The Australian bee bulletin. Vol. 18, no. 1 April 30, 1909

West Maitland, N.S.W.: E. Tipper, April 30, 1909

tered at the General Post Office Sydney for transmission by post as a Newspaper

THE AUSTRALIAN Bee Bulletin.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.
ted and Published by E. TIPPER, West Maitland; Apiary, Willow Tree, N.S.W
lated in all the Australian Colonies, New Zealand, & Cape of Good Hope.

8. No 1. APRIL 30, 1909. PER COPY, 6D
Per Annum 5s, booked 6s 6d, in Australasia, outside N.S.W., add 6d. postage

Printed and Publis by E. TIPPER, Proprietor, High Street, West Maitland, N.S.W.

Registered at the General Post Office, Sydney, for transmission by Post as a Newspaper.

"The Australian Bee Bulletin."

A Monthly Journal devoted to Beekeeping.

Circulated throughout the Commonwealth of Australia,—New Zealand & Cape of Good Hope.

Editor & Publisher: E. TIPPER, West Maitland, N.S.W. Aus.

MAITLAND, N.S.W.—APRIL 30, 1909.

The following is the list of advertisers in our present issue, all of whom we would recommend our readers to patronise:—

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THE SYDNEY SHOW.

Once more the attraction of the Sydney Show is now past. Exceptional fine weather favoured a large attendance. Horses, Cattle, etc., were in quantity, and quality exceptionally fine, and the numerous district trophies displayed the products of the State to advantage. What with all sorts of side-shows there is hardly room for the public to move comfortably. What concerns us, however, is the Bee and Honey Section. In the various classes the entries numbered about 75 from various parts of N.S.W. and from Victoria. The honey from Victoria was the lightest in colour, but it did not win a prize, and it went candied before the show closed. Considering the rather general unfavourable season for honey production, the exhibits appeared to be very good, and would suggest that some districts produced a fair share of the sweet.

Mr. McFarlane, employed at the Mort's Dock Engineering Works, was sole judge, and Mr. J. Trahair, Newtown, steward. In the trophy class, "Collection and display of the products of the apiary," there were three competitors: Mr. Seabrook obtained first prize, Mr. Abram and Son second prize, Mr. Roberts third prize. In the opinion of many Mr. Abram and Son had the best exhibit of the three. Messrs. A. Hordern and

Sons displayed hives and many other goods appertaining to beekeeping, and Mr. Trahair, the steward of the section, had a non-competitive exhibit for the sale of honey at the show

BEEKEEPERS BEWARE.

In response to an invitation by circular from Mr. J. Trahair, I attended the meeting on the 12th inst. Twelve to fourteen persons were present, several of whom stated that they had no bees. Mr. H. Lord was voted to take the chair, and Mr. J. J. Branch to act as secretary of the Meeting. Owing to the small attendance I suggested that the forming of an association be deferred till the views of beekeepers be obtained. This, however, did not fit in with those who had no bees, and Mr. H. Hall moved, Mr. Trahair seconded, that in the opinion of this meeting, it is desirable that a beekeepers' association be formed, the members of which shall consist of beekeepers and others interested in beekeeping. The motion was carried by a majority of one vote. I then left the meeting stating my presence there could be of no further use to beekeepers. My two sons left also

According to a report in the Daily Telegraph, the following were elected as officers: President, Mr. H. Hall; Hon. Secretary, Mr. W. T. Seabrook; Hon. Treasurer, Mr. Henry Lord; Committee, Mr. J. Trahair, Mr. McFarlane, Mr. H. R. Whittell, and Mr. James Robertson. The subscription was fixed at 5/- for the first year, and the executive was authorised to draft a constitution for the association, and to report to a further meeting.

Let me now analyse the personal of the said committee as regards beekeeping. Mr. Trahair has a shop in Newtown, where amongst other things he sells honey. He has no bees, and therefore has no practical knowledge of the beekeeping industry. Mr. McFarlane is an employee at the Mort's Dock Engineering Works. Mr. H. R. Whittell, Beecroft, has told me that he had never more than one hive of bees. Mr. James Robertson, Annandale, repeatedly stated at the meeting that he keeps no bees; I am told he makes honey tins. Such is the committee to look after the interests of beekeepers, and such is the state of beekeepers that they permit it. How I wished I could have brought a dozen persons there and have it all my own way; but such sharp practice is not tolerated by me. At the same time I am not so much surprised at beekeepers being absent from the meeting, because it was called by a non-beekeeper; but what surprises me is that the few beekeepers there did not follow my example and leave; and what astonished me most was to see non-beekeepers vote on matters which they have no practical knowledge of. What would be thought of me if I voted at a bakers', buthers' or tinsmiths' meeting, just because I use bread, meat and honey tins? Need I say more? The question now is: Are you going to submit? If you feel as I do, namely, that we can look after our own interests better than others interested: then the best way is to form an association of boekeepers. and if we do that we wipe them out in one sweep. Who will join? Send your assent for a strong beekeepers' union either to Mr. Tipper, I dare say he will accept them, or send a post card to me, and we will confer together and publish the outcome. If you respond as I expect you will, we can establish the fact that beekeepers need no help from others "Now or never" is the motto. Those in distant parts may not be as well aware of things as I am, but I venture to think that you will recognise the fact that I make this appeal on behalf of the industry with which I have been so many years connected and which I helped to build up.

In the hope that most beekeepers of all parts in N.S.W. will respond, and to facilitate matters I will now make a few more remarks as to how I think the scheme could be worked so as to give

every one an equal chance to have a say in the decision of vital questions. It must be recognised that personal attendance at meetings means considerable expense, we living so far apart from one another; at the same time the voice of the most distant one should be of as much importance as that of others. Therefore, I would suggest that a committee of reputed beekeepers be appointed, and said committee to formulate all matters submitted to them and then send each member a voting paper with the matter to be decided on, and members submit their vote by post. The committee then decides according to majority vote. In this way every member has a vote, as he should have. Have you any better suggestions to make? If so, let them be known. To bring the matter to a head without much delay you might also suggest how many executive officers you favour and whom you think suited for the various positions. I fancy the fewer the better, so long as they are willing and capable to spend considerable time for the welfare of the industry. A subscription of 5/- will not be begrudged by anyone so long as he knows his views are as much valued as anyone's. If ultimately those interested wish to join in, they may, but none but practical beekepers should have vote on matters of beekeeping.

The matter is now solely in your hands, and it is for you to say what shall be done. As for myself, I am pretty busy, but I thought it advisable to write the above; if I have done wrong I beg pardon.

W. ABRAM.

Italian Bee Farm,
Beecroft, N.S.W.

NEW ZEALAND.

An open-air meeting of the Southland Beekeepers' Association and others interested in bee culture, was held recently on the show grounds, Invercargill, Mr. James Allen, president of the provincial association, presiding. Mr. Allen spoke briefly on the aims and progress of the Association, and the good it was doing. He stated that at the last meeting it had been decided to ask that the Department of Agriculture be asked to establish a State apiary in the South Island, preferably in Otago or Southland. Mr. Allen then asked Mr. Hopkins to address the gathering. Mr. Hopkins spoke of what was being done in other parts of the Dominion in the direction of stamping out disease, and the satisfactory progress made, and a great deal of good had been done in assisting the beekeepers. With regard to the box hive that had been so long in use, it would not be long before all beekeepers used frame hives, and by this means the greatest drawback to the success of the industry would be removed. Speaking on the commercial aspect, Mr. Hopkins said that there was an unlimited market in Europe for honey, and there was no danger of over-production. Some questions were asked and answered, and a hearty vote of thanks was passed to Mr. Hopkins for his interesting and instructive remarks. Despite the weather, a profitable time was spent by the interested spectators.—"N. Z. Farmer."

Producing nearly 20,000 Sections With only 129 Colonies.

Dr. C. C. Miller in "Beekeepers' Review."

In the year 1908, from 129 colonies, spring count, I took 19,480 sections, or 151 sections per colony, increasing to 160 colonies. The sections were the common $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$, two bee-way, and, counting 11 pounds to 12 sections, the yield was $138\frac{1}{2}$ pounds per colony. Editor Hutchinson has asked me a lot of questions about just how I did it. I might resent his questions as impertinently prying into my secrets, and reply "None of your business." On the whole, I feel

flattered that he thinks I haven't any secrets I'm not willing to share with others. Moreover, there are no secrets in the case, for I merely followed out the plans detailed in full in the book "Forty years among the Bees."

