The Australian bee bulletin. Vol. 13, no. 6 September 29, 1904

West Maitland, N.S.W.: E. Tipper, September 29, 1904

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THE AUSTRALIAN Bee Bulletin.

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

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Per Annum 5s, booked 6s 6d, in Australasia, outside N.S.W., add 6d. postage

N. S. W. BEE-FARMERS' ASSOCIATION.

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RULES & OBJECTS.

1. The careful watching of the interests of the industry.
2. To arrange for combined action in exporting honey to relieve local glut when necessary.
3. To advise members as to suitable localities for establishing apiaries.
4. Any beekeeper can become a member on approval of committee, subscription 2/6 per annum.
5. That every member with more than 50 hives shall be allowed an extra vote for every additional 50 effective hives.
6. No member be eligible for office who has less than 50 effective hives, or his subscription is in arrear.
7. The Association to consist of a central body and district branches affiliated with it.
8. The principal officers be such as will undertake to meet each other in committee at least once in twelve months.
9. The officers shall consist of President, Vice-President, Treasurer and Secretary, and Executive Committee.
10. After the first election of officers, arrangements to be made by the Secretary to call for nominations for office-bearers, and issue ballot papers prior to the next annual meeting.
11. Supply dealers or commission agents cannot become members.
12. Members unable to attend meetings or conventions can authorise or nominate any member they know will be present to vote for them on any subject brought forward. Such vote or votes to be in addition to the member's present own vote.

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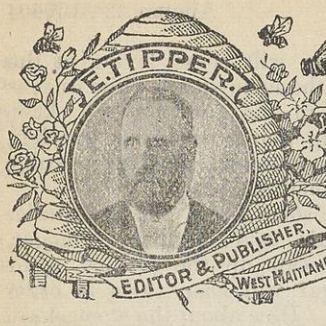

THE AUSTRALIAN BEE BULLETIN.

A MONTHLY JOURNAL

Devoted to Beekeeping

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

MAITLAND, N S.W.—SEPTEMBER 29, 1904.

The following is a list of advertisers in our present issue :—

Supply Dealers.

C. J. Manning, Chuter-st., North Sydney.

A. Hordern & Sons, Haymarket, Sydney.

The W. T. Falconer Manufacturing Co., Jamestown, N.Y., U.S.A.

L. T. Chambers, Franklin-St., Melbourne

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T. Bolton, Hamilton, Victoria.

R. H. Jervis, Moss Vale.

H. Edwards, Kemp's Creek, via Liverpool, N.S.W.

Honey Tins.

Chown Bros. and Mullholland, Ltd., Thomas St., Ultimo, Sydney.

Miscellaneous.

A. Hordern & Sons, Haymarket only, Sydney.

P. J. Moy & Co., 161 Sussex St, Sydney.

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H. Prescott & Co., 336 & 338 Sussex-St, Sydney.

W. L. Davey, Station-St., Fairfield, Vic.

SEASONABLE.

The busy time of year is now on. Abundance of pollen from the many sources that the bees can now procure, encourages the queen to lay. Soon the hive is filled with eggs and larvæ, then sealed brood. From one or two frames covered with bees there may be eight, nine, or ten, yes thirteen frames occasionally with brood in. The hive is filled, more especially if honey is coming in. Now put on your supers, perhaps leaving the ruberoid under the super, so as not to chill the brood by enlarging the hive too quickly, or you may give a frame with starters in next the brood. In spite of this queen cells will start. Every hive should be looked through every nine or less days to see if queen cells are started. In which case, if we wish only moderate increase, we remove the hive to a new place ; place a fresh one on the old stand, with a frame with one or two queen-cells. The old hive (the removed one) containing the queen, being depleted of bees, who all go back to the old stand, give up the idea of swarming, and destroy the queen cells in it. If you wish to supersede the old queen, you may let them rear a queen from one of these cells. Watch when these young queens are likely to emerge, and give each hive with such a frame with larvæ and eggs. This is a matter we pay great attention to. Even when we catch and hive a swarm, a frame of larvæ is the best retainer of the

swarm we know of. Queens raised under the swarming impulse, when honey is coming in, and there are abundance of young bees emerging to become nurse bees, are amongst the best you can have. Watch for your poorest honey-gatherers in order to supersede them.

EXPLANATION.

Complaints have been made of inaccuracies in the report of Dr. Cherry's address at the Melbourne Conference in the large circular issued. At the time he delivered it he promised he would revise the proof if sent to him. It was set up in type immediately on our return, and proof forwarded to him. We waited several days and wrote again, but no reply. In the meanwhile proofs of rest of matter had been returned, and so the sheets were printed off. Afterwards the proofs came, and next issue of A.B.B. contained Dr. Cherry's revised address. A scientific address is one of the most difficult to report, and believing we would get the matter revised, we relied more on the revision by Dr. Cherry than our notes.

The less a colony is inclined to swarm the more honey it is likely to gather.

There are 400,000 people in the United States engaged to some extent in the bee and honey business.

A Californian beekeeper reports seeing a lizard catching and killing six or seven bees in less than ten minutes.

Gleanings says the Russian Government has commissioned a man named Titoff to go to America to learn beekeeping.

Bags soaked in alum water and sewn with thread treated the same way are mouse proof; use 1lb. of alum to about 20 bags, and no mouse will attack the contents.

A circular received from C. H. Brierly stating that the Income Tax Commissioners are going in for larger powers, and urging a royal commission should be appointed to see into the matter.

Old queens will cease laying at the cessation of the honey-flow, while queens reared late in the summer will keep brood-rearing going until cold weather, putting the colony in the best possible wintering condition.

It is said some large pickle factories use sulphuric acid to make vinegar. They say it eats up the pickles, while honey vinegar will keep them in order indefinitely. How about the stomachs of those who eat the pickles.

A John Fixter, in Canada, has had a big wooden tank made so that it could be taken down, leaving a solid block of honey weighing a ton, when candied, to be wired into little blocks and thus retailed.—*Gleanings.*

The *Irish Bee Journal* says "Recent experience has proved that it is easier to obtain large yields than to market the honey when secured. At any rate, in districts remote from large towns remunerative prices cannot be obtained."

There is an old tradition in Ireland that bees come out of the hives at midnight on old Christmas day, January 4th, in each year, making a wonderful noise, and eventually appearing on the alighting board. There are many persons, it is said, have seen such.

A discussion as to placing frames crosswise or parallel to entrance, the majority were in favour of placing them crosswise. Crosswise of the entrance does not admit of the hive leaning forward, but they are said by some to keep the hive warmer in winter.

If a watering-can or other vessel in which nothing hot is to be put has a leak try beeswax as a solder. Warm over the stove the spot to be mended, warm also the wax and put a bit of it flattened out on each side the hole, then press firmly together.

The United States has 4,500,000 colonies of bees; Germany, 2,000,000; Austria, 1,800,000: Spain, 1,700,000; France, 1,000,000; Great Britain, 500,000; Holland, 250,000; Belgium, 200,000; Denmark, 100,000; Greece 50,000; Switzerland, 30,000.

The editor, the real "journalist" of the future, must be a man of such known integrity that he will be above the suspicion of writing or editing against his convictions. He must be known as one who would resign rather than sacrifice his principles to any business interest.

We have been asked to look out for a buyer for 400 hives in eight apiaries. Last year the writer took eleven tons of honey, and sold all in his own neighborhood, having, he says, no other apiaries within 60 miles. Any one desiring such might communicate with us.

We would call the attention of our readers to the fact that Mr. R. Beuhne, of Toboorac, Vic., is a supplier of first-class foundation. An advertisement stating this was miscarried in the mails, and did not appear in our last issue. We trust that the omission will not be the cause of loss to him, and ask anyone now wanting foundation not to forget to send to him.

We have received from the British Australian Co., Ltd., Park-st., Sydney, a circular, in which they are offering £160 in cash prizes for the production of tobacco leaf. They have sent samples of the leaf required to the Mayors of Quirindi, Bathurst, Tamworth and Texas. Prizes run from £10 downwards. Samples must be of two tons weight. First prizes will be paid 8d. per lb. for the whole two tons, and second prizes 7d. per lb.

We are exceedingly sorry to have to record the following. Mr. Latimore is an old and esteemed beekeeper: A very serious accident befell Mrs. Robert Latimore on Sunday morning, on the Wingham-Taree road. She was, with her son, about 12 years old, in a sulky going to church, when the horse shied, and the sulky collided with a log just off the road. Mrs. Latimore was thrown out heavily on her head, and picked up unconscious and removed to the district hospital. She sustained nasty injuries to the face and concussion of the brain. Hopes are entertained for her recovery.

