a grizzled old professional, arose, looked sweetly at the judge, and said, "Your Honor, I will follow the example of my young friend who has just finished, and submit the case without argument." He then sat down, and the young lawyer felt as though cold water was coming down his back.—Detroit Free Press.

Bees of the Olden Time.

(A REMINISCENCE OF THE OLD FARM)

AS I open the last issue of the CANADIAN BEE JOURNAL and scan its contents, my mind reverts to my boyhood days on the farm, and a contrast naturally presents itself between the old and modern methods in the apiary. Of course there were "bees" innumerable even in those pioneer days. Log houses were built by "bees"; corn was husked in the same way. Even quilts were stitched; apples were pared; wood drawn, and the other work of the farm was often done by "bees" composed of all the neighbors within a radius of miles. And the boys kissed the girls, and the table groaned under its load of substantial. And then the boys had often painful experiences with a small yellow uniformed gentleman of very lively habits of locomotion and with a business end that was good to keep away from. In short he was very "waspy" in his nature. One incident left a vivid impression in my memory. The day was sultry; the plough I was guiding often caught in the roots that made a network in the field. Another snag caught—team halted—air filled with a buzzing sound like a saw-mill in motion—barefooted boy dancing a jig—horses frantic—screams—dust—yells. I drop the curtain,—but oh, the horror of it.

But we too, had real honey bees. They were kept in primitive old, box hives. and when we wanted a supply of honey we simply murdered the poor little workers and robbed their store. One day we made an experiment. The upper box of the hive, filled with honey and bees, was taken to the cellar and a window left open for the latter to vacate the ranch. We waited an hour and then cautiously looked to see the result. A thousand poor bees were struggling in a score or more of milk pans that had been left uncovered, and the ranks were being recruited by all the bees in the yard that were rushing in to secure a share of the contents of the box of honey in the cellar.

Such were the old-time methods, but now the industry is one that affords pleasant and lucrative employment to thousands, and my hope is that the JOURNAL, under its new auspices may be a power for good. I know the men at the helm and feel assured that its readers will welcome its coming.

EDMUND YEIGH.

Toronto, Aug. 3, '93.

GLEANINGS IN BEE CULTURE.

WAX-MELTING.

WHY FOUNDATION IS MILKY IN COLOR.

THERE are some people who think steam makes foundation milky, and some that heating hot injures wax. Now, steam, if not used right, will make poor foundation, and heating hot will spoil wax; but wax heated in water cannot be heated too hot, and steam used rightly increases its value. When melting wax, if steam is used direct, be sure to let all boil together, (water and wax) *furiously* for fifteen minutes. Then let it stand five hours, and the wax will be perfectly clear—so clear that you can see to the bottom of a dipperful. There is now no water with the wax. If the wax is dipped immediately over into the dipping-can after melting, or if the wax is not heated hot, but only enough to *just* melt it, the wax will be milky, and foundation made from it will look as though full of sand. At our State fair there was 150 pounds which we clarified for a bee-keeper, and it too the first premium. It certainly would not if it had been sandy. Everyone that has rendered wax is acquainted with the refuse on the bottom of the cakes. Some of it is loose and is easily scraped off. This is in the same condition that the whole cake would have been if it had been heated only just enough to melt and given a good stirring. If you ever have a cake of wax in this condition, to remedy it put the cake in some water and heat to the boiling point and boil hard for fifteen minutes, then set off the stove, disturbing it as little as possible; cover up so as to keep in a melted state as long as you can. Let it stand for 24 hours, when you can take off a cake of wax just as good as it ever was. Save all the scrapings from the bottom of your cakes and try this. You will get enough wax from them every year to more than pay for Gleanings.

I wonder whether those who say steam injures wax have melted much that way. We rendered about 1000 pounds of wax from old combs this last year, and challenge anyone to show as nice a lot. It was rendered by steam at a pressure of 80 lbs., blowing directly into the water containing the combs. I don't know of any way to take wax that comes to us, that was rendered in iron utensils, and make it yellow, unless it is the one of thoroughly boiling it in acidulated water. The acid combines with the iron, and sinks to the bottom with the water, leaving the wax free from it, which made it dark in color.

One thing I should like to correct. The acid does not carbonize or burn the organic

matter, but combines with the iron, etc. that is in the wax, also with the water, making it easier for the water to soak into the impurities. The hotter the water and wax the more easily the refuse will settle. In rendering old combs, if we could use something in the place of water that would soak up the cocoons so as to make them heavier than the wax, the process of getting the wax from the comb would be very simple.

I have used water and acid, half and half measure, on old combs, and have succeeded in getting all the refuse cocoons and everything else to settle; but on heating to get the wax to rise, the refuse would come to the top, caused by the steam from the boiler condensing and mingling with what water was there before, and making the refuse lighter. I now have another idea in my head to try. It is, to wash out the wax while all is boiling hot. I believe I have something that will work, and something that every bee-keeper can use.

F. A. SALISBURY.

Syracuse, N. Y., January 9, 1892.

The editor of Gleanings comments as follows:

[So far as our experience goes you are the first one to discover the plan to us. We may add, incidentally, that any foundation, after having been rolled, that is milky, instead of yellow and transparent, may be brought to the latter condition by exposure to the rays of the sun before a window for a few minutes, or by exposure to artificial heat. Any foundation that is used for exhibition purposes can thus be very much improved where otherwise it might pass for a second grade.]

We feel that much good may be done in Canada and other lands by the discussion of the above question in all its phases. The supply dealers are dependent upon bee-keepers for their wax, and much can undoubtedly be done to improve the quality of wax and thus the quality of foundation. We invite discussion upon the subject. - Ed.

A notice on a door in Albany, Wash., reads: "I have gone to the mines. Where are you going?" Some one wrote underneath: "To the poorhouse. I have been to the mines."—Evening Post.

Quill—Why is it that you have no women writers on The Bugle? Scree—Because the managing editor always tells a beginner to keep his eyes and ears open and his mouth shut.—Kate Field's Washington.

Strictly Business.

EXPECT to have a little talk with you. Readers of the CANADIAN BEE JOURNAL. Each month, on "strictly business" matters and even if my early training as a farmer has fitted me better for handling the plow than a pen, I hope to say something that will be worth your reading.

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By this time I suspect you realize that new hands are at the helm for weal or woe. For weal if we can carry out our intentions and can rely upon you, with other Canadian bee men to give us a helping hand. We want to give you just as good a journal as your support will warrant, and one that you will be proud of and glad to encourage. But I beg of you don't mention this to our mutual friend Holtermann for he thinks nothing too good for the patrons of the C. B. J., and if we don't keep him in check just a little he might forget the business side in his enthusiasm.

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Among other kind things being said, I give this extract from one letter because it gives a text to start from and helps to emphasize the fact that we are largely "in the hands of our friends," and that their hearty co-operation will assuredly do much to make the JOURNAL an unqualified success.

F. W. Jones, Bedford, O., July 27th, says:—"We are pleased to hear that you have taken hold of the C. B. J. and will be glad to do all we can to extend its circulation."

You know the effect of "a long pull, a strong pull and a pull altogether," so please take hold of the rope and pull with us "for all you are worth," as the disreputable small boy is wont to say.

.

"I am willing, but what can I do?" did I hear you say? Well, if you mean business do one or all these things.

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BRANTFORD, CANADA.

R. F. HOLTERMANN, EDITOR.

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About this "trial trip," let me explain that we want at least 1000 new subscribers before January 1st, and to accomplish this, we offer the JOURNAL to new subscribers until December for twenty-five cents, paid strictly in advance. You can send stamps, or write us for a supply of cards especially prepared to hold a silver quarter so that it can be sent by mail. State how many cards you can use and we will gladly furnish them.

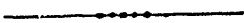
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**

I expect to make some good offers next month so keep both eyes open for them.

Yours very truly, STRICTLY BUSINESS.



Worth While.

By Edward G. Martin.

I pray thee, Lord, that when it comes to me To say if I will follow truth and thee, Or choose instead to win, as better worth My pains, some cloying recompense of earth--

Grant me, great Father, from a hard-fought field, Forespent and bruised, upon a battered shield,

Home to obscure endurance to be borne Rather than live my own mean gains to scorn.

Far better fall with face turned toward the goal, At one with wisdom and my own worn soul,

Than ever come to see myself prevail, When to succeed at last is but to fail.

Mean ends to win and therewith be content, Save me from that! Direct thou the event As suits thy will: where e'er the prizes go, Grant me the struggle, that my soul may grow.

-From Scribner's Magazine.

WANTS OR EXCHANGE DEPARTMENT.

Notices will be inserted under this head for 25c. five lines or under each insertion; five insertions \$1.00. All advertisements intended for this department must not exceed five lines, and you must say you want your advertisement in this department, or we will not be responsible for errors. You can have the notice as many lines as you please; but all over five lines will cost you according to our regular rates. This department is intended only for bona-fide exchanges. Exchanges for cash or for price lists or notices offering articles for sale, can not be inserted under this head, unless offering full colonies of bees or honey. For such our regular rates will be charged, and they will be put with the regular advertisements. We can not be responsible for dissatisfaction arising from these exchanges.

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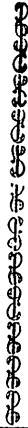
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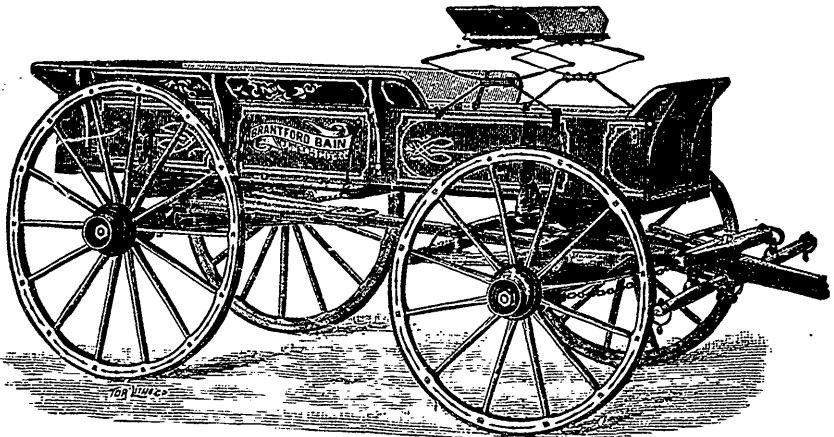
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