I never before had so good success except in the year 1903, when from 124 colonies, spring count, I took 18,150 pounds of comb honey, or an average of a little more than 146 pounds per colony. The season closed earlier in 1908 than in 1903, perhaps on account or the drouth, hence the smaller yield.

But 1903 and 1908 were exceptionally good years, and to balance them are occasional years of entire failure. The trouble is that I depend almost entirely on white clover, and sometimes the clover bloom is scarce, and occasionally what bloom there is yields no nectar. If I were to start anew I would seek a location with basswood, buckwheat, or some other dependable honey plant. Latterly, heartsease seems to be coming in a little, for which I am thankful.

Importance of Selection in Breeding.

Even with the heavy flood of clover nectar in 1908, I would have had no such results with poor bees Breeding persistently from the best stores has, I am sure, brought up the average, and there is nothing to hinder every honey producer from breeding from the best. But if I had it to do over again, I would stick to pure Italian blood, and look out for temper. I would rather not take so many stings, even if I should not get quite so much honey.

Importance of Stores in Spring.

Well, now, about the season's work. The bees were taken out of the cellar March 23 and March 26, the season being early, and April 3 part were taken to the Wilson apiary. Very soon after the bees were taken out of the cellar, I hefted them, and whenever a hive didn't feel very heavy, it was opened and a frame of sealed honey given. Not that there was danger of starving, but we had those frames of honey; and the bees would feel encouraged by their presence to start all the brood they could cover. Moreover, for every pound of honey thus given, the bees returned more than a pound of section honey.

A Woman does at least one-half the Work.

April 8, Miss Emma Wilson, my sister-in-law, who has been my assistant for a number of years, began getting sections ready. She did all the work at putting in foundation. I helped somewhat at putting the sections together, but didn't hurt myself at it. And right here is a good place to say that throughout the season Miss Wilson took the brunt of the burden. She and I did all the work in the apiary with no other help. Usually she did the work of going into the hives, while I looked on, kept the record in the book, and played errand boy. During the harvest I helped lift off and put back the supers.

We hired help to take the bees in and out of the cellar, haul them to and from the out-apiary, some of the time to wheel into the house the filled supers at the close of the days work, and Miss Wilson had a woman to help her when she sorted out the "go-backs" and when she scraped and packed the sections. I think that covers all the outside help.

As already said, we crowded in some honey whenever a colony hefted light in the latter end of March, and then the bees were left untouched till May 9, when we overhauled them to find whether they were queen-right, whether they would take any more honey, and to note in the record book the strength of each colony. If any colony was found queenless, or having a queen partly or wholly a drone-layer, it was relentlessly broken up, the combs with adhering bees being added without any ceremony to some of the weaker colonies.

RECORDING THE AMOUNT OF BROOD.

In making the recood, if a frame was half filled with brood, or more, it was called 1 brood; if there was less than half a frame it was called "brood in 1." If there was brood in 2 frames, no matter how little in one or both of them, it was called "brood in 2," "3 brood" meant that each of 3 frames was at least half filled with brood. It will be seen that a colony credited with 2 brood might be twice as strong as one entered "brood in 3." A fairer way of entering the record might be found.

That you may judge of the condition of the colonies May 9, here is the standing of the first 40: I had 2 brood; 3 had brood in 3; 2 had 3 brood; 5 had brood in 4; 7 had 4 brood; 6 had brood in 5; 8 had 5 brood; 2 had brood in 6; 4 had 6 brood; and 2 had brood in 7.

EQUALIZING THE BROOD.

Where a colony had brood in more than five frames, we took away a frame or two with adhering bees, using the same to strengthen, not the weakest, but those that had brood in 3 or 4 frames.

The first 50 colonies were overhauled May 9; then, consulting the weather and our own convenience, we overhauled some May 12, and the rest May 15. May 16 we began again overhauling, not all, but those we thought were strongest and could help some of their weaker neighbours. A colony with more than 5 brood could spare, and a colony with less than 4 brood could take. Of course an empty comb was put in the brood nest for every full one taken away.

We did no stimulative feeding nor spreading of brood. When a colony of its own accord keeps up all the brood it has bees to cover, what more would you? Without giving each individual colony, it would be hard to tell just what we did do during the next two or three weeks It was merely to take from some strong colony to help the weaker until there was no colony left with less than 4 brood. That really obliged us to do but very little work. A colony of medium strength required no attention. For instance, No. 3, which brood in 4, May 9, was looked into May 21, when it had 5 brood, and it was not opened again until there was danger of swarming.

About the 20th of May there was no need to strengthen any more colonies, and we gave to a few of the strongeet a second story. When it came time to put on supers, of course these were reduced to one story, whatever brood they had more than 8 frames being given to other colonies. There was no trouble in disposing of this brood, although one year, at least, we had to pile up a lot of it after allowing 8 brood to each colony.

PUTTING ON SUPERS.

May 25 the first white clover was seen in bloom, and we began to put on supers. Not that they were immediately needed, for we always count that storing begins 10 days after the first clover bloom is seen; but if supers are on a little before needed it helps to keep down swarming.

June 3 the bees seemed to be gathering more than enough for their daily needs, and by June 10 nectar was coming in a flood. June 5 we began looking for queen cells, and perhaps in one case out of five we found either eggs or larvae in queen-cells. We destroyed them Then the real tug-of-war began, fighting against swarming. About once in 10 days we went through each hive. If we found only eggs or very young larvae, we destroyed these and let the colony go for another 10 days. Perhaps not even eggs were found 10 days later. Per aps only eggs or very young larvae again, in which case we destroyed these again But if we found larvae well advanced, we knew there was no use fooling, and something must be done. That something was not always the same.

A PERIOD OF NO BROOD REARING.

One general principle prevailed, however, and that was that there must be a break of about ten days in the production

of brood and young bees. In a few cases we shook a swarm. That allowed the queen to go right on laying, although it stopped the work of rearing the brood that was taken away, although of course that work went on elsewhere. In nearly all cases, however, we interfered with the laying of the queen.

In some cases we used what we called the foundation plan An empty story was put under the full one, an excluder between. In the lower story was the queen and 2 or 3 frames of foundation. Oftener, the name "foundation plan" was a misnomer, for we gave no foundation, but a frame from the upper story containing the least brood, and 2 or 3 entirely empty frames – not even a starter in them. Ten days later we found very little work done in the lower story. Where foundation had been given we took it for nuclei or whatever needed, and where empty frames had been given the little comb that was built was generally taken as so much wax. The lower story was taken away, and the one story left, with the queen in her original place. Generally that ended all trouble for the season. But we were not dead sure about it, and had to look in each 10 days to see whether cells were started again. If they were, and if they were persisted in, then the colony had to be treated again.

The "Put Up" Plan.

Generally the queen was taken away. She was "put up." That is, the queen with a frame or two of adhering bees was put into an empty hive; two extra combs added, some more bees shaken in for good measure, and this hive set on top of supers and all, of course having no communication with the bees in the lower hive. At the time of "putting up" the queen, all cells were destroyed below. Ten days later they were destroyed again, and the queen put down.

Instead of putting up the queen, if we were in need of nuclei, we put her with her 2 brood on a new stand. Then, 10 days later she was returned to the old hive with one brood. That left a nice nucleus on the new stand.

If the queen was not above the average, or if for any reason we did not care to keep her, instead of putting her up we killed her, of course destroying cells at the same time. Then 10 days later we gave a young queen that had just begun laying. A few days later, when we found this queen received all right, we entered in the book as the record of this colony, the word "Pass," and no more was that hive opened for the season. You would hardly guess what a pleasure it was to write that single word "Pass."

There were, however, two—possibly three – cases in which one of these young queens swarmed. I think that never happened before 1908, which was an exceedingly bad year for swarming. I don't know why. But there is so little chance of such a colony swarming, that I wouldn't think it worth while to watch against it. Better to lose an occasional swarm than to do so much work.

I may remark in passing that I think friend Hutchinson finds it necessary merely to introduce such a young queen without having the colony queenless 10 days. For anything I know that may work in most localities. Note here. I'd give money if it would.

That's about the whole story of our summer's campaign. It was an unusual season, our bees were hustlers, and we hustled ourselves, sometimes up at 4 o'clock, and at the hives till dark.

The T Super.

For the sake of anticipating some questions, I may add a little. We used 8-frame Dovetailed hives, T supers, and the common $4\frac{1}{4}$ x $4\frac{1}{4}$ x $1\frac{7}{8}$ two-bee-way sections. I prefer these after much experience with many other kinds. I believe the T super the best super in existence, not for every one, but for *everyone who knows how to use it.*

To contain the 19,490 sections required 812 supers. That would be something more than 6 supers to a colony. But there will be some unfinished sections, the best one can do, and we always count on having about 7 supers ready in advance for each colony. This year, when the season was well advanced we got scared for fear more would be needed, and got them ready. But the drouth came and saved the trouble of using them. They're just so much ready for the next crop.

Bait Sections and Tiering up.

The first super given to each colony had at least one bait section. When that was perhaps half filled we gave a second super under it. Then when this last was fairly advanced another was given. In many, if not in most cases, we also gave an empty super on top, a sort of safety valve, not generally used by the bees, but the extra room helped keep down swarming, and occasionally the bees would be crowded enough before we got around to them to use these top supers. With so much room given, the bees took longer time to finish up, and several supers were given before the first was ready to come off.

Taking off the Supers.

But we didn't wait, generally, for a super to be entirely finished before taking it off. If we waited for the corner sections to be finished, the central ones would be darkened. So when a super had its corner sections still unfinished, perhaps sometimes also some at the sides, it was taken off. The bees were partly smoked out before the super was taken off, the supers were piled up 10 or 15 high, and a Miller cone escape put on top. Before putting a super on the pile, however, at time of good flow, it was set on end on the top of its hive, and the bees were given time to run down into the entrance.

Next day, or the first day at our convenience, the sections were dumped out of the supers, the unfinished ones picked off, the finished ones dumped back into their supers, and the unfinished ones assembled in supers and given back (we called them "go-backs") to be finished by the bees.

I fancy I hear a certain editor saying, "Don't you think it would be better to keep 'more bees' and do less fussing with individval colonies?" I don't know.

THE PLYRAL-QUEEN SYSTEM.

It it Ppofitable for Beekeepers to Practice it?

By E. W. Alexander.

It is now about 18 months since this new method of beekeeping dropped into our camp like a bombshell. During this time I have had but little to say as to its merits or demerits. Some endorsed it at once as another forward step, while others were ready to condemn it from the first. It is now of a proper age to bear some fruits whereby it will be known. It is only natural that I should be anxious to hear from others in regard to the results derived from this system. Like many other improvements it has come to stay, and will be adopted in some ways by intelligent beekeepers as long as bees are kept by man.

In making our increase it has, in connection with the nuclei system, enabled us to make more increase with less expense and trouble that has ever been made before. In forming nuclei heretofore, we have taken two or three frames of brood and honey with adhering bees, and, after putting them into an empty hive, set them off to one side, shut the bees up two or three days, and then given them a queen-cell, a virgin queen, or a laying one, and left them to build up into a colony of proper weight and strength for winter, not expecting and seldom securing any surplus from them.

But how different now! All that is necessary is to form our nucleus over a queen-excluder on any colony of medium

strength, and the next day introduce a laying queen to the nucleus; then in about 25 days the hives can be separated. Each hive will be full of bees and maturing brood; then move the lower hive a little to one side, and set the upper hive alongside so about an equal number of the working force will enter each hive.

Here you now have two good strong colonies in the place of one. Each has its laying queen, its hive filled with brood, and a good working force of bees. There has been no chilled or starved brood.

This, you will find, is the surest and best method that has ever been practised in order to make a large increase in time for our early harvest. This one advantage of itself, which is easily secured by a plurality of queens in a colony is worth hundreds of colonies and tons of honey to the extensive honey-producer.

I am sorry to see men of experience in our business condemn new methods before they have given them due consideration. There are certain seasons of the year and certain conditions a colony can be in when a plurality of queens is of no particular benefit; but because this is so, it is no proof but at other seasons, and under other conditions, a plurality of queens in a colony is a great help. There seems to be a tendency on the part of some bee-keepers to belittle this idea, and make it appear of little value. This we must expect. It has always been so—one class trying to pull down every thing of an advanced nature, while others are trying to build up. This whole question, like many others connected with our business, must turn entirely on this one point—does it pay? If it pays to check the desire to swarm in very strong colonies, then on that point it does pay. If it is to our advantage to have unusually strong colonies just before our main harvest for surplus, then it pays on that point. If there is any gain in superseding our undesirable queens without an hour of lost time in egg-laying, then on that point it pays. If it pays to have strong full colonies to put away into their winter quarters, then it pays to have a plurality of queens in your hives during the latter part of brood-rearing. If it is worth anything to have a surplus of laying queens four months of the season, so if one is accidentally killed, or you find a queenless colony, you have a plenty to take her place, then it pays to have a plurality of queens in some of your colonies. If it pays to rear your queens instead of buying them, then certainly it pays to rear several in one colony instead of only one. If it pays to double the number of our colonies before our early harvest, and have each one full and as strong in working force as one-half the number would have been had we not practised this new system, then surely on that point it pays.

Yes, my friends, this idea has come to stay; and as the years go by there will be many advantages derived from it that we little dream of now. I think this new departure from the old rut of the past has already borne some very good fruit considering its age, and the fact that it was an unwelcome visitor from the first with some. I hope that many of our most experienced honey-producers will give this subject a fair trial the coming season, and then when we have heard their verdict we will let this subject rest. —"Gleanings."

SELLING HONEY AS A FOOD.

By C. P. Dadant in "American Bee Journal."

May I be permitted to deviate from the common monthly discussion of American methods in apiculture, and talk a little about what some other countries are doing? This time it will be about the sale of honey and its spread among the people as an article of food of the very best kind. Our own National Association has given prizes for essays to be inserted in the newspapers concerning the value of honey as food. This is good. But an object lesson in the sale of honey is better, especially in cities.

The January number of the Swiss "Bulletin de la Société Romande D'Apiculture" contains an article from the Progrés Apicole on the honey-fair, at Lausanne. Some years ago I called the attention of beekeepers to the Swiss method of advertising honey. It would appear to be successful, since it is continued from year to year. This "honey-fair" is also called "honey-market," and was held in a small Park, 170 feet wide by 500 feet in length, situated, in the center of the city; it was held simultaneously with a flower-fair, which takes place every year at the same time, August 24th and 25th; under three rows of large basswood trees which shelter the exhibitors from the rays of the sun. At night, a line of Venetion or Chinese lanterns hung along the walk and among the tree gives a fairy appearance to this exhibit which is continued until eleven o'clock at night

The honey exhibit is made under the management of the beekeepers' association, and is kept by only three or four persons. It is very much as our State Fair exhibits, as far as I can see, with this difference, however, that it is independent of any fair except the flower-fair already mentioned. Honey and flowers go well together.

The honey-fair is advertised some time beforehand. Both comb and extracted honey are on sale, all put up in the most attractive manner, and the prices are established by the beekeepers' association. The result is that many consumers, among all classes of society, have their attention drawn to this exhibit. It is the object of an evening walk, and the family go there as they might go to the show. The knowledge that the purity of the honey on exhibition is in a manner guaranteed by the association of beekeepers, removes any possible distrust of its purity, and my readers surely know how easy it is to sell good honey when the people who buy it have no doubt about its purity.

As I understand it, the sales are not large at these honey-fairs—a few thousand pounds only. But they serve as an introduction between the consumer and the producer; they remove the barrier which has caused the consumer to ask himself whether he can depend upon what he buys as pure, simply because he usually gets it from a man, the retailer, who often does not himself know whence it came. If the retailer does not know the producer of the honey, and has any doubt about it purity, he is ill-fitted to recommend it. When the consumer and the producer meet in the way mentioned, there is a mutual confidence established, and a demand is created which will need but litte urging to be continued indefinitely.

Nothing more than a mention is needed to remind our beekeepers that it is the first sale to a family which is the most difficult. In thousands of cases, people pass by an opportunity to buy honey, without purchasing, because their attenton is not especially drawn to this matter, is well as to the healthfulness of honey, which, by the way, no one thinks of doubting if only he is certain that it is pure honey he has the opportunity to secure.

May I say that, not only in honey sales, but in the advertising of many other products, we might profitably look at Europe? We now have what is called "street-fairs," organised in many small cities, with the view of drawing the farmers and pushing sales. The dry-goods stores, the clothing and shoe stores, the photographers, restaurants, etc., do a large business, because the country people are attracted from miles around to these popular gatherings. There they see exhibits of trained dogs, heavy-weight lifters, jugglers, and side-shows of all kinds, many of which are fakes.

These street fairs are copied from those of Europe, but in Europe they have at the same time a flower exhibit, a vegetable exhibit, a horse-fair, a cattle-fair; not as in our country fairs, for exhibition of only the best of all breeds, with premiums, but to sell or buy whatever you may wish to aequire or get rid of in your line. Not only you may buy there, on a stated day, any kind of a horse, cow, or pig, chickens or bees, eggs, butter, honey because you are sure to find the greatest possible selection, in high or low prices according to quality, but farm hands go to find employers, carrying a green twig in their hat as a token that they want employment. The country trades with the city, and the country people trade with each other. It is a general concourse where all come, either to make sales or spend money, and is very much more useful than our noisy modern American street-fair.

In this country the great distances originally between farms and cities compelled us to resort to advertising, but the present growing aggregation of people in small centers will sooner or later induce us to use these most convenient methods of finding sales for our products, where the middleman cannot do what is readily done between individuals. Neither is this injurious to the middleman, for when exchanges are thus begun, they are usually continued by the help of this middleman, who can always be found at the center of business, when the farmer has returned to his daily occupations.

It is far better to create a market for our honey among our own people, through such local exhibits, than to crowd our produce on the big markets where it comes back to our dealers in poorer shape, with additional charges attached for the profit of the commission man, who must live as well as the producer. If a little more of this local market hunting were practised it would have a tendency to stiffen prices, for it is the large market that sets the pace, and too much is now sent to the large markets.

The race is to the swift. The man who uses his ingenuity to sell his crop will always distance the man who waits for the market to come to him. Let us not neglect any of the means that are in our reach for success.

RUAKURA STATE APIARY.

Out of the 300 visitors to the Ruakura Experimental Farm on the 16th of March, there were a good many beekeepers, all of whom were much interested in the fine exhibit of honey in 10lb. and 2lb. tins, shown in the green-house set apart for the exhibition of the products of the farm. One of the new features in honey-tins shown by Mr Hopkins, the Government Apiarist, who was present, was the 2lb. laquered tins with pressed, instead of soldered seams. They are as Mr. Hopkins explained, a very great improvement on the old kind, as there is neither solder nor acid used in putting them together. He could not say positively that the lead in the solder and the acid usid with the soldered seams might have some effect on the contents, but thought there is a possibility, at all events; the tins are much better without the solder and acid. These tins were also laquered, and with the small Government label on one side, looked remarkably neat, and were much

admired by the visiting beekeepers, several expressing themselves as intending to adopt them in future.

The honey shown was a very fine sample indeed, the whole of the crop having already been bespoken. The visitors were shown through the apiary by Miss Livesay, the young lady in charge, and all were pleased with what they saw.

At the luncheon the Hon Mr. Buddo spoke very highly of the progress beekeeping had made, and said it was developing into a very important industry. Mr. Greenslade, M.P., member for the district, and Mr. Lowry, M.P , also dwelt upon the importance of the bee-farming industry, and the good the Department has done in fostering it.—"N. Z. Farmer."

BEE-BUZZINGS.

(By a Beekeeper.)

DOMINION HONEY EXHIBIT.

The honey sent home to England by the Agricultural Department, and which gained the grand prix at the Franco-British Exhibition, could not be shown as desired at the Royal Agricultural Show in June. It was exhibited at a show held by the society later in the year, and was an agreeable surprise to all honey experts who saw it, and who were unsparing in their praise of its excellent quality. Unfortunately, owing to the length of time during which it had been exhibited at the Franco-British Exhibition, and the impossibility of the High Commissioner's staff clarifying it, it was shown somewhat granulated, and in this condition it did not appear to the best advantage. However, the honey gained a bronze medal. Had the officers acting for the High commissioner understood honey, they would have known, the Chief Biologist pointed out, that it could easily have been liguified and shown .n as good a condition as when it gained the grand prix by placing the bottles in water and the temperature being gradually raised until the honey became clear. Mr. J. Hopkins, the Government Apiarist. believes that had this been done the honey would have taken the first prize.

APPRECIATION OF THE N.Z. APIARIES ACT.

Not many months ago, a request was received by Mr. Hopkins, Government Apiarist, from the Secretary of the Queensland Beekeepers' Association for a copy of our Apiaries Act, as the Association intended to apply for legislation on the same lines for Queensland. On February 10th last, at an extraordinary general meeting of the Victorian Apiarists' Association, held at Melbourne, it was resolved to ask the Minister of Agriculture "to introduce legislation dealing with bee-diseases on the lines of the New Zealand Apiaries' Act, and that the Secretary write to the Stawell Association, stating that this Association is in full sympathy with their proposal, and will take similar steps to obtain legislation."

QUEENLESS COLONIES IN AUTUMN.

It is a waste of time to look for queenless colonies late in the fall; and, besides opening colonies when the bees are all at home starts robbing in a short time. When we find a colony queenless, or very weak from some other cause, we simply set it on top of another strong colony. The combs will be taken care of, at least, while otherwise moth larvae might destroy them before we could make another visit to that yard. With many yards to attend to in a busy season we found long ago that tinkering with weak or queenless colonies does not pay, and the above is the quickest way to dispose of them Later the hives and combs may again be used for increase. During the late fall, only such are disposed of as are easily seen to be weak or queenless by simply walking through

the yards. All others are left to take care of themselves until the following spring. If they die out in the meantime the combs are safe from the ravages of the moth larvae. They must, of course, be taken care of promptly during warm weather.

AUTUMN ROBBING.

Care should be exercised to prevent robbing late in the fall. It has a wearing-out effect on the bees. This is in reference to wholesale robbing, or a robbing-spree, which often occurs through the negligence of the beekeeper, though sometimes due to some avoidable accident. Of course, it also happens that the beekeeper cannot always avoid such wholesale robbing. We had such a case only recently. Since we haul nearly all of our honey home, where it is put up, the bees are always on hand, and soon show up by the thousand. They've been spoiled several times, and are always looking for another chance, even on very cool days, wearing themselves out unnecessarily when they should be in their "winter-quarters rest."

"SHAKING" MORE ENERGY INTO BEES.

One would think that bees had enough energy in them naturally, without trying to put more into them by artificial means. There seems, however, to be "something in it," according to the testimony of several well-known beekeepers in America. Every beekeeper who is up-to-date knows all about "shook" bees, but it is necessary to explain to beginners what "shaking" means.

It means that all the bees of a hive are taken out on their combs, and shaken down into a fresh hive placed on the same stand, and it is claimed that by so doing the bees go to work with greater energy, and thus the owner reaps greater profit. One, Mr. Williams, of Indiana, has been prominent in this matter, and the following plan, as described by himself, is the one he follows:—To begin with, we will give the hive a vigorous kick or two to ease up our rising temper, and, incidentally, to cause the bees to fill themselves sufficiently with honey. Next, give them a few puffs of smoke, and then dump every bee, queen, drones and all, with a good sharp thump, in a pile in front of the hive; and as we put the frames back, we will put the honey and capped brood in the centre, and the younger brood to the outside, and the job is done. Now, if the bees do not start to work in the sections, and in all of them alike, before morning, it is because they are different from mine; and I will always believe that their education has been neglected. It would do your eyes good to see the beautiful cases of honey taken this season from just such a colony. In all my manipulations I try to keep the fact constantly before me that a thorough shaking never fails to bring a colony into the same psychological condition that characterises a newly-hived swarm; and, as I go among them, and find one that, for any cause, fails to come up to the standard I have set, I "shake" it. Of course, I give all needed room, shade and ventilation but I find in practice that all colonies have to be "shaken up" sometimes during the flow. I do not want to be misunderstood in this matter: Promiscuous shaking without any good and apparent reason will no more bring a crop of honey than Whistler's paints would produce one of his exquisite pictures before they were mixed with a few brains. But I have demonstrated to a certainty that judicious shaking will enable us to secure larger crops of honey with less work and fussing; consequently we can use the unskilled help that is our resource. In short, it will allow some of us to pursue the business as a vocation where otherwise we would have to mix it with other business.—"N. Z Farmer."

A COMB-HONEY CUTTER.

Every beekeeper knows that bees, if given plenty of room, are more coutented, and more likely to confine their efforts to the production of honey rather than to swarming. I use a little machine for cutting round pieces of comb honey out of combs and placing the same in glass jars so that I can produce comb honey without the expense of comb-honey supers and sections. This places the honey immediately in a package where it is non-perishable and almost non-breakable, and where it shows off to the very best advantage. The device works very much on the plan of an ordinary cake or biscuit cutter.

In order to cut the honey it is necessary only to lay the comb on a clean board or a tray made for the purpose; press the cutter through the comb, then pull it out again, when it will be found that the cake of honey is retained in the cutter. By putting on the handle the cake of honey may be quickly placed inside the can or jar, which should be 1-8 to ¼ inch larger in diameter than the cutter. The jars are 2 5 8 inches inside diameter, ½ inches in height, and they will hold from four to five cakes from combs of ordinary hickness. The weight of the comb honey runs from 15 to 17 ounces; and after pouring in sufficient liquid honey to fill the jar the entire weight is found to be about 23 or 24 ounces. The comb shows plainly through the glass and honey, and, when held before the light, is beautiful beyond description.

Tin cans can be used and covered with a suitable label, although glass jars provide a more handsome package. There is a little difficulty in getting jars and cans with large openings that will not leak, but I think this objection can be very easily overcome. It is important that the opening into the jar should be as large in diameter as the jar itself.

Son-in-Law of Rev. L. L. Langstroth at the Ohio State Fair.

The publishers had an educational exhibit of bees, honey, and bee-appliances at the State Fair. Among the many visitors who came to pay their respects was Mr. John W. Jamison, of Roxabell, Ross Co., O.

While Mr. Jamison is a prominent agricultural writer, he will be better known to the beekeeping world when it is said that he married the youngest daughter of Rev. L. L. Langstroth. Her sister, Mrs. Anna M. Cowan, the eldest daughter, died a few years ago, so that Mrs. Jamison is the only survivor of the Langstroth family.

We are glad to say to her that her father's great invention of a practical movable frame, and his book, "Langstroth on the Honey-bee," have placed almost all the modern beekeepers of the world under everlasting obligations to him. We are sure we are voicing the the sentiment of all of them when we say we wish she may enjoy a long life, and health long enough, at least, to see the full fruition of her father's great work.

Profitable and Unprofitable Work in the Apiary.

By G. M. Doolittle, in "Gleanings."

"Mr. Doolittle, I have been wondering if I have not been doing too much unnecessary work with my bees."

"There is no doubt that a great deal of the work done in many apiaries is not very profitable, Mr. Jones, and would be characterized as 'fussing' by many; still, it often happens that the beginner learns much about the bees by this same fussing, hence the time so spent is not altogether thrown away."

"But is it not as important as any thing in making money out of bees to work so that every stroke counts?"

"Undoubtedly that is correct. It is easy to put a large amount of work on the bees, by the one having the bee fever, that amounts to little or nothing after the first principles have been passed. After the business is well understood, no doubt a greater satisfaction will come to us by making every stroke count, as you say."

"I think that is right, and I should like to have you tell me just what are the necessary things to do with the bees."

"If you were to ask the farmer bee-keeper this question he would tell you to hive the swarms when you see them and put on the supers. Then the enthusiast who has just read one or more of the bee books and papers would be apt to say, 'Stimulate brood-rearing, equalize stores, make nuclei, raise queens, examine all colonies once a weak during the summer, and, as often as it is mild during the winter, extract the honey in early spring and feed it back so as to get the cold solid slabs of honey from the middle of the brood-nest; extract the honey in the fall, and feed sugar-syrup for wintering, etc., till you are almost dizzy with the rounds you must make with the bees the whole of the year.'"

"But what do *you* say?"

"The most practical course is by no means midway between these two extremes, as you probably expect me to say, for from my later years' experience I believe it lies much nearer the farmer's method than the enthusiast's. In other words, my motto now is, the largest possible amount of honey with as little well-directed labour as is possible to secure said amount of honey."

"What do you mean by well-directed labour?"

"The farmer loses much honey by *not* doing a *few* things at the right time and in the right place. The practical successful apiarist does just those things, but no more. Or, when he has just the necessary work done at *just* the right time and in *just* the right place, he does not hinder the bees in their work by upsetting all their house-keeping in pulling their well-arranged plans inside the hive to pieces, thus causing them to spend much of their precious time during the honey flow at repair work."

"Would you mind naming things which you consider as paying work in the apiary?"

"Briefly stated, all colonies should be examined rather hurriedly in early spring with as little disturbance as possible, to see that they have stores enough to last them till pollen becomes plentiful, when they should be examined more carefully to see that they have good queens and sufficient stores to carry them through to the white-clover harvet, taking advantage of this inspection to do all desirable cleaning of hives, pruning of propolis and burr-combs, and clipping of queens. All hives and supers needed for the season should be in readiness beforehand to be used at a moment's notice when they are needed. Then some simple and uniform plan for swarming should be adopted which will prevent all watching or climbing tall trees for after swarms, for these have no part in a well-regulated apiary. Some good plan of artificial swarming to control increase is better by far for the busy man's use than natural swarming in any shape. Poor colonies should be requeened, the supers put on at the right time, more added as needed, and *just when they are needed*, and the filled supers should be removed promptly. Next, the honey should be graded and packed in accordance with some definite system as early as possible, to take advantage of the early market, so that any chances for selling it to good advantage may not be lost. The necessary number of queen-cells should be raised from the best stock so as to supersede all failing queens at the end of the honey harvest, and nearly all drone comb as well as irregular or imperfect combs should be replaced by straight worker combs; and the bees

should be gotten ready for wintering during September and the first half of October."

"I notice you do not name some of the things neighbour K. insists are essential."

"Probably not. One of the tantalizing things about apiculture is that some apparently good authorities think some things are necessary, not to say vital, and other equally good anthorities say they are not."

"How do you account for this?"

"Locality accounts for much of it in my opinion. In some portions of the West the clear dry atmosphere makes it possible for the beekeepers to adopt a different system of management from that necessary here at the East."

"But when two authorities living near each other put forth different opinions, what am I to think?"

"Both can hardly be right. One may be competent in his practical work, but lacking as a close observer, or in scientific accuracy, and quick to jump at conclusions. Or, as is sometimes the case, he may be one of those who thinks it more virtue to claim knowledge than to admit or say frankly, 'I don't know.'"

"I take it from what you said that you do not think stimulative feeding in the spring would be profitable labour."

"I am sure it is not with me, for I have tried it very many times by feeding a certain number of colonies and leaving the same number of colonies of equal strength without feeding, but with plenty of honey; and I find that those not fed give the best results in honey when an inventory of each lot is taken in the fall. I know some claim this is the only way of having colonies prepared for the harvest. But it does not necessarily mean that stimulation must be profitable because it stimulates brood-rearing. There are two questions involved in this stimulative feeding. First, which is better—a strong colony of old bees whose vitality is unimpaired by previous brood-rearing, or a weak colony of young bees 37 days before our honey harvest is to begin, that being the time required to rear labourers for the fields from the egg. Second, when natural pollen (the best kind of stimulant in connection with plenty of honey in the hive) begins, as it does here, more than 37 days before our earliest harvest commences, and continues without a break, is it any additional stimulation to feed thin honey? All of my experience says that colonies which do not begin brood-rearing in earnest till pollen comes in plentifully from the elms and hard maple will excel by far those which are stimulated to brood-rearing earlier, so that the old bees die of exhausted vitality before the honey harvest arrives."

BEE BUZZINGS.

By a Beekeeper.

(Continued from March issue).

Loss of Bees.

A correspondent writing from Waihao Forks, Waimate, states that there has been a remarkable loss of bees this season. It has been customary for swarms of bees to be seen daily during November, December, January, and February, and clover, Cape weed, and flowers have provided them with happy hunting-grounds. This year there is a wealth of blossum everywhere, but instead of a hundred or more swarms being taken in boxes only three have been secured.

Recognising Age of Queens.

The following is a novel way of distinguishing old from young queens, although it is not at all difficult to an experienced beekeeper to tell the difference by their appearance.

Pastor Strauli has been writing a series of articles on queen-rearing as recommended by Mr. Sladen in his book "Queen-rearing in England," from which also some of the illustrations have been reproduced in the "Deutsche Illustrierte

Bienzeitung." In a recent number the writer says when it is desired to destroy a queen for the purpose of introducing another, frequently there is an uncertainty as to the queen in the hive being an old or a young one that has been replaced in the natural order of events. In order to be certain about it, M. Strauli gives the queen a push with his forefinger. I the queen runs away swiftly or flies she is for certain a young one, and should be retained. If, on the contrary, the queen moves away languidly, she is the old one, and can be destroyed. A queen of the previous year will sometimes fly a little. During warm weather a queen that has only recently been fecundated will also fly if the frame of comb on which she is found is lifted out of the nucleus; therefore, when desiring to examine a nucleus to ascertain if a queen has commenced to lay, it is best to take it into a room, and open it in front of a closed window, against which the queen would fly and then be easily found.—"British Bee Journal."

No Risk of Disease in Comb Foundation.

I have frequently been asked if comb-foundation made from foul-broody combs would be likely to transmit disease to a colony using it. I have always maintained that there is no risk at all. One cannot tell in buying wax whether any part of it came from diseased colonies or not, so that in our modern methods we are compelled if we desire to get the most out of beekeeping, to use all the comb-foundation we can as an aid to success and take all risks. After having made and used many tons of comb-foundation, I am absolutely convinced that there is no risk in its use. The refining by heat, and the length of time the wax must remain heated to clarify it before making up precludes the possibility of any germs remaining alive. The editor of "Gleanings" has the following on this matter:—"We desire to say most emphatically that foul brood is not carried in foundation. One melting would be sufficient to kill all the disease germs, but after it goes to the foundation maker it goes through several separate and distinct processes of melting and refinings, covering a period of probably three or four hours all told, during which all disease germs of any sort would bee cooked and killed." The fact of there being several boilings appears to me to be a sufficient safeguard. Two or three boilings of half-an-hour must be immensely more destructive than one boiling of double that time. So doubters may breathe freely.—"N. Z. Farmer."

A Little Girl's Good Fortune.

Miss Marjorie Roberts, of the district school, Rozelle, Sydney, is the most expert of at least 200,000 Australians at solving picture-puzzles, for the March number of "The New Idea" announces her as the winner of a contest that has been running in that magazine for the past twelve months. Each of the pictures represented an author, and Miss Roberts succeeded in unravelling all but two of the 108 problems. Her reward for this performance is a trip to Japan and back by first-class saloon. In the same number there is the delightful illustrated interview with Marchesi, done by an enterprising young Australian lady-journalist. A first of a series of illustrated articles on the Government Houses of Australasia contains a fine collection of photographs taken by Lady Dudley's permission in Federal Government House, Melbourne. Perhaps the most interesting of these are two pictures taken of the school-room, and showing the Dudley youngsters at work and at play. Fiction is strong, and to balance it there are a number of practical articles which contain directions for making all sorts of useful and ornamental things for the home, ranging from a stencilled set of window curtains to Teddy Bears for the children. The departments are replete with good things, as usual.

CORRESPONDENCE.

"Novice," Condobolin.—I am a novice at beekeeping and have just purchased an extractor, but find great difficulty in working it; in fact every comb breaks with me, and is useless as far as putting back in the hive is concerned. I use 7½ inch frame, closed end. The extractor is an A. I. Root Cohen reversible. What I want to get at is, how am I to prevent the combs breaking when I put them in the extractor? If you will be good enough to give me any information that will enable me to overcome the difficulty, I will be obliged. Whether it is in the uncapping or in turning the handle too fast I don't know; but no doubt you can put me on the right track.

[If the frames are wider than the comb, the comb almost always breaks in extracting. The frames should not extend over the comb, or else provision must be provided in the comb basket to let the frames in so that the comb, when uncapped, leans against the wire. The quickness of turning can soon be learned; if too fast the combs are apt to break; if too slow the honey will not come out properly; but if the honey is very dense, choose a warm time of the day, and with a little practice you will soon master the work.]

J.T.H., Nimbin,—I like your journal very much. My honey season did not open till November; the latest in my 18 years' experience. Then it came fast for a few weeks and suddenly eased off. February we had a great show of Bloodwood, but the flying-foxes, birds and heavy rains too often got the largest part of it. So, as there is no winter flow, we will now be quiet for about six months.

J.H.A., Bundaburg.—Am very sorry to say that the bees in this locality have done little or nothing all last year, and this season dees not promise much better success. However, we keep hoping on, and trust you are doing better in New South Wales.

B.F., Frampton.—The last season has been so bad in this locality for bees that mine have all died, with the exception of couple of hives, and I have been feeding them for a considerable time. However, bad times won't last always.

C.S.W., Lower Bucca Ck.—Bees have been quite a failure this season owing to the dry spring.

J.S.C., Kendall.—The honey season has only been fair. Too dry.

H. Bros., Beecroft, Newbury.—We have had very favourable weather here this spring, which was most suitable for queen-rearing. The summer, however, was windy, cloudy, and wet, with an occasional fine day. At the end of January, the weather settled fine with nice warm nights favourable for honey secretion. The bees have worked well since then on clover and thistles.

DIFFERENCE IN RACES OF BEES.

By G. M. Doolittle in "American Bee Journal."

I realize that the older beekeepers are quite apt to forget how eager they were in the beginning to know all about things which have long ago become established facts with them, and for this reason often "soar so high" that those just entering the ranks feel that they are left out in the cold because but very little of the "first principles" of things pertaining to bee-culture finds its way into our yearly periodicals of the present time.

My first experience was with the German, or what is more commonly known as the black bee, and where or when I could find anything telling about the peculiarities of these bees, I was all

"eyes and ears" to learn whatever new I could of them. When the Italian bees were first introduced into this country, they were compared with the black bee, and in this comparison much was brought out that had never seen the "light of day" before, I finding out that the knowledge of these which I supposed was very nearly perfect, was, in fact, only in its infancy. The black bees had been described as very industrious, quite gentle to handle, good comb-builders, hardy to stand the winters and moderate swarmers, when their early and prolific brood-rearing was taken into consideration. And before the advent of the Italians we thought that came very near perfection. But the Italians proved that the claim of industriousness for these black bees was only comparative, for the Italians would toil all day with only "pennies" in sight, while the blacks would not work unless there were dollars, halves, quarters, or at least dimes lying around to be gathered. To illustrate this:

When I had my first Italians, I came through with three colonies in the spring, with something over 20 colonies of black bees. I tapped a few maple trees, and made the sap about twice as sweet as it came from the buckets by stirring sugar in it. This sweetened water was placed in outdoor feeders, and to start the bees to work, somewhat thinned honey was used. I soon had bees swarming over the feed, and they came in about the proportion of colonies I had, or about one Italian bee to seven black bees. As soon as the thinned honey was gone the black bees began to diminish, while the Italians increased, when, two hours from the time of starting there was not a black bee around the feed, but the Italians kept on working till the feeders were licked up clean.

This experiment proved it was true that the Italians would store enough for wintering, and often give a small surplus in years so poor that the black bees had to be fed to keep them from starving during the winter months In a really good year, when nectar was abundant, there was little difference in favor of either along this line of gathering sweets.

When it came to gentleness, there was a great difference in regard to their manipulation while in their hives, the Italians keeping steadily along with their work as a rule, while the black bees would run wildly about, take wing and sting, if as little smoke was used as with the Italians; while if smoke enough to subdue them was used they would often stampede off their combs and clear out of the hive If you held a comb up to the sun or light for a prolonged examination, the bees would collect in little knots at the lower corners of the frame, and drop off on the ground elsewhere, thus endangering the life of the queen, should she happen to be on the frame of comb you were inspecting. This almost prohibited the finding of black queens, where the necessary amount of smoke was used to quiet (?) the bees, while without such an amount of smoke the "hunter" was almost sure to get severely punished with stings.

Now while this was true as regards handling combs and hives, yet from years of experience, I found that with swarms hanging out on limbs and elsewhere, after clustering during swarming time, the blacks would resent being interfered with for hiving, far less than did the Italians; and as about all the handling of bees which was done before the advent of the Italians was that of hiving or handling clustered swarms, by the great mass of those having bees this gave rise to the idea that the blacks were really a gentle race of bees.

As to comb-building qualities, there is probably no race of bees known which will give more or whiter combs than the blacks when there is a "down pour" of nectar, lasting for two or three weeks, but with a poor or intermittent flow of nectar, the Italians will go steadily on

with comb-building, just as if they were sure they would gather enough honey to to fill it all.

The sections I used in those days of black bees were 5¼ inches deep, and with an intermittent flow here would be an active starting of comb-building, and a stopping of the same as many as from 3 to 5 times in building a comb down to the bottom of the section. And, as every period of activity caused some of the cells to be lengthened, while at times of stopping others would be capped over much shorter, this gave the surface of the comb a "washboardy" appearance which was quite detrimental when it came to marketing the crop. At the same time the blacks were thus building combs and finishing them in the sections in this way, the Italians would build their section combs right straight down to the bottom, and cap them over as even and nicely as in one of the best of seasons. But in a really good season, there the blacks would show their superiority in this matter, for their section combs would be as straight and smooth as a board, while the cappings would stand out away from the honey, so that the face sides of these combs would be of snowy whiteness, while the darker Italians would use so little wax in capping and plaster this down on the honey, apparently to save wax and space, that the face sides of the combs in section honey built by them would have watery appearance, this making it unattractive to the purchaser through its appearing like another and a darker grade of honey. However, with the golden Italians we have something which cap their honey very nearly as white as the blacks, while they have all the good qualities of their darker sisters

As to standing our winters, nothing need be said for either race south of 40 or 41 degrees north latitude, as any race of bees should stand the winters that far south; and in the colder parts of the United States and in southern Canada there need be little trouble where cellar-wintering is practiced. When it comes to a confinement of 3 or 4 months with the mercury down from the freezing point to 30 to 50 degrees below zero, with the bees wintering "out in the open," there is little doubt but what the black bees can exceed in hardidess their more yellow sisters. However, here in central New York, they stand our winters remarkably well, where any one is obliged to winter bees out on the summer stand. A little protection by way of double-walled or chaff hives seems to carry them throvgh equally well with the blacks.

As to the swarming of the two races, I see very little difference, though I think the black bees are much more prone to cast many after-swarms. But as nearly, if not quite all of our pratical apiarists know how to control after-swarming, this counts for very little.

The main point in favor of the Italian bees, as I see it, is their pliability under the hand of good management. Of course, all their other good qualities are extremely valuable, but all of these mnst take a back seat for the fact that they are so pliable in the hands of the apiarist, so that the maximum number of bees can be brought on the stage of action just in the right time for the honey harvest, be that for clover, basswood, buckwheat, or fall flowers; or at the right time to secure the greatest amount of nectar from any given flow that may be one of the regular supplies for our surplus, no matter what its time of blooming may be.

I have said nothing about the Cyprians, Carniolans, Holy Lands or Syrians, Caucasians, etc., because I consider none of these, after giving all a fair trial, little if any better than the blacks, taking all things into consideration.

He who builds no castles in the air, builds no castles anywhere.

The Discovery of how "Shaking" Increases Bees' Energy

By Louis H. Scholl.

This seems to be a new theme to the beekeeper's fraternity. With the writer it is an old one. For more than a dozen years it has been made use of in our apiaries. The discovery (?) was made in my first beekeeping, over fifteen years ago, when only a twelve-year-old boy.

In purchasing some bees from a neighboring beekeeper, it happened that he would sell me only the bees and the combs in their frames, wishing to keep the hives for increase; so we just traded the frames. The colonies were simply transferred, combs and all, into my new hives. The bees had been in the old hives for years, receiving very few manipulations, and, in consequence, had become "sot in their ways," instead of keeping up with the times, as it were. The combs were old; the frames covered with burr and brace combs; and the hive corners were thickly coated with chunks of propolis. The whole reminded one of an old, run-down farm. The people on it had become "sot in their way," their energy and enthusiasm had vanished, and instead of making the farm pay, it was being eaten up by mortgages. Many a beekeeper, I dare say, has seen just such conditions. And many a one has also seen the great change that took place with these same people after they had moved to a new place, be it on another farm, or to follow a new line of business. They became possessed with new enthusiasm and energy. The new place was overhauled, everything was done with a vim that was lacking entirely at the old home. The results are generally for the better. But how long does it last? They soon become "sot in their ways" again, and unless stirred or "shaken" up again, remain as before.

Apply this to a colony of bees and you will have exactly the same conditions. Leave them alone entirely, or manipulate them only sparingly for any length of time, and what is the result? Give them proper attention, *handle them, shake them up*, and note the different results. Now go a little further and "shake" them up a little more and oftener than you *used to think* was necessary, and the better results show that there is something in it. Proceed still another step, make use of this "shaking," apply it in a systematic manner, by which better results can be obtained, and you are doing exactly what a *few* have already done.

That the tearing up of the bees' old home had an effect on them, the newly bought bees soon showed, with new, clean hives, and the frames scraped clean of burr combs and propolis, with the combs mutilated in straightening some of them, and patching worker combs in place of drone comb and thereby bruising the sealed honey to some extent, put the bees into an entirely different condition. It put them to work. They became possessed of new *energy* caused by the shaking up they went through, not only in moving them from one place to another but by the manipulations of the colonies themselves.

The Wonderful Differences in Results.

The difference between the colonies of the two places, the new and the old, was so great that I could not help noticing it. And this has many times been noted since. While those left unmolested on the old stands yielded an average of only 37 pounds of *extracted* honey in the same season, my "shaken" colonies averaged 128 pounds of *comb and extracted honey, and thirty per cent. increase of colonies.* Do you wonder that the increase was noticed by me as only a twelve-year-old boy will who is alert and anxious to learn "all about bees," with the bee-fever already at the dangerous point of 104 degrees?—"Beekeepers' Review."

The Comparative Cost of Comb and Extracted Honey.

It requires as a first outlay a little larger investment for the extracted-honey equipment; but this equipment is permanent, and does not have to be renewed every year. In comb-honey production the work piles up all at once, and cannot be neglected. An extracting super may be left on the hive indefinitely, and it may be only partially filled or clear full, while the comb-honey supers, on the other hand, must be carefully looked after or there will be a great many unfinished sections to melt in making the expensive *strained* honey.

I believe there is but little difference in removing the two kinds of honey. It costs about as much to scrape and case comb honey as to remove, extract and pack extracted honey. The extracting supers themselves are perhaps a little less expensive than comb-honey supers; but both are permanent investments, and nearly balance. However, when I count the sections to be bought for each crop as well as the foundation, etc., there is a cost of at least one cent a pound on comb honey that does not have to be figured on extracted honey. Final packages for each approximate about the same value.

There is more than this to consider, however. Extracted honey should never be produced unless it is largely capped, and the wax from the cappings will just about pay for the expense of extracting. Several years ago I had some estimates on this point, but have forgotten the details, as I have so little to extract of late. Any way the amount of wax obtained varies, depending on how much the combs are bulged and on the amount of burr-combs. It must be remembered that beeswax runs into money fast, and needs no expensive packages, and is not nearly so perishable as honey.

Now, suppose we melt three out of four extracting combs, retaining one for a bait comb. On the basis of 4lbs. of wax to hold 100lbs of honey, and with wax at 25 cents per lb., we have the proportion of 75 cents' worth of wax to the 100lbs. of honey. I think that extracted honey and the cost of labor of producing, and packages up to the time it is ready for shipment, cost fully 2 cts. per lb. less than comb honey. In addition to the cost, the management necessary for extracted honey is easier and less skill is needed, and the honey when gathered is less likely to be injured, can be kept indefinitely, and may be shipped more safely. If so desired, the extracting may be left to any convenient time after the harvest is over.

I have mentioned the fact that the first equipment for extracted honey is greater than for comb, but it is serviceable for years. With comb honey production one must put money into sections and foundation every year without knowing whether there will be any use for them; but with extracted-honey production there is no need of spending a cent for cans, etc., until the honey is actually in sight. Furthermore, because of the greater ease in controlling swarming, and the less amount of attention given to the details of management during the season, one can handle a greater number of extracted-honey colonies, and thereby materially augment his gross earnings, at least in the number of pounds produced. In localities where honey does not candy rapidly, it is not necessary to extract until some time during the late fall or winter, thus giving the whole time to producing through the summer, and leaving profitable work for the winter.

I wish to call attention again to the fact that wax is very valuable, and that much of it can be produced when colonies are run for extracted honey. Great quantities of wax are lost each season if bees are not allowed to use it in building comb. The bees use it for other purposes if there is no comb to build. When scraping sections I save the scrapings, which appear to be almost entirely

propolis; but when melted they yield considerable wax. Then I have many times seen nice white wax used to fill cracks about comb-honey supers; and where there are full sets of combs already built to hold every drop of honey to be stored, I have found workers loaded with wax scales, cracks stopped with wax, burr-combs put here and there without stint, and when not needed, bits of wax built against the quilts over the top-bars, sometimes amounting to a quarter or even half a pound—all this apparently done just to get rid of the surplus wax by using it where propolis would ordinarily be used. If the colony clusters outside the hive the bees will put little knots of wax even on the hive-walls. So far I have said nothing about wax scales that may be dropped. We can not see these, because the bees of a strong colony will not leave any sort of chip of wax or anything else where we are likely to see it. I think that burr and brace combs are the richest in wax of any thing we get wax from, and they are evidently built, at least partly, to get rid of the surplus.

I know that I am going contrary to popular opinion, but I have simply told the results of my experience and observation. Ready-made combs, during a rush of honey which comes on suddenly, are valuable, but otherwise they should be used only as a basis.

In producing extracted honey I should use a brood chamber of ten or twelve frames instead of an eight-frame brood chamber when running for comb honey, in order to prevent robbing of the stores. —Writer in "Beekeepers' Review."

We have to announce the severe illness of Mr. E. Tipper, editor of the "A. B. Bulletin." Some months ago Mr. Tipper was attacked with an elileptic seizure, and has been suffering from the effect ever since, at times his condition causing great anxiety to his family.

THE GROWTH OF A BEEKEEPER.

How a Sickly Boy Battled with Disease and Finally Became an Extensive Producer of Comb Honey.

BY ALLEN S. HOWDEN, HIS FATHER.

It may be of interest to some of the readers of "Gleanings" to hear something of the progress of one bee-man, and of the business, which is now the largest in Allegenty Co., N. Y. As his early history has never appeared in print I feel as though my letter would be more complete if I were to go back a little.

When Leon F. Howden was four years of age he fell from a chair on a hard floor and sustained a bruise on the hip which caused blood-poisoning and a psoas abcess, and, later, diseased bone beneath it. When he was taken down with this trouble he was a fat, rugged boy, and weighed 50 pounds. The abcess was not properly drained at the start, and the blood soon conveyed puss to other parts of his body until other abcesses of like nature appeared one at a time for a period of two years, until he had twelve of them in all. Several of them were so deep-seated that, while they were gathering, they caused an unusually high temperature, and some even started on the bone, not healing for months, and then only when pieces of bone had been discharged through the openings.

Many noted doctors and surgeons of the country pronounced the boy incurable. He underwent seven operations at his home, some of which were of two hour's duration. When he had improved a little, but before he was able to walk again, his parents took him in their arms and went by train to Rochester to consult Dr. E. M. Moore, at that time an old, white-haired, feeble man, but one who

had been one of the greatest surgeons known in Western New York. At that time Dr. Moore said the only thing to do was to get that dead bone out of the the boy's hip. If it could'nt be done at one operation, another trial should be made. He was brought back home without the operation at that time, but was later operated upon by a son of the former surgeon. At this time Leon was away from home, and was in the hospital bed two weeks. He was in the General Hospital in Buffalo two weeks at a time, two different times, and each time was operated on. He took chloroform twelve times in all.

When he commenced to gain, his weight was 25 pounds; and at 15 years of age he was sickly and far from being able to work on the farm with his father and brothers. It happened, however, that a near relative was about to go out of the bee busIness, having 24 colonies of bees in good double-walled hives. These were bought by his father, with 50 good empty hives, for 40 dols. Because of Leon's condition they were brought home and turned over to him for his own. In a short time he showed an an unmistakable interest in the bees, and his parents were sure that he would be successful with them if he had the strength to take care of them. He soon had a copy of "ABC of Bee Culture," and a little later subscribed for "Gleanings." His mother says that it always brings a smile to Leon's face when he comes in and finds on the stand a new "Gleanings."

Well, he kept improving in health until the last thing to do was to have a piece of skin the size of a silver dollar taken from one of his limbs and grafted on to a sore that would not heal, which was on the other limb, just above the ankle. Now he is 20 years of age, standing by his bench near his oil-stove in his honey-room folding sections and putting in foundation at the rate of over a thousand a day. In one day recently he put together 40 honey-boards of 33 pieces each, driving 90 nails in each board. From the little fever-burned boy of 25 pounds he now tips the scales at 160, weighing the most of any one person in the whole Howden families. He is hearty and strong, and always wants a good big chunk of candied honey near his plate at meal time. Last season he sold nearly a full carload of good to fancy comb honey; besides that he extracted and sold to his friends and neighbours 12,000 pounds. He has 250 colonies of bees. Leon aspires to be the greatest producer of fancy comb honey in the State.—"Gleanings."

For uncapping, there is suggested, "a straight-handled tool on plain work, and another knife, with an offset handle, in places which can not be reached with the straight knife." Are not those "places" depressions, and would they not be better reached with a straight handle and a curved blade?—"Gleanings."

SHAKING BEES OFF COMBS.

How to Easily Jerk Them off with an Upward Movement.

Most of beekeepers try to dislodge bees from combs by shaking the combs so as to jerk them off in a downward direction. This is exactly what the bee is guarding against, and Mr. Doolittle, in his new book, tells how to get them off very easily with an *upward* jerk. Here is how he does it:—

Let the projecting ends of the top-bar to the frame rest mainly on the big finger of each hand; then, with a quick upward motion, toss these ends against the ball of the hands at the base of the thumb, and at just the instant the ends of the frame strike the ball of the hands give the hands a quick downward motion. This takes the bee off its guard, as it is holding on to keep from falling off the comb downward, having no idea that there is any danger from falling off up-

ward. But this "falling upward" is exactly what it does, as three-fourths the bees, when I shake the combs, are tossed up in the air as they are dislodged. The instant the ends of the frame strike the fingers again, toss it up against the ball a second time, and then back to the fingers, when, if you get the "hang" of the matter as you will after a few trials, you will find that 990 out of every 1,000 bees are off the comb.

"My John" and the Bees.

I send you a pen picture of my John, who is so afraid of a honey-bee. Would that I had a kodak, and I could have sent you a very funny picture.

One very warm morning in July, I heard faint yells in the direction of the apiary. Hastening out I saw legs beneath a quilt that was hanging on a line near the apiary. Investigating closer, I found it was my John who had taken refuge under the quilt, as in a little tent. Louder yells reached me. "Come quick! The bees are after me!"

I hastened out with broom in hand. Vainly did I bang at those bees, often banging the quilt, which only brought forth more yells, such as, "Can't you hit them?" "I am nearly smothering;" and other words that would not look well in print.

At last I murdered all the bees that were near, and John came out of his tent and fanned himself.

That evening he was sitting on the porch. I heard yells again; also a loud bumping. I ran out and John lay on his back fighting a bee with his straw hat, his elbows as they came down on the porch floor making the loud bumping. I went to his rescue and killed another little bee.

He stayed in the house after that. Some way the bees don't care for John. —Writer in "Am. Bee Journal."