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The Australian Bee Bulletin
Vol. VIII No. 3
June 20, 1899

The Australian Bee Bulletin.

A JOURNAL DEVOTED TO BEEKEEPING

MAITLAND, N.S.W.—JUNE 20, 1899.

WE hear of some people having small quantities of honey—say 8 or 10 tins—that are selling it at a very low price. Those that do so should remember honey need not be always so plentiful as at present. It is easy to lower a price, but it is a very difficult matter to raise it. There are people who will always be too ready to say, "Oh! I bought it for so-and-so, and am not going to give more now." In justice to yourself and your neighbouring beekeepers, therefore keep the price up. Next season might be a poor one—honey might be far less plentiful than now. The past year has been a honey failure in some parts of America, the result being prices are rising there. One thing is certain, the honey producing forests of the world are receding before the advance of increasing town and rural populations. Keep the price up in your local market. Look after your local storekeepers, who ought to stock 2lb. and 4lb. tins, nicely labelled. The men with tons of honey should study the foreign markets, and how to get it there. These matters should be well talked over at the Convention.

Some seven or eight years ago we sent as a present to friends in the old country two large earthen jars, containing home made Australian jam. Every care was taken in the packing; the two jars were placed in a case with sawdust around, and the outer case carefully nailed up. Imagine our annoyance on receipt of the intelligence that when the case arrived at its destination one of the jars was missing, and was reported broken in the Custom House!!! Now, in reply to our communication from Mr. Hopkins, of

New Zealand, who we knew had exported large quantities of honey to England most successfully (and to whom we wrote, as we had some doubts about that four 28lb. tins in a case and blotting paper between of the N.S.W. Export Board). He says the most important matter is to have the *tare, gross and nett weight of honey on cases*. We take it to be Custom House officers *must* always suspect smuggling, and where the contents of a case are not marked distinctly on its outside, they imagine it might be just possible the contents would be something contraband, and the desire to find such would be further heightened by the supposed sweetness of the alleged contents. Like Nature's desire to fertilize plants—fertilizing is Nature's want—but the bees say they are looking for honey; they know nothing about fertilizing. The securing sweet things may really be more the motive for opening the tins than the desire for smuggled goods. Now may we not here have a clue to the non-success of the Victorian and other attempts to export honey to Great Britain? If New Zealand has been so successful in her attempts, why not Australia? Mr. Hopkins in his younger days had considerable maritime experience, and it may be during that time he *learnt a thing or two*, which knowledge has come in very handy.

An apiary in Chili has 700 frame hives.

A golden rule—Keep your colonies strong.

Spotted gum is now in bloom on the Hunter River.

Chilian honey is put in poplar barrels weighing 150lbs, and in this way exported to Europe.

Being compelled to get this issue out early in order to advertise the Convention a lot of valuable copy that arrived too late is unavoidably held over.

We again call attention to the Convention to be held at the Technological College, on Wednesday, Thursday, and

Friday, June 28, 29 and 30. May we hope some practical good will be the outcome to the fraternity.

Some of the American writers are in favour of a plain section $5 \times 3\frac{1}{2} \times 1\frac{1}{2}$ or thinner. They say they may not be quite a pound weight, but are more likely to be better filled and capped, and so more saleable, and being not sold by weight, realise quite as much.

Exporting Honey.

THE SECRET OUT.

As stated in our last issue, we wrote to Mr. I Hopkins, of New Zealand, author of "The Australian Bee Manual," and who we knew had been most successful in exporting honey from that colony to England, asking him to give us some idea of the methods of sending their honey away. We are sorry to hear that both Mr. and Mrs. Hopkins have had serious illness, and trust there are yet some years of usefulness for both of them. We think Mr. H., gives the secret of our failure:—The Custom-house officials having a look to see whether it is honey or more dutiable goods in the tins. Mr. H., says:—

Mrs. Hopkins and myself are fairly well although we have both had a serious illness within the last 15 months—Mrs. H. with congestion of lungs, and I followed nine months after with inflammation of same organ. We both came within a trifle of a better world.

Re packing honey for English market. If it is for general market put it in 56lb tins, two in a case, and be particular to put tare, gross, and nett weight of honey on cases, otherwise they will have each case opened, weigh each tin, and charge you slightly for the trouble. If to order of course you need not be particular to a few lbs more in each tin. I have always considered you Australian people spoil your market at home yourselves—and it has cost you no end of loss. You went about the thing in such a slipshod manner, without any system or enquiry, and would not accept any advice nor take lessons from those who had "gone through the same mill" and come out alright. I made an attempt once or twice to put you right, but when I found my efforts had no effect, I simply concluded to

let the matter RIP, but it often grieved me when I saw you people making such losses on the home markets. I at that time happened to have the most experience in dealing with the English honey markets of any person in Australasia, hence my wish to guide you, and I believe had you been guided by me you would have had a good market opened years ago for your best honey. However, its done and there's an end on't.

Hope you like bee culture better than press work and that you are doing well at it. I find I am now getting too old to do much practical work at bees, I don't care for it now like I used to.

Our New Zealand honey is fetching a higher price than ever on the home market, and it is difficult to get a decent bit of the article here now, it all goes home. It fetches easily from £41 to £45 per ton for it, and I have no doubt it will go to £48 before long, the same as the very best English.

EXPORTING HONEY.

E. J. RIEN, M.H.A.C.

From the letter in your last by Mr. Stephenson, Secretary Board of Exports, it would seem there is a likelihood of the export scheme falling through. While the Department of Agriculture and Mines deserve the best thanks of beekeepers for their efforts, I think it would be a very good thing if the present arrangement fell through; because, it is establishing export upon a wrong basis, and places a heavy tax upon us which there is no need for. Had the regulations been workable and considered the beekeepers more I have no doubt there would have been an unlimited quantity at the disposal of the Board. I trust that in the interest of beekeepers a scheme will be devised of a less expensive character. In the first place it is proposed to grade the samples in classes 1, 2, and 3. Now such a thing will prejudice the sale of classes 2 and 3. In my mind the thing that should be done is, that each honey should be tested by an expert, and labelled according to the source from which it is derived—say Clover, Alfalfa, Bloodwood, the various Gums, Ironbark, etc., avoiding every reference to the name "Eucalyptus." This would place every

honey on the market on its merits and without prejudice, which would not be the case if marked 1st, 2nd, or 3rd class by the Board.

Then we come to the expensive item of mixing, bulking, etc. What necessity is there for this? Surely our beekeepers know enough to be able to strain honey properly, and pack it in original packages at the apiary, without all this work. Then again, mixing is a most unsatisfactory business; it is not quite as easy as blending tea. As our honies, or the best of them, are at present candied, this means additional work, and unless they are over-heated they are sure to candy again. This would also be avoided if packed by the apiarist. Surely our honey harvest is large enough to provide tons of each kind of honey without mixing and bulking in Sydney.

Let the Export Board decide upon the size of tin, and the style and size of case, and let the apiarist fill the tins himself, submitting a sample to the Board. If the sample be satisfactory, the apiarist should be advised to forward the honey to the store. It will be a simple matter for the expert to say if the honey is according to sample, to name it and then stamp or seal it with the Board's seal. Then, honey which was found improperly packed, carelessly strained, not according to sample, or topped with good honey might be left at owner's risk. This would prevent fraud.

The price offered and the risks taken hardly allow for such a heavy tax per ton as £6 at least, not to speak of freight to Sydney, return of tins and other charges. It is easy seen by the beekeepers preparing their honey a very great reduction would be made in the expenses. I have yet to learn that export honey is treated as our authorities propose in other countries, and I am not at all surprised at the quantity required not being sent in. I quite agree with you that 10 tons would be ample for a first experiment. Our honey only needs to be known in England to be appreciated, and the Eucalyptus prejudice over-

come. I trust that the export business may be placed on a proper footing at once, and the beekeepers' interest considered. We are not picking up our honey without labour and expense, that we can afford to pay people to do work which can be done better in the apiary, Indeed, which we have had to do before we could place our honey on the local market to the best advantage. If any beekeepers are so ignorant as not to be able to prepare honey for export, a pamphlet might be issued by one of the Departmental experts.

VICTORIAN NOTES.

R. BEUHNÉ.

EXPORT OF HONEY.

Being a "Worker" it is not often that I agree with the "Drone," but I readily endorse the opinion expressed on page 6. The word "colour" should be left out of those export regulations. The honey should be tested for purity and density and the colour point left to the buyer to decide. Keep the different shades separate but without putting the brand of Cain on the darker, and thus handicapping it. The demand is all for light here, nobody seems to know exactly why. Perhaps for the same reason that no up-to-date house-wife will use any other but roller flour, although the darker sort is the more wholesome. Must we needs assume that people on the other side are as wayward?

HAPPY EVENTS.

The last A.B.B. to hand brings news of two happy events. My congratulations to Mr. H. L. Jones. As the object of his happiness grows so will his joy increase.

As for the second event, the embryo National Beekeeper's Association of Australia. "I hae ma doots" whether the joy of the parents will increase in a like manner. "Good luck to them anyhow." The harangue is fervent. Send in your half-crowns and fall in and form the body of what at present appears like a tadpole. It might have been as well to

have asked a few *beekeepers* to attend that first meeting.

The first investment of the National should consist in some trumpets and a big drum to rouse the sleeping fraternity, next a patent steel stamp to stamp out foul brood. The musical instruments referred to will no doubt be much used for that purpose and various others.

THE LONG HIVE.

Loyalstone wants reports re long hive. Here is one:—A friend with an apiary of over 200 colonies has given that hive a fair trial during two or three seasons alongside super hives. I asked him quite lately how he liked them. "I am going to saw them into two and put one half on top. They have only one good point—they can't be knocked over in an out apiary to which cattle have access," he said. Loyalstone himself hints that it may be necessary to put another body underneath. (A beautiful operation to get into that bottom box.) I thought it was the principal advantage of the long hive to have only one single story. I have run my colonies three and four stories high this season, nine frames in a set, spaced $\frac{1}{2}$ -inch; that gives 4 feet 6 inches inside length if put in one story. Of course I could have worked with less supering by employing boys in quantity and taking the honey raw.

QUESTIONS.

219.—Are frames better lengthwise or crosswise to the entrance?

C. RADOLL, SENR.

220.—How to make preserves and pickles with honey?

S. J. WILSON.

221.—State objections to Hoffmann frame?

222.—Do you use slips of wood in place of wiring frames, if so, with what result?

E. T.

223.—In the *American Bee Journal*, C. Davenport describes how he took 30 colonies in early spring, all in good condition, three boxes each. In 10 hives he

put queen-excluder zinc above the brood chamber, and below the super. In 10 he put queen-excluder zinc above the first super. In 10 he put no excluder zinc at all. Result: 1st ten gave seven swarms and 500 lbs honey; 2nd ten, six swarms and 175 lbs honey; 3rd ten, no swarms and 150 lbs honey. He accounts for the differences, that the queen, having abundant room in the third lot, bred and gave the bees work to do to rear the brood, whereas in the first lot the queen was restricted in laying, and so the bees gave all their energy to honey gathering, the swarms that emerged being placed on top of hives they came from. How does this work in Australia?

F. BOLTON.

224.—What is the cause of queens laying 4, 6, and 8 eggs in a cell. The colony being pretty strong, I requeened and the new queen started just the same. I daily examined them until they broke into the larva state all huddled together, but wet weather started which prevented me from observing further into them. When I did get a chance there was only one young bee in each cell?

E. T.

222. My experience has been that combs in which honey has been extracted from two or three years, the weight of the honey stretches the wire, causing the combs, and sometimes the wire to break. I have used wooden strips instead, with much more satisfaction. I learn Dr. Miller of America, and other leading beekeepers are doing the same.

J. POTTS.

217.—If they are full of honey leave them on top, if empty remove them. Last winter I shut all my bees down in one story, this winter I am leaving them nearly all two story as I believe they winter better in two story hives than one if the colony is strong and has plenty of honey.

221.—I have yet to see a better frame. Whatever else you make do not make your own frames.

222.—No. What is wrong with the wire? Best for poor beekeepers to keep on well beaten tracks.

E. J. RIEN, M.H.A.C.

217 —Leaving on the hives. A good way is to hang up in racks above your head, two inches apart, the wax grub has no chance then.

219 —Lengthwise if a small hive, crosswise large hives.

220.—Have made good preserves from recipes published by Editor.

221.—I have no objection to the Root-Hoffmann frame.

222.—No, prefer wire, have used centre piece in frame, but wire is best for extracting.

223.—In my experience the reverse way No. 3 gave the most honey. Of course if one had nothing else to do but watch for swarms from No. 1, and return them at once, it might give better results.

224.—Old age or diseases causes it, also not sufficient laying room.

WM. PACEY.

219.—From what experience I have had in the matter, I say lengthwise.

220.—Have no experience in the matter.

221.—The spacing is too narrow, consequently the combs are too lanky, and a nuisance when uncapping. The half-depths are another nuisance, too much handling without any appreciable benefit. I have done away with all I had and am using the $\frac{3}{4}$ x $\frac{1}{2}$ inch, bottom bar $\frac{1}{4}$, redwood frame, which I find the best for all requirements.

222.—I have never tried the slips of wood in the frames, but don't think they would be a success in frames that are being extracted from, I use wire, but then that breaks in the frames at times.

224.—I suppose the queens were very prolific, and did not go outside the cluster of bees, as the brood would get a chill and consequently the queen would be restricted, which would cause her to lay as indicated.

J. SMITH.

220.—You cannot make good preserves with honey, as the heat required spoils the flavour of the honey. You can easily make vinegar with honey, and then pickles with it in usual way.

222.—Have occasionally used slips of wood. Have not found them satisfactory. Wire I think better.

223.—Have tried all the three plans. My experience, is that in an ordinary season, the zinc excluder above brood chamber, and below first super answers best; but in a real good season I have taken excluders away and found the whole magazine has been kept in full swing right through the honey flow. Have never tried the three ways at one time so cannot say how it would work by comparison.

224.—Have often found queens lay 2, 3, or 4 eggs in a cell, but never yet saw more than one hatched into larvae. Generally speaking the nurse maid bees, when they go round the establishment to tidy up, usually rectify any little errors of that kind committed by careless queens.

R. BEUHE.

219.—A matter of convenience. I prefer them crosswise, the operator then stands right behind the hive.

220.—We don't.

221.—Too much propolis, more difficult to uncup, and the comb more liable to break in the extractor on account of the wide top bar. The last style, the "pugnose," I should not accept as a gift. A frame with side bars $1\frac{1}{2}$ inch wide projecting only one way, the reverse side at the two ends, spaced with 1 inch flat head nails, two driven into each projecting shoulder, $\frac{3}{4}$ in. deep, will have all the advantages of Hoffmann frames without their drawbacks.

222.—I prefer wiring, the sticks are more humbug than wires when cutting out combs.

223.—This works just the opposite way here.

224.—Not necessarily a faulty queen. Have had the same experience with young queens, the laying become normal in about two months, and queens as good as any, have several now two years old.

H. JUPP.

219.—Lengthwise by all means, as there is better ventilation in summer. Always close entrances in winter, except about two inches.

220.—Have had no experience.

221.—Have none. They are the best by odds of any I have had to handle since starting bee-keeping, and have handled a good number of different kinds. I use the Hoffmann exclusively now.

222.—Always use wire, but will probably try a few the coming season as an experiment.

223.—A "knotty" problem for beekeepers to solve, surely, except by practical experiment. I believe in the way that No. 1 lot was worked for honey, but cannot see how so many swarms would come out if properly attended to. No. 2 lot was in my opinion a "senseless" way to work bees, as there was no room of any account for honey storing, but would think, other things being equal, there should be more swarms by working in this way; while No. 3 lot was not "worked" at all, but like the Scotchman's dog, left to do for themselves.

224.—Honey and pollen coming in plentifully with not much room in the hive will cause a prolific queen to do this always.

QUESTIONS NEXT MONTH.

E. T.

225.—Is a strong winter flow really a gain?

WORK FOR THE MONTH.

On a fine afternoon take a very brief glance at the bees, just sufficient to see they have food enough to last till spring comes, and that moths are not in any of the combs. Should you think there is not sufficient food, take frames of honey

from any you think can spare it, and give to those who want. If you have not such give sugar syrup comprised of half sugar and water, blended by the water being poured on the sugar while boiling, and stirred. This syrup may be poured onto a comb from a height of say a couple of feet, the fall giving force to cause it to fill the cells. Or the combs may be placed in a tub or vessel in which the syrup is poured and the syrup brushed into the cells. We have placed syrup in a pickle bottle, then tied the mouth tightly over with muslin, fasten two sticks on sides of bottle, so they reach an inch or two above top, then turn upside down smartly in spare space in hive. In feeding always do it as late as possible in the evenings or the smell of the food will attract other bees and cause robbing. If the hive is full of combs take an empty one out and put in its place one with syrup in. The pickle bottle can be used behind a follower, or where there is a vacant space, or the combs may be placed in a tub or vessel, in which the syrup is poured, and the syrup brushed into the cells. It is always best for two to work together with the hives, one to pay attention to smoker or any other little matter required, the other the manipulation. It saves time and the exposure of the hives too long. At this time of the year, however, bees will generally be found fairly quiet. Be sure and never have any bagging or covering on frames hanging over outside of hive. If you have, and there is much wet weather don't be surprised if you find something like foul brood in the spring. In this winter time let your examinations of hives be as few and brief as possible.

You will soon detect the presence of moths by their markings in the combs, but those who have Italian bees need not fear their ravages.

Robbing is best cured by covering the entrance with straw or similar stuff dipped in carbolic acid or something to take the smell of new food away from the strangers to the hive. The bees of the hive itself will find their way in, but the others will go away disgusted.

Some like to feed with candy—sugar made into cakes and placed in hive. It is made by boiling 4lb. or 6lb. of sugar in a pint of boiling water, in a saucepan, keeping stirred till it is tough enough to be drawn into threads, when it can be turned out into moulds. Don't let it turn. Rub the moulds with butter to prevent sticking, or the candy might be poured on paper in the moulds. Next month the bees may be stimulated to breeding by giving a substitute of pollen in the shape of flour or pea meal. Such may be mixed with the sugar in making candy. Last week we opened three of our hives. They were strong in bees, had plenty of honey, but no larvæ or eggs whatever, the queens evidently taking their winter's rest.

Any spare time the apiarist may now have should be devoted to making up hives and frames, or painting same, in preparation for the coming springtime.

J. P., Wingham, June 7th:—The past season here has been a poor one for honey in both quantity and quality. This making two poor seasons in succession, but, however the prospects seem brighter for the coming season. The ironbark tree is in full bud; this being our best honey producing tree we have here. * * I was pleased to learn you had planted a patch of broad beans, Mr. Editor, for your bees. If these are planted early enough they will bloom all through the winter and early spring when other flowers are scarce. I think a few acres of these beans on good soil would be a great boon to any beekeeper. * * In making hop yeast use honey instead of sugar and note the improvement it makes in bread. * * For bee stings try Barry's Tricopherous. This will give instantaneous relief. * * Re honey export. I hope it will be a success. But, Mr. Editor, why cannot some of our old experienced beekeepers