One day recently a guard on a N.S.W. railway, the recent possessor of one swarm, was expatiating on the excelience of a new hive he had invented, something on the long idea plan, a piece of perforated tin dividing the frames in two parts, with a hole in the rear causing the bees to go out there instead of in the front, so making the taking of honey easy. He looked very straight when informed by a lad present that that kind of thing was used by Methusaleh. On enquiry what honey was selling at now, his gaze was further prolonged when informed there was such a glut it could not be given away.

VICTORIAN APIARISTS' ASSOCIATION.

BY W. L. DAVEY.

WORK FOR THE FUTURE.

Hear, hear, Mr. President, I have much pleasure in endorsing your remarks.

Like our President, I have been president, and taken an active part in all conferences and meetings for the past seven or eight years, and from my experience and knowledge of the beekeeping industry I maintain that there never was a time when Australian beekeepers needed to combine more than the present one. In addition, I am bold enough to say there never was a sounder or more prosperous organisation than the V.A.A. As proof of the faith in this Association that some beekeepers have, I may mention that I have just recently received a 10s. donation from a beekeeper in another State, who says that he has a very high opinion of the V.A.A., and that all Victorians ought to support it, especially when they have such practical men as the leading Victorians supporting it and heading it.

Beekeepers must not say, "What can I get out of it?" They must themselves endeavour to see what way they can make the Association stronger; they must take a pride in their Association, and endeavour to build it up. They

must spread its fame, defend its name, so that as a united industry we shall advance and prosper.

Who amongst us is bold enough to say that for the 10s. paid in subscriptions the beekeeper shall receive nothing as an individual? I believe myself that in the course of time this Association if properly supported, will probably be exporting its members' honey to foreign markets, but if honey comes so low that in Victoria we must look to foreign markets for our profits, then we must have none of the agents' treatment, such as the well-known "butter scandal," but we must have our organisation strong enough to undertake this work, then I believe every man will receive ten times over any amount he could possibly pay in subscriptions to our funds.

Let us all be united, and present a solid front; be not afraid to pay a solid subscription, and eventually to receive a solid and lasting benefit.

To the credit of Victorian beekeepers, I am glad to say that I have not yet had a single refusal from old members to pay the new rate. I have had some complaints, but upon explaining matters they have promptly replied with the full amount of subscription; so come along and join us, everybody who keeps bees. We are just on the eve of forming No. 2 Branch at Horsham, and No. 3 at Stawell, so send in your subscriptions, until the books are full with your names and addresses, then we will endeavour to have a branch in every locality where honey production is carried on commercially.

Come along, beekeepers! The President cannot do all the work. The secretary or executive council cannot do everything. We will all do our utmost; we want you to become a member, and then get others to join, until the little one shall become a thousand.

Any beekeepers having anything of importance for the council to discuss, anyone forming branches or wishing to do so please send a full report of what they have so far accomplished, to the secretary, to place before the next meeting of the executive, early in October.

I have several letters of importance, copies will be printed in next issue.

One thousand reports of the Conference have been sent throughout Victoria. Write to the secretary for more if you have not enough for all beekeepers in your district.

F. W. PENBERTHY.

The Victorian Apiarists' Association had a good muster—35 beekeepers, without the inducement we had to go to Bathurst a few years ago—free rail. Their mustering is a great contrast to the subscription list to such a good cause. Just fancy only £9 5s. 5d. given out of £12000 in returns, to safeguard their rights, with such go-ahead men in the lead- men with energy and experience, which has lifted them above the average beekeeper, the loss of whom through lack of support in an Association cannot be estimated in money to the beekeeping industry of Victoria.

The President's remarks seem to be a bit wide to me, when he says the beekeepers in other States were able to land their honey in Melbourne cheaper than Victorians, who had to send their honey by rail. I don't think there are many bee yards on the wharves in this State; I know mine is not, as it costs me £3 16s. 6d. per ton to get it to the nearest wharf by rail alone, besides team 12s.

Ringbarking. I think they would make more progress if they would compromise with the grazier by leaving a certain number of trees to the acre, and get the thin end of the wedge in that way. There are very few of us who have any idea of the number of trees to the acre to give the best results in honey. I know the tree that stands out alone has the greatest hum in it when in bloom during a honey flow, and that the trees that are from 20 to 30 feet apart are very silent.

Dr. Cherry's paper is very good. Flour is better than nothing as a substitute for pollen. I found only 10 per cent.

of the brood capped when fed on flour alone for a month; the larvæ thrive alright until the third or fourth day from the egg, and then a large percentage disappear before being capped.

REPLIES TO QUESTIONS.

Our leading article of last month, and Mr. Ferguson's opinion as follows:—

W. F., Bungowannah Aug 9th—I am surprised at your idea of raising the price of honey by decreasing the number of beekeepers. I maintain that we would get a better price if we produced a ton for every pound now produced as we would then be able to keep up a regular supply of uniform quality. The more beekeepers the better so long as they do not encroach on each others runs. A large increase in the production of honey might reduce the price for a while, but the reduced price would lead to an increased consumption, and also to a sound export trade.

E. J. RIEN.

The idea that there is no such thing as overproduction in the matter of honey, ought by this time to have been exploded, and if we were to "produce a ton for every lb now produced" where would we be? Look at our experience the past few years. A plentiful harvest, a difficulty to sell; a bad honey harvest, merchants glad to get your honey almost at your own price. Now we have had a bountiful year, and our honey is unsaleable, through the ordinary channels we are told "there is a glut in market." There is a limit at which it will pay a man to give his whole time to the production of honey; when persons are in receipt of a (government) salary or wages they can sell the honey at any price, as we find them doing to our loss. Your leader puts the matter about as clear as it is possible to put it. There are only a few people in these states comparatively, and we have a very heavy handicap in the handy and cheap form in which golden syrup, treacle and jam, etc., are done up; also are heavily handicapped in the matter of export as you have clearly shown. As to increased consumption, I doubt very much if that would come, unless we give our honey away. While I deny no man the right to keep bees if he so choses, yet I know by sad experience, the multiplication of beekeepers, and therefore increased honey production has lowered the price this year lower than it has been for years. We do not fear or care for the competition of expert beekeepers, those who give their whole time to the business and work for it to maintain them; but it is those who take up bees as a side issue, and therefore, if they only get a low price for their honey it is not much loss, and as every Tom, Dick and Harry seem to be going into the business on these lines, not to speak of civil servants, there is nothing left to the expert but to leave the field to them, for only the men located in very favourable situations will be able to do anything at it.

S. T. MAIN.

As to Mr. Ferguson's statement as to the more honey produced the better the price, I do not take him seriously, as the statement is an absurd one and not according to facts.

PAUL MOORFIELD.

What are we to do in regard to our industry? After reading your leading article on pages 94 and 95 of your last issue, it must make all beekeepers who intend to try to make a living for themselves and their families think a great deal before they put all they have in bees. There is no doubt a great deal in what you say, and since we have had Federation it makes everyone equal in the States in regard to the markets of the Commonwealth. Take Melbourne for example, as H.R.G. says, the commission houses are full, and at one place I was at they told me that they were getting a quantity from S.A. free in Melbourne at 2d. per pound. After paying expenses what will the beekeeper get for himself?

There is one good point in it, and that is that good light honey will always command a better price. I cannot make out why the quality should be judged by the light colour, only some of the honey I tasted in Melbourne was not to be compared, in my opinion, to some of the amber colour. I do not think that the very dark will have much show in future. Another point is, as all beekeepers know, while there is one good year there are several bad ones, and before Federation that used to stand to the beekeepers in each state, but now, if this is a poor year in N.S.W. it does not say that it will be a failure in all the states, with the result that we cannot depend upon the good years making up for the bad.

I should advise all beekeepers when they do well, and I hope they will not blow about it and write to the papers and tell everyone what amount they made from half an acre of ground. I think also that the middlemen, storekeepers, &c., want too much profit, but as we cannot do without them well, what can we do? Combine, and see if we could not by that means steady prices a bit.

There is no doubt good work was done at the last Conference or the V.A.A., but I should like to see some more work being done for those who are now in the industry, and less for those who intend to come into it. I have no doubt this will appear selfish, but if you have a family to

keep, being generous at their expense will not keep them in clothes, food, boots and shoes, etc. Although our product is good for the inside of the body it is not so good for the outside. We have talked about exporting, &c., but no good has come out of it, and I think if each beekeeper would go round their own district from house to house and leave a sample of his honey, and also some leaflets explaining the benefits of honey, as a food, also tell them the storekeeper that stocks it. If they want to buy some sell them some, but not at the prices you sell to the storekeepers, but put on a reasonable profit, as it is only right that they should get some profit, but not the amount some of them want. By that means honey would become known, and more would be sold, as from what I can see it seems to be only an off line, and it is hardly ever you see the storekeeper quoting it in his advertisements, but when he found that there was a demand for it he would put it in a prominent, so that people would see that he kept it in stock. In regard to W.F., I think that it will be difficult to find a market without increasing the present number of beekeepers, and I think if those who have good honey would only keep some of it back in the good seasons they would be able to keep up and repeat supply. And why should not the supply dealer live as well as well as the beekeeper? If he does not have fresh beekeepers to buy his hives, etc., he would have to shut up shop, and that would never do, for perhaps in time they might take all the honey that anyone who buys his supplies can produce by them. Now, if they would only make that offer then I should say nothing about them trying to make beekeepers. I should like W. F. to tell us how the increase in beekeepers and the increase in production is going to lead to increased consumption, and how he is going to bring it about. By so doing he will confer a benefit upon a large number of beekeepers, and perhaps those who are now adverse to this way of thinking.

QUESTION NEXT ISSUE.

Have you worked any apiary with queen excluders and Porter bee escape for extracted honey, and with what result?

Echoes from Continental Journals.

(*Specially translated for A.B.B. by J.R G.*)

AN AUTOMATIC BEE SMOKER.

The *Petit Almanack des Abeilles* during the last 18 months or so has largely devoted its space to a discussion upon bee-escapes. However ingenious these appliances may be to me they are perfectly useless. A simple sheet of "excluder" zinc, hindering queen and drones from entering the honey chambers, greatly facilitates the expulsion of the bees from the supers. But in my opinion the true bee-escape (or "super-clearer" as our English friends more appropriately term such contrivances) the only practical, the only economical is the Bingham or the Layens Smoker.

The last-named — the Layens — has greatly my preference, because it works *by itself, automatically*, for at least half-an-hour, giving forth during that time an abundant volume of smoke, while the Bingham only smokes on compression of the bellows. To vigorously compress the bellows so as to make it work properly one is often obliged to take the smoker in both hands. The jerky, *staccato* movements involved in this, in presence of a hive already irritated, are they not often the cause of multitudes of stings to the unfortunate operator? Thus in place of subduing the angry bees this smoker only stirs them up the more, and, in addition, prevents one having his hands free to manipulate the hive.

The Layens smoker, on the contrary, puffing away *automatically* and regularly, ejects a stream of smoke, copious and cool. It is like a battery of artillery laid upon the enemy, and it protects the beekeeper most efficaciously.

TO USE THE LAYENS AUTOMATIC SMOKER.

As with an ordinary hand-compressed smoker, direct a quantity of smoke over the tops of the frames, and then guide the nozzle of the smoker between the frames, and in a few seconds, especially if the honey is sealed, the bees have almost completely evacuated the super. Then you place your "Layens" upon one corner of the hive, where it continues to protect your hands from stings, as it incessantly emits waves of smoke, which drive back the bees, while the Bingham *requires an assistant* to work its bellows, and so maintain an almost continuous

stream of smoke. [Note.—I treat this question from the point of view of the intensive culture of bees, and not as an amateur.]

One may object that with the Layens you run the risk of scorching bees more easily than with the Bingham. I admit this, but, with a little skill, one quickly succeeds in understanding how to fill and otherwise regulate this appliance in such a fashion that *it will never burn.* Moreover, a prudent beekeeper will always test with his ungloved fingers (away with gloves for all true apiculturists !) the degree of heat from his smoker before directing it upon the bees—it is the affair of half-a-second.

Thus the Layens smoker is a precious auxiliary, which in the apiary fills the place of an assistant operator, and spares the beekeeper himself many a sharp stinging.

As fuel I employ cowdung dried in the sun. It only costs the labour of collecting, and it produces a mild smoke, which does not blind or distress the eyes like that from rags.—J. Conterel in *La Revue Electique d' Apiculture.*

Translator's Note.—The above article seems well worthy of consideration, coming especially as it does, from the pen of one of the largest and most scientific apiculturists of France. That beekeepers in Australia have not been generally aware of even the existence of an automatic smoker may be traceable to the fact that the American supply firms, whose ideas control and dominate Australian beekeepers, do not stock the article in question. Brilliant and ingenious inventions by Frenchmen are by no means rare, and it is very possible that the "Layens" automatic smoker may be one of these, neglected unjustly by American manufacturers, as was for many years the Cowan reversible extractor (a purely British invention.) The price in France of the Layens smoker is 9 francs (about 7s. 3d. each.)

TREATMENT OF A BABY STUNG BY BEES

We read in *De Bie* the following:—Last week an infant, 18 months old only, a little son of Monsieur Koslowski, of Goldan (Prussia), escaped the vigilance of his nurse, and toddled towards the bee yard. Soon after his father, attracted by the screams of the little mite, found him stretched out on the grass surrounded by furious bees, the face, ears, neck and hands of the unfortunate child being covered with stings. The father picked them out as promptly as possible, and then plunged the child into a cold bath. After a short immersion the affected parts were rubbed with vinegar. The mother then put the little one in her bed, and lay down beside herself to keep him warm. Soon he was sleeping gently, and some hours later awoke as lively as if nothing had happened.—*Bienenzeitung General.*

THE WRONG DOOR.

The following is told of an American gentleman who was stopping with his wife at the Hotel Cecil in London.

On their first evening there he happened to retire somewhat earlier than his spouse. Arriving at the door of what he imagined was his own room, and finding it locked, he tapped and called "Honey!" No answer came, and he again called, more loudly, "Honey!"

Still he got no reply, and, becoming somewhat uneasy, he shouted the endearing term for the third time with his full lung power.

This time a reply came, and in a male voice: "Go away, you blithering idiot! This is a bath-room, not a blooming beehive!" —*La Sabhier de Juillet.*

COMMISSION AGENTS.

The following letter explains itself:—

September 26th.

Referring to the 19 cases of honey received on Saturday on your account on which their is a reserve of 2½d per lb., we have examined the honey, and find some to be better than others, but we would strongly advise the removal of the reserve, as we see no prospect of obtain-

ing 2½d. The market is literally glutted with honey, which is selling from 1½d to 2¼d per lb. We would, therefore, be glad if you will favour us with your instructions, and you may rest assured that we will do our very best to obtain the highest market value for you, if you decide to leave the matter in our hands.

[The honey was all white box, in new tins. The reply asked if a microscope had been used in detecting the difference, or some of the tins had been in the shade when examined. The tins were all new.]

PRICES OF HONEY.

Maitland Mercury.—Honey, 1½d to 2d per lb.

Melbourne Australasian.—Honey, demand rather dull. Prime clear garden, from 2¾d to 3d; medium quality, from 2½d; congealed and inferior lower. Beeswax, from 1/- to 1/0½d.

Melbourne Leader.—Honey—Prime clear garden samples had sale to-day at from 2¾d to 3d, the latter being an outside quote, excepting for exceptional samples; medium to good lots realised from 2d upwards. Beeswax—Trade was moderately brisk. Prime clear lots were disposed of readily at 1s 2d, the range for medium to good being from 1s to 1s 1d.

Garden & Field, S. A.—Clear extracted 2¼d to 2½d per lb., dark and inferior 1d to 1½d.

S. M. Herald.—Choice liquid 2½d per lb., candied and good liquid 2d to 2¼d., inferior 1d to 1¼d.

Tamworth News.—Honey, 6/- per dozen bottles; 1/8 per 7lb tin; 9/- to 10/- per 60lb tin.

BEE-FARMING.

THE MAIN FACTORS WHICH ENSURES SUCCESS.

[BY W. AGER.]

THE INDIVIDUAL.

The success or failure in bee-farming as with all other pursuits depend upon the ability, tact, and fitness of the man for the occupation. The intending bee-farmer must have plenty of energy, perseverance, and a liking for the study of nature, and bush life. He must have a thorough knowledge of his business, and be able to put his knowledge into practice, do the right thing at the right time and keep ahead of his work. He must not run away with that idea, simply because he has a few hives of bees, that someone put into verse,

I vos one of dose happy bee mons,
I vos not got to verk any more,
I can sot down all day in de apple tree shade,
Or smoke mine pipe at de door.

for if he does he may soon have to pawn his pipe to buy spectacles to find his honey crop.

SELECTING A LOCALITY.

The first thing to be considered is locality, for if bees are to gather honey abundantly they must be where honey abounds. If one hundred colonies of bees are placed in one locality they may starve, while if they are placed in another locality which is suitable, they may store as high as 200lbs. of honey per colony. To get good crops the city and towns must be left out of consideration. The locality required is a good mixed forest of eucalyptus trees, consisting of ironbark or box (yellow being best) interspersed with any of the various gums (red or spotted preferred), bloodwood, peppermint, stringy bark, apple, etc. The disadvantage of selecting a forest consisting chiefly of one kind of tree, even if it is one of the best honey producing varieties, or a locality which depends on the one kind of flora for a honey flow, such as clover fields etc., is the fact that the flow of honey from any variety of honey flora is very uncertain, and again, our honey producing trees bloom periodically, some having a general bloom every two years, some every three years, and some longer. The bees may do excellent in the season that the one class of tree is blooming, but in the off years beekeepers in such localities are fortunate if their colonies of bees can keep alive and strong, for they sometimes have to resort to artificial feeding to keep them from starving. If a good mixed forest is selected in which to start the apiary, then, when it is the off year for one or two species of flora it mar be the year for the general bloom of the third, therefore, the chances of a crop are far more certain.

THE SYSTEM TO BE EMPLOYED.

At one time a swarm of bees was simply shook into a common box and left to chances. When it was considered that a good quantity of honey was stored the box was turned over, and midst stings, swearing, and destruction of bees, the combs of honey were cut out. After the operation the box was again stood in position and left to Providence. The honey was removed from the combs by straining it through a sugar bag or well-used blanket. Such a slipshod method is left far out of date by modern beekeeping, which can boast of the moveable frame hive and the extractor. The honey comb is now built in wooden frames which can be manipulated at will, the honey is thrown out of the combs by the extractor, and the uninjured combs are replaced in the hive to be filled again with honey by the bees. This is a great economy, as wax is a natural secretion of the bees caused by the consumption of honey, and it is calculated that 20lbs. of honey must be consumed by the bees to produce 1lb. of wax. It also gives a beekeeper sole control in the management of his bees, for whenever needed, he can take the hive to pieces and put it together again. The two most prominent systems employed are the Heddon and the Langstroth; of the two I prefer the Langstroth, and use the ten frame hive two and three storey high.

THE PECULIARITIES OF THE DIFFERENT BREEDS OF BEES.

The class or breed is not so much to be considered as the individual colonies of the breed, but each breed has its own peculiarities. The black or old English bee, although fairly industrious does not defend its home against intruding enemies, and will often allow the bee moth to take possession of and wreck its hive. The Cyprian bees are a yellow variety, the queens are generally very prolific and the bees are hardy and industrious workers. They often excell other varieties in honey gathering qualities, but they are generally savage and hard to subdue. The Carniolans are generally very gentle bees, but they are excessive swarmers which makes them objectable to the apiarist who is running for honey. The Italian bees are the ones which find most favour among beefarmers, the queens are fairly prolific, and the workers are generally hardy, energetic, and easily subdued, and they defend their hives well, keeping them clear of all vermin. But even in the Italian breed there are good and bad strains, and a great deal depends upon getting a good honey gathering strain. Some colonies of bees may store 100lbs. surplus honey, while others alongside may not store 20lbs. A beekeeper must note the value of each colony, breed from the best and weed out the unprofitable ones.

MANAGEMENT.

No hard and fast rule can be laid down for the management of an apiary, as the seasons differ, and the honey flow does not always occur at the same time of the year. A beekeeper must watch the conditions of the season, and work according to circumstances. In running bees for honey the main thing is to keep the colonies strong, and prevent them from swarming as far as possible. It is not the number of colonies of bees a person has that is going to swell his honey crop, but it is the number of bees that are in each hive at the commencement of the honey flow. 50,000 bees in one hive will store more honey than the same number of bees divided into two, for in the first the surplus bees turn their attention to honey gathering, while the energy of the latter is taken up in brood-rearing and will probably be in fine condition for honey gathering at the end of the flow. Swarming is nature's method of propogating the bee race, and it cannot be properly subdued, but there are conditions such as an over heated or over crowded hive, or one chocked with honey, which tends to excite swarming, therefore the beekeeper should prevent these condititons occuring. If the bees are given plenty of storing room and the queen sufficient space in the brood chamber to keep her employed, and the hive be well ventilated swarming will be reduced to a mininum. When the hives are fairly well filled with honey the combs are taken out and the bees shaken or brushed off them, and they are taken to the honey house. Here the cappings which confines the honey in the cells are removed with a heated uncapping knife and the combs are placed in the extractor where they are whirled round fast enough to throw out all the honey but not damage the comb. When sufficient honey is collected at the bottom of the extractor it is run off and strained into tanks through cheese cloth. It is left in the tanks for a couple of days to settle and clarify, and then it is ready to can off and market. The cappings which are shaved off the combs fall into an uncapping can where the honey drains from them and falls into the bottom compartment of the can. When the frames are all extracted they are taken back and placed in the hive from which they came.

WINTERING.

Wintering bees in this state is not attended with the difficulty that is experienced in such countries as England and North America. In these places of perpetual snows through winter beekeepers are compelled to winter their bees in chaff packed hives, or in cellars specially constructed for the purpose. Here the winter being much milder less difficulty is experienced. The essential

factors for successful wintering are well populated healthy colonies of bees, sufficient well ripened honey, and a warm dry hive. At the end of the season each hive should contain or be supplied with at least 20lbs of capped honey, or four Root-Hoff frames full and well capped over; this gives the colony sufficient to go through winter with and to build up strong in the spring before honey is obtainable from the pastures. All weak colonies should be united, the supers of empty combs taken off the hive and stored away, and the entrances contracted to prevent mice from entering the hives and destroying the combs. If a beekeeper has no convenient place in which to store the supers of empty combs they can be placed on the bottom board under the brood box of the hive. As the warmth always rises to the top they will not interfere much with the warmth of the hive and the bees, if Italians, will keep them free from vermin. If the cover of a hive is removed on a frosty or damp winter's morning the underside of it will be found dripping with water, the inside of the hive and the frames which are not covered by the cluster of bees will also be found damp. Any uncapped honey which is in the hive, and very often that which is capped and not kept dry by the bees, absorbs this moisture which causes it to deteriorate as a bee food and turn sour. If the bees are compelled to use this honey in the early spring it greatly weakens their constitution and reduces their vitality and therefore creates a fertile field for the bacteria of paralysis or spring dwindling to display its ravages. To prevent this condition a frame of wood should be made the size of the hive and two inches thick, the bottom covered with wire gauze and the top with a piece of bagging and it then be filled with chaff and set on the top of the hive under the cover, two half inch strips should be nailed across it, one at each end for the purpose of keeping the cover of the hive raised above it. This cushion so placed absorbs the moisture from the cluster and allows it to evaporate, keeping the hive comparatively dry and at the same time it retains the warmth in the hive.

CONCLUSION.

There are a great many subjects connected with Bee Farming, such as Queen Rearing, Introducing Queens, Robbing, Artificial Swarming, Details in management, Diseases of Bees, etc, and to treat them all would take up too much space. But the desirous student can do no better than procure a copy of A. I. Root's, "A.B.C. on Bee Culture" or "Langstroth on the Honey Bee" in which most everything of any value in up-to-date beefarming is explained. These books may be procured from any trader in beekeepers supplies.

WEST AUSTRALIAN BEEKEEPERS' ASSOCIATION.

ANNUAL MEETING.

WEDNESDAY, 27TH.

The annual meeting of the W. A. Beekeepers' Association was held in Perth, followed by the yearly conference. The president (Mr. J. N. Shipton) occupied the chair. There was a large attendance.

The Minister for Lands, in opening the conference, said that the large attendance, compared with the modest one of last year, augured well for the future of the association and the success of the industry. That the latter was a profitable side-line for settlers, big and small, was generally admitted. Recently the Director of Agriculture had reported that in twelve months no less than 600lbs. of honey had been taken from one hive in the Guildford district. The market before the industry was practically unlimited, for up to date something like £17,000 of honey had been imported into the State. The gratifying feature about the question of importation was that it was rapidly decreasing. Whilst he was Minister for Lands the beekeepers of the State would have a friend and the industry a supporter.

The President, in his annual report, said the association had made good progress during the year. The question of the propagation of special honey-bearing trees upon Government reserves, parks, and streets, the Forestry Department had promised to assist as much as possible by planting those which were nectar producing. A sum of £5 had been appropriated from funds towards importing queen bees, and several had arrived, and had been distributed amongst the members, on the understanding that they should return in the early spring at least two queens, the progeny of the imported stock. Reports from the country district associations were read, and showed that although the season had been a bad one, beekeepers were hopeful for a good harvest this coming season. The Agricultural Department had been requested to appoint an expert to the vacancy caused by Mr. Sutton's retirement from that position. The thanks of the Association were due to the Secretary for his efforts in advancing the interests of the Association, and also to the committee for their services.

The Secretary read the financial report for the past year, which showed a credit balance of £5 15s 6d. The Secretary explained that out of this balance had to be taken the expenses of the conference, which would considerably reduce the balance in hand. On the motion of Mr. Hilton, seconded by Mr. Layton, the financial statement was adopted. Consideration was given to the alterations to the rules, which were prepared by a subcommittee appointed for the purpose; these will be printed and forwarded to members in due course.

On the motion of Mr. Carruthers, seconded by Mr. Clifton, it was decided in the interests of the association, considering the work which was being carried out, to raise the membership fee to 5s per annum. A suggestion was put forward that next year's conference be held at the headquarters of one of the country associations, but on the motion of Mr. Ankers, seconded by Mr. Sutton, it was decided to allow the committee to make arrangements when the time arrived.

The election of officers resulted as follows:—President, Mr. Shipton (re-elected); Vice-Presidents, Messrs. Sutton, Dickie, and Kline; Patron, Capt. Oats, M.L.C.; Secretary and Treasurer, Mr. Potter (re-elected); Committee, Messrs. Ankers, Anderson, Hilton, Street, Masterson, Ainslie, and Mrs. Hilton.

Mr. J. B. Kline read an interesting paper on "Bees and Beekeeping." He said that with conditions so much in favour of the apiarist the industry should have a bright future before it in this State. The advantages of apiculture in relation to agriculture were generally recognised, and although there were still some farmers who contended that an apiary on the farm was a nuisance, this objection was being overcome by the dissatisfied ones procuring hives and thus retaining for themselves the article which hitherto had been gathered on their property by other people's bees The flight of bees was seldom farther than the nearest pasturage—the farther it was necessary to travel, the less the bees could carry. It therefore behoved the association to take steps to prevent, as far as possible, indiscriminate destruction of trees. In this State the natural source from which honey was gathered was the gum tree, and in the absence of these in cities, bees do not thrive so well. Some purveyors made a feature of the fact that their honey came from gardens, and labelled it "pure garden honey," yet one good gum tree in bloom was worth an acre of flower beds. The best honey came from districts where there was one kind of tree, for flavour and aroma reach a high standard of excellence. Mr. Kline then dealt with the quality of Western Australian honey, and pointed out how this could be improved. The local honey needed more maturing, and more careful handling, to make it sufficiently good to compete with the imported article. The four essential points of good honey were flavour, aroma, density, and clearness; and for the open

market the honey should be examined by an expert and graded. At present good and inferior honeys were dumped together, and the prices consequently were based on the lowest instead of the highest grade. He did not infer that adulteration was necessary, but only that more care should be taken in preparation for market. He was favourable to judging produce at show by points.

Mr. Kline was thanked for his paper, and an interesting discussion followed.

THURSDAY, 28TH.

The schedule of prizes for the Royal Agricultural Society's Show to be held in Guildford, received consideration in the apicultural section, and several small alterations were suggested, which have been placed before the Secretary of the R.A.S. It was also suggested that the Secretary ask R.A S. to have a wire or other screen placed around exhibits after the judging has been completed, to prevent pilfering. Mr. Sutton suggested that the association adopt some badge of recognition to be worn by members of association.

On the motion of Mr. Rees, the Secretary was asked to call tenders for the supply of honey tins for coming year; quantity, 100 gross, more or less.

Captain Oats, M.L.C., and Messrs. Shipton and Potter were appointed a deputation to wait on the Hon. the Minister for Lands and place before him the following motions:—

1. That the Department of Agricuiture be asked to reinstate the position of bee expert.

2. *Timber Destruction.*—That the Lands Department take such action as shall be necessary to prevent the wholesale and indiscriminate destruction of trees on Crown lands, pastoral leases, commons, etc., and, if necessary, to amend the present Act so that honey-producing timbers which are only useful as firewood, etc., may be allowed to reach maturity, and to enforce such clauses in the Act that are at present favourable to the beekeeping industry.

3. *Forest Licenses.*—In the event of the Government granting licenses on Crown lands for the purposes of apiculture, a clause should be inserted preventing beekeepers settling within three miles from an already established apiary of more than 20 hives.

4. That the Hon. the Minister be asked to make a grant of money to the association for the general advancement of the interest of the industry. By the dissemination of suitable literature, importation of queens, and such other methods as may from time to time appear useful.

The following question was discussed, and, on being put to the vote, was lost:—

That the Department of Agriculture establish experimental apiaries under the supervision of the expert for purposes of queen-raising; also in connection with same to import a variety of select breeding queens.

In answer to a question, the Secretary detailed facts obtained by him in relation to the publishing of a Bee journal, and, after considerable discussion, the time was considered inopportune for the association to lauch out on such a venture.

Votes of thanks were passed as follows:

(1). To those municipal councils and local governing bodies that had during the year planted honey-producing trees on their streets, parks, reserves, etc.

(2) To the Department of Agriculture for assistance rendered to Association during the year.

(3). To Mr. Shipton for the able manner in which he carried out the duties of chairman during the conference.

The conference was concluded at 6 p.m. on Thursday, 28th, and in the evening a Lecture on Beekeeping was delivered by Mr. Sutton.—*W. A. Journal of Agriculture.*

The following were appointed judges for Agricultural Shows:—Bees.—Messrs. J. Shipton, Barker Road, Subiaco; C.

Cooke, Woorooloo; J. M. Sutton, Wingate, South Western Railway; C. Smith, Baker's Hill.

THE HEDDON HIVE.

If your little, shallow half-depth hives, with your little toy frames, (pardon the expression--they seem just like that to me) are so superior to the full depth Langstroth hives and frames, why it is that only a comparatively few are using them? No doubt you will try to answer this by saying that your hive and shallow frame is new, and that the bee-keeping world has not heard the many advantages of this new hive and system. This I deny, for did not James Heddon adopt this same hive and system more than twenty years ago. Yes, he went so far as to take out a patent on this hive, and used costly cuts and drawings in all the leading bee-journals illustrating the many (?) advantages of this little hive and system. Yes, he advertised, using whole columns of space, pushed, boomed, did everything in his power that a shrewd, up-to-date business man could possibly do to push this hive to the front. He was shrewd enough, and of such prominence as a writer at that time that he managed to get in many full columns of advertising in the reading pages of most all the bee-papers. Now you say, "What has this to do with the shallow hive and system I am using?" It has this to do with it: If those "toy" hives and "fixings" were so much superior to the Langstroth hive and system, as you seem to think, why is it, after so much advertising, that so few of them are in use? The answer is plain to me. They did not prove to be superior in the hands of most bee keepers. Your arguments imply that bees winter better in shallow hives, build up faster in the spring, etc., than in the full depth Langstroth hive. Pray tell us, what possible advantage there is in having the brood-nest of any colony divided up into two or more parts by horizontal strips of wood—top and bottom bars of frames—towards keeping the bees warm in winter or of building up in the spring. I fail to see any of the advantages you claim for the sectional hive and shallow frame, except these two points: They are light to handle and the combs of these little half-depth frames are easy to uncap. These two, being the only ones worthy of mentioning, are more than offset by their many disadvantages. In uncapping you have twice the number of frames to uncap and handle in taking them out and putting them back in the supers. It is the same putting in foundation, nailing up frames, etc. You've twice the number of frames to handle and nail up.

You say you do not handle frames, but handle hives in sections instead. This I'll admit to a certain extent. But there are times when you must handle frames, else they have frames at all. Just think of going into an apiary of one hundred colonies or more, where they were tiered up five or six stories with these sectional hives. They would have to be that to be equal to a ten frame, three story Langstroth hive, and have to handle the frames of every hive. Oh, my, I am tired right now, just thinking about it. I can truly say I in no way envy you the pleasure and satisfaction you get out of handling your bees on these little frames. I could give many advantages the Langstroth hive and frame has over those little sectional hives and shallow frames that I have not touched upon yet. But what is the use? It seems to me that the Langstroth hive and frame being the standard the world over, is sufficient evidence within itself to convince any reasonable mind of its superiority over all other makes.—L. R. Smith, in *Southland Queen*.

DRONE COMB

It seems to be something like a natural law that swarms in normal condition build no drone comb for the first ten or twelve days of their occupancy of a new hive; but work with indefatigable haste to construct cells fitted to rear only of

their own kind. The exact time may vary somewhat, owing to the weather, the rate at which nectar is being carried in, the strength of the swarm, and the age of the queen. But the almost invariable rule is that for ten days at least no drone-comb is built. Strive, therefore, to get combs drawn out quickly, and then you can count on their being not only well built, but of the right kind desired by you, and required by the bees to do the best work later on.

If nuclei are not over-strong, but yet bees sufficiently numerous to build out combs, with a liberal supply coming in either from the feeder or the fields, these will build only worker cells from starters. These combs are, as a rule, the most perfect and regular we can produce, and the fact should be more widely known. The *raison d'être* in this and the two following cases is undoubtedly the fact that the community in all three instances have no thoughts of swarming, and therefore know instinctively that drones are not required to carry on the line of succession. Having no need for them, they wisely make no provision for producing them.

Second swarms, headed by an unmated queen, may also be depended on to fill out every frame with starters with only worker cells. I like to make use of any of these small lots to secure such combs, and they build them as true and flat as a board, so that each may be warranted as perfectly interchangeable, and without a single drone-cell to mar the beauty of their construction. These casts know well that raising such undesirables in the first year of their existence would be futile work, and just so much labour thrown away without any compensating advantage.

It follows invariably that, when simple starters are given to established stocks only, drone-comb is built. But even here we can persuade them by a little manipulation to act otherwise. Choose a colony of bees fairly strong, but which cannot be relied on to gather surplus. Take away all their frames but one of brood and one of honey, and then give them one up to four frames with starters only, the number depending on the strength of your lot, and you will find that they will build the very finest comb and not one single drone-cell in the whole number. More combs may be given later on during the season, but care must be taken not to leave too many combs in at one time, or have too many bees, for whenever this happens thoughts of swarming arise, and they at once proceed to construct drone-comb. This can be again hindered by taking out some of the frames of brood. These small lots are also useful for patching up any faulty or incomplete comb, or any from which you may have cut out patches of drone-cells. This is a wrinkle worth knowing, for many such combs are thrown aside as useless, whereas, when they are given to one of these weak lots, they can be made equal to the best, without any trouble or worry on the part of the bee-keeper.—*Exchange.*

CAPPINGS,

I have heard it stated by some apiarists that the day was coming when the production of beeswax would pay better than that of honey. No one has had faith enough in such an assertion to give it a trial in practice, and I dare say that it would not take long to convince any one of its fallacy. Those who have tried to feed extracted honey to fill up sections have invariably reported that it did not pay, that the cost was too great, and I do not believe it will ever pay, much less will it pay to let the bees expend their honey for wax-production alone. When we put all testimonials together, the cost of comb honey appears to be fully twice that of extracted honey; that is, the bees can harvest twice as much honey when the combs are already built as when they have to build them. This I take as an average. In some seasons there will be less cost to the building of comb, while in other years the cost will be increased. The most expensive production of comb

honey to the bees comes when the crop is very short and very sudden. If the weather has been cold, backward, rainy, unfavorable, in short, and a suitable day comes suddenly to be followed perhaps by five or six other such days, and then the crop ceases—in such a case the production of extracted honey is far ahead of that of comb. In the first instance, the combs are ready for harvest and there is no delay, no loss of time, the bees are at work *en masse*. In the second instance the suddenness of the crop has taken us unawares, and they have had hardly time to build a few combs when the flow is at end. A large crop cut short, suddenly, by a storm and continued bad weather, will also leave the comb-honey production in bad shape, as many combs have been built, and partly filled, and must be abandoned. A big flow, uninterrupted and steady, is the most encouraging for comb-honey producers, and that is why I insist that the production of comb honey will be most especially successful in localities where large crops are the rule. My last, and least, grievance against the production of comb honey is that it requires the use of a number of contrivances for which I never had any fancy—separators, queen-excluders, honey-boards, etc. With the production of extracted honey none of these is needed; at least not by the methods we follow. We connect the upper and lower stories as freely as possible, and make things as convenient for the bees as it is possible to do.—*C. P. Dadant in American Bee Journal.*

In experiments made it has been found that the rays of radium have proved fatal to all kinds of bacteria. A great many tests have been made in treating different kinds of germ disease, and in almost every case exposure to the rays destroyed the germs, so that on trial being made it was proved that they cease to grow and multiply in a gelatine medium. Experiments have been made whereby the rays have been allowed to pass through a hole in a metal disc and strike on a small mass of gelatine containing active germs, with the result that they were developed, *except on the spot where the rays had struck.* This undoubtedly proves that a comb so treated would be sterilized, and that radium may prove able to accomplish a cure of foul brood. I ask no one to accept this as a truism until the experiment has been tried and found a success. All I now plead for is, that, theoretically, it should do what I claim for it. Some of our scientific bee-keepers might be able to bring a small piece of comb containing active germs of foul brood, under the action of radium rays, and prove if the deadly possibilities of germ or spore would be rendered innocuous. The heavy cost of even the most minute particle may prove a bar to any thing more than this simple experiment; but this wonderful force is only in its infancy, and by and by will become more common and attainable. I hope this is not merely a vain dream!—*British Bee Journal.*

In another part of the same journal it says:—"Mr. O. L. Hershiser has been giving a series of lectures on bees before the children of the public schools of Buffalo. Beginning on the 28th of last April and continuing until May 9, every school day, forenoon and afternoon, Mr. Hershiser gave a lecture before a division of the the seventh grade children of the public schools. As only about 300 children could listen at a time, and there were 3,500 in the seventh grade, it can be imagined that Mr. H. had to do a good deal of talking. [Is the first paragraph to be wondered at after reading the second paragraph. Several years ago a N. S. Wales supply dealer was very anxious a bee lecturer should be appointed in Western Australia. We would like to know for whose benefit, the beekeepers of the colonies, or the man who sold hives and supplies?]

The beekeeper who is so vigilant that no swarm ever escapes from his yard and goes to the forest is certainly a better beekeeper than I am, and I have very grave doubts whether there are many such beekeepers.—*Exchange.*

CORRESPONDENCE.

W. S. M., Axedale.—Bees are wintering well and working well on spotted gum and white box. I opened up two hives and found brood in all stages up to capped brood. The prospects for the coming season are bright; trees have an abundance of bloom. Every appearance of an early spring. Wattle is in bloom and bees are working on it.

J. F. W., Goonoo Goonoo.—I should take it as a very great favour if you would suggest a remedy for my bees. They are attacked with a disease which I take to be paralysis. Everyone of my 34 hives is affected. Every morning a number of dead or dying bees are to be seen on the alighting board and for some distance in front of hive. Some are to be seen lying on their backs struggling, others again are feebly crawling about, and some have the appearance of having been stung by other bees. A majority of them are comparatively young bees. I have had paralysis in my apiary before, but the form was different to that now affecting my bees. The form I refer to, is what I think is called swollen paralysis, where the bee becomes almost double the ordinary size. If you can suggest a remedy at once I shall be exceedingly obliged to you. I may mention that I have tried spraying with sulphur and honey without effect.

[As you have tried sulphur without effect, the only remedy would be to requeen, getting fresh blood from other sources. Do you think it could be anything the bees are feeding from?

E. J., Helensburgh.—I am only a novice at bee culture yet. I started with only four boxes last year, but don't know what luck I will have this spring. They say this place is not much for honey. I might get enough honey for me to learn how to handle the bees.

P. R., Stuart's Point, Macleay River.—I have been much pleased with your helpful efforts on behalf of the beekeeping fraternity. Glad to see your face among the Victorians. Not sure what the coming spring will do for honey yield. Things here look well at least.

E. J. R., Wyee.—Can anything be done to prevent the railway men entering into competition with beekeepers. I know of 5 at least on this line, between the river and Awaba. Personally they do not affect me, but others complain about them. My bees came through the winter in good trim and gathered a bit of honey from spotted gum.

Messrs. Prescott & Co., write us:—We have been receiving rather too many consignments of honey, and this is largely due to advertising in your paper, but unfortunately, there is very little outlet at present.

W. K. P., Claremont, W.A.—I am pleased to see the matter of "Mailing Queens" appearing in ycur issue and would advise beekeepers mailing queens to this State to be particular about same, so that they will be forwarded at once, and by the boats belonging to the P. & O. or O.S.N. Coy. only. These mails, as has been stated, are specially placed in a special hold for mails only, and therefore are not fumigated. I will forward you a copy of "The Journal of Agriculture," containing a report of our conference. Our attendance beat Victoria, numbering about 40 persons, and lasted two days.

S. T. M., Kimbriki.—Please find enclosed a postal note for 10s., 5s. from myself, and 5s. from Mr. G. L., for the widow who is in so much trouble, as stated in A.B.B. a "Sorrowful Letter." Please do not mention our names when forwarding same, as we don't need to be thanked. I trust others will see their way to help a little in so deserving a case of distress.

We shall be very pleased to receive and forward other subscriptions. It is a genuine case of real trouble.

E.B., Eden—I look forward to the "Bulletin" each time with interest, as there is a great deal of information in it. There is no bee news around this way. We had a very bad season last year; a

great many bees died out, but it is looking a little better this time. I hope we do better this year.

J. C., Mitta Mitta, Vic., Aug. 9—My bees have come out of winter splendidly. No disease, only two queenless out of 53. Plenty of pollen coming in off wattle bloom, also a little honey from willows. It looks like a good season. Wishing you good luck.

J. A. H., Millah Murrah, Sep. 10—I have about 3,000 frames to wire, and also to hole the end bars. As I do not use staples, kindly let me know the best method of doing them. Many thanks for the information I got from you. I am getting the hive bodies from H. L. Jones, and saving 5d. per body thereby. Hoping you will have a successful season with the bees.

Have not used wired frames for the past eight years, and would not do it. We use a stick same size as bottom bar (slightly shorter to fit between end bars), wedging them in horizontally in centre of frame with a bit of hardened wax. If frame is full of honey the wire stretches. There is no bother of making holes for the wire.

T. I., Quirindi, Sep. 13—My bees are doing very well just now, queens laying well, and there is some white box honey coming in, and it looks like a splendid season coming. The yellow box trees are loaded with buds. Trusting your bees are in good heart for the coming flow.

THE REISCHE WAX PRESS.

C. J. WARNECKE.

In your June number a correspondent asks "Can you recommend any work on the manufacture of foundation comb, are those metal plates advertised in Melbourne fast enough, and do they turn out the correct article?" As none of your regular correspondents have replied I beg to do so. I have used these plates with satisfactory results, and can recommend them to any one in a small way. I can turn out about 20 sheets per hour, varying from 4½ to 5 sheets to the pound. This foundation is superior to the roller-made for worker-brood foundation. The bees prefer it. Full instructions accompany each set of plates. Follow directions given therein closely, except composition of wash for prevention of foundation sticking to plates—honey, water, and spirits. Honey becomes exceedingly adhesive when continuously heated. I used honey wash, bad language and made bad foundation for a start; then I tried flour and water (thin paste will do) with success. For melting the wash I use an oil drum, made after the fashion of a tinsmith's furnace; an oil-drum cut down to about eight inches in depth to melt wax in, and have legs ½ inch long, saldered on the bottom of strainer in order to prevent it reaching bottom of wax pot. This prevents any heavy foreign matter from rising up into strainer, and thus getting on to plates. The foundation made by these plates is larger than our standard frames. A piece has to be removed from both end and top. The latter is large enough for a starter. I work thus: Remove sheet from plates, place on cutting board, re-wash plates, pour in wax and surplus back into pot, and while it is cooling trim up sheet just removed. There is no waste time. For cutting off starter I nail a straight piece of wood 2ft. long on a flat surface—table, board, or bench—and drive in two nails 20 inches apart, and distant from cleat the width of starter, pass sheet between nails and hard against cleat, then with a straight-edge hard against nails I pass a knife along straight edge. This gives a true straight edge for fixing in frames.

HOW TO GET WORKER COMBS BUILT.

When any colony is so weak that it has no desire to swarm, during or preceding the swarming or honey-flow, such a colony will unvariably build worker comb, so that worker brood may be reared till the colony comes into a prosperous condition, providing they do not have sufficient comb already built.

I use all colonies which are too weak to store honey to advantage, at the beginning of the honey flow, or as many as I wish to use for this purpose, treating

them thus: Their combs are generally all taken from them excepting two, one having a little brood and considerable honey in it, and the other one being as nearly full of honey as possible, giving all the other combs having brood in them to other colonies so that they will be still stronger for the honey harvest.

I don't leave any of the combs which they may have, having neither honey nor brood in them for their use.

If I did it would defeat my object; for the bees would clean up such combs, and the queen lay in them, instead of the bees building any comb at all.

I now put in one, two, and sometimes three frames having starters in them, or frames which are partly filled with comb, just according to the size of the little colony after having taken their combs away.

Take a strip of comb foundation one-half inch wide and as long as your frame is wide between the end-bars, and with melted wax stick this along the centre of the under side of the top-bar of your frame, and you have a starter that will beat any other which I know of.

Frames partly filled with comb are any combs which any colony of bees may have started at any time and not completely filled the frames with the same. Or they may be frames once filled with comb, a part of which may be drone comb, which I have cut out, or holes, which have come out by some accident to the combs, such as mice gnawing them or the bees tearing them down to get out moldy pollen or something of that sort; or I may have allowed the bees to build comb when they were not in a condition to build worker comb exclusively.

The bees will patch up such combs as these, filling out with worker comb.

In all this work I always see that each little colony has a frame well filled with honey, for should storms or cloudy windy weather come on at this time, they would build no come of any amount, and might starve; while with the frame of honey they will go right on converting that honey into comb, storm or no storm. If the right number of frames is given to suit the size of the little colony they will fill them quickly, especially when honey is coming in from the fields; and each comb will be filled with worker brood as fast as built.

If not too strong they will generally build comb of the worker size of cells till the brood begins to emerge from the eggs first laid in the newly built combs by the queen; but as soon as many bees emerge they are liable to change to the drone size of cells; or if the little colony is quite strong in bees they may change the size of cells sooner than this if honey is coming in very rapidly.

As soon as the first frames I gave them are filled with comb, I look to see about how many bees they have; and if they are still well stocked with bees, or are in a shape where I may expect that they will change the size of cells before they reach the bottom of any frames they may have started with worker comb, I take out any full frames they may have already built, and thus put them in the same condition they were in when I started with that colony.

They will not build combs quite as freely now as they did at first, unless there can be some young bees emerging; so if I can conveniently, I give them a comb containing mostly honey with some emerging brood (if they have such a comb it is left with them, which is more often the case than otherwise) from some other colony, when they ars ready to work the same as before. If just the right amount of brood is left, or given them, so that they stay in about the same condition, they will build worker comb all summer by the apiarist supplying them with honey or feed when none is coming in from the fields. If not so strong but that I think they will build worker comb still longer, instead of taking the brood away, I spread apart the combs now built, and insert one or more frames with starters between, when these will generally be filled with worker comb before enough young bees emerge for them to change the size of cell.

One thing is always to be kept in mind whenever you find them building drone comb. The combs they then have, all except the one mostly filled with honey, are to be taken away so that they may feel their need of worker brood again, when they will build cells of the worker size once more.

I have used this plan to the extent that I have had hundreds of frames built full of worker comb in this way, hundreds completed that the bees had built partly full the previous season, and hundreds if not thousands patched where I had cut out patches of drone comb which had gotten in in one way or another; or where I had cut out pieces of comb having little larvæ in that were to be used in queen-rearing. In this way the bees fix these holes in any comb in a very perfect manner; in fact, very much better than any man can do it by fitting in patches of worker comb as was the manner of fixing up combs having a little drone comb in them, during the past. Therefore I do not fear mutilated combs nearly as much as I formerly did.—Abridged from "Gleanings in Bee Culture."

TRUTH OR FALSEHOOD.

We copy the following from the Sydney *Daily Telegraph* of Sept. 2. Will some of our readers have a say in it:—

So far, however, the chief industries pursued in the Richmond and Tweed districts are dairying and sugar-cane growing. Many others could be profitably followed, such as bee-farming, vegetable-growing, poultry-keeping, etc. Perhaps in no part of New South Wales will bees do better. In at least two instances apiarists make £300 per annum each out of their hives. "I am surprised when I see that men are unemployed in Sydney," said one of them to the writer the other day, "when there are such chances to make a good living here with practically no outlay. Just think of the thousands of pounds worth of honey which goes to waste in this part of the country every year for the want of bees to gather it. It would not take a man long to get a few colonies together if he was energetic. There are tens of thousands of acres of land in this district, too broken up and precipitus for dairying or farming, rich with flora suitable for the purpose, which could be let to men anxious to make a living on easy terms, by the State. In this class of country there are patches of five and ten acres of land to be found, eminently suitable for vegetables and poultry, and with the surrounding country for the bees, a man would soon be on the way to success."

It was suggested to him that the honey market would soon be glutted. He replied that there was a good demand in England for the honey produced in that part of the country. There was, he knew, a prejudice existing against the Australian product, but he denied that it was justified so far as his produce was concerned. It could be overcome, however, by shipping the honey in bulk to some large firm, the latter undertaking to put it up in bottles and tins without indicating where it came from.

In answer to the above, in addition to what we have previously said in regard to foreign markets, we are able to also give a little more information. There are in England and Wales some 52 counties. The following are figures of ONE COUNTY ONLY, that of Devonshire. There is no doubt some interested person is busy circulating these ridiculous reports in the Richmond district, and ignorant persons knowing no better, are assisting in propagating the same, but read the following. Is it not just as likely, some English people of the same calibrae, if self interested and ignorant, may be talking of exporting English honey to Australia? How many millions of tons of firewood are there not also there waiting for the axeman to cut it down. Surely thousands of such could find occupation. But there is a big "IF." Would it be saleable when cut? So with honey, The honey market in Australia is sufficiently glutted now.

"The number of apiaries in Devon totalled 1794. These apiaries comprised 4023 bar frame hives, and 2682 straw skeps. Entirely modern apiaries numbered 709. Entirely old fashioned apiaries 562, and mixed apiaries 494. This return must unavoidably present a considerable under-estimate. In the opinion of the Council an addition of one-eighth may fairly be made to the numbers gived, and the number of apiaries be taken as 2000: and of frame hives 4500; and of straw skeps 3000. A fair average yield from a modern frame hive is 40lbs., a very low one 20lbs. Adopting the latter estimate for 4500 frame hives, and 10lbs. each for 3000 straw skeps, the amount of honey produced annually in Devon is 120,000lbs. To draw up a general balance-sheet of beekeeping in Devon would be a difficult matter, involving many considerations, such as

original outlay, the annual increase of stock by swarming, the liability to disease, the production of wax, and the proportion of honey which is consumed privately and does not find its way to market. Apart from this the figures given are interesting, as affording a fair idea of the extent of an industry which keeps steadily increasing. It may confidently be asserted that the number of hives kept in Devon might be increased several times over without any lowering of the average yield of each hive, and with very little effect upon the general market."—Annual Report Devon County Beekeepers' Association, 1903.

Washing Honey from the Cappings Honey-Vinegar.

Up to a short time ago I used to wash the cappings and then squeeze them into balls, after which I placed them in the kettle for rendering. A month or two ago I adopted a different method which I consider an improvement, and, as it may be of interest to some of the readers, I will describe it. In the first place I leave the cappings in the uncapping can for several days, sometimes for a week or two, and occasionally take the honey-knife and cut down through them, and stir them about so as to liberate as much of the honey as possible. When ready to render wax, I take a tub and put it in rain-water equal to about two thirds of the amount of cappings I intend to wash it in (by measure). I find that after the cappings have been well drained there still remains in them enough honey to make good, strong vinegar by using the above proportions of water and cappings.

The water should be of a temperature so as to feel slightly warm to the hand. I have not tested the temperature, but think it should be little, if any, above 100 degrees, Fahr. If too warm it will soften the cappings, and this we do not want. They should remain somewhat brittle. If too cold it will not readily free the honey from the cappings.

When the water is ready the cappings are thrown into it, thoroughly washed and stirred about, and well broken up with the hands. After the cappings are thoroughly washed, instead of pressing them into balls as I used to do I throw them back into the uncapping can to drain, and allow them to remain as loose as possible. After they are well drained they are put in the pan or kettle for rendering.

The advantage that I claim for this method over the one of squeezing them into balls is: First, the water drains from the cappings much sooner, and, second, in this loose form they are more readily attacked by the heat, and will, therefore, melt in a shorter time. Any one who has never tried this method, I think will find it an improvement.

As I have described my method so far, I may as well tell what I do with the water used for washing the cappings. As this sweetened water will make excellent vinegar, it would certainly be a great waste to throw it away. I therefore put it in a barrell or keg having the head removed, and also add to it the water that is used for washing or rinsing the extractor and other utensils that have become daubed with honey. At times we also have small quantities of honey that are off colour or for some reason not fit to offer for sale, and if not needed to feed the bees, this is used by mixing it with the proper proportion of clean water. All odds and ends of honey are used this way. The barrel is placed in an out-of-way position in the honey-house and a piece of cheese-cloth thrown over it and a board laid over this to keep it in place, or else the cloth is tied in place. We should aim to exclude flies and all insects and yet expose it to the air as much as possible.

If the water is warm, fermentation will set in in a few days, and in a week or two we will find a thick scum on the surface of the liquid. This I remove about every week or ten days, or as often as it accumulates to a considerable extent.

Each time after removing the scum I take a dipper or cup and dip out a cupful and pour it back from a height of two or three feet. This I repeated some ten or twelve times. It also hastens fermentation if a quantity of mother from old

vinegar is added. Some may claim that it is not necessary to remove the scum, as it will finally settle to the bottom of the barrell and do no harm, but I once made a lot and neglected to remove the scum, and this was so bitter that it was not fit for use, and I see no use in having it in the vinegar when it can be so easily removed.

If the barrel or keg is removed to a warm room on the approach of cool or cold weather, the vinegar should be fit for use within six months after the time it was made. When it is finished it should be carefully dipped or poured into a clean receptacle, or what is better, draw it off with a hose, being careful not to disturb the sediment at the bottom of the barrel. When you have this you have an article that you know is pure and good, and do not have to go to you grocer and purchase so-called "pure cider vinegar" that is likely made of water and poisonous acids that are not fit to be taken into the stomach.—S. E. Miller, in "Progressive Beekeeper."

CAPPINGS.

The writer of this has been studying and thinking how to get around buying high-priced lumber for bee hives and his mind has turned (?) to the paper and straw. A German friend tells in Leipzigor Biene Zeitung how he makes use of waste paper. He says: "A receptacle is filled up with the paper and the latter is covered with water. Thus it is left for several days. Then it is hauled over with a garden rake and stirred smooth till it is a sort of pudding. This is then poured into forms and smoothed down. In this shape it is left to dry for several weeks when the paper boards are dry enough to be made up into hives. They can be sawed, bored, nailed but not planed. I make the boards 1 1-2 inches thick. The hives made from them are very warm in winter and cool in summer. Well painted they will resist the weather first rate. With the primitive means employed I have not been able to make hives all in one piece."—*American Beekeeper.*

The German beekeepers are in a sad plight as to honey adulterations. A dealer of honey in Hamburg says: "A great deal of artificial honey is consumed in Germany. The product is usually sugar syrup flavored with a little honey and bee-bread decoction. Unfortunately a great deal of fraud is practiced and the artificial mixture is palmed off as the genuine article, sold to bakeries and small conumers. The authorities are powerless, as there is no sure way to detect the fraud outside of judging by the taste and odor, and they have given up the idea of watching for adulteration in honey."—*American Beekeeper.*

PACKING POLLEN.—Exactly how the packing of the pollen in the cells is done, no one can tell. That the pollen is packed, tamped and rammed hard, every one knows. Each pellet is spread in a slightly concave form, only they are close and tight together instead of being separate. It is probable that the grains of pollen are spread by the mandibles, and tamped or pressed by the head. It would be impossible to pack the pollen as tight as it is without some tamping or pressing. No matter how carefully you might spread some pollen, it will be impossible to pack it as hard as the pollen is in the cells without a considerable pressure. No matter how carefully you would put the macadam on a road, it will never make a hard roadbed without considerable tamping or rolling.—"Exchange."

In regard to how I would have beekeepers keep more bees. I would not do it by increasing the number of beekeepers but by increasing the number of colonies now kept by those already in the business. I am working to increase the prosperity of the existing bee keepers, instead of adding to their numbers. If a man feels that bee keeping is his calling, he will be welcomed into our ranks, but I never believed in hurrahing in every Tom, Dick and Harry. By so doing we often do a wrong to all concerned—*Exchange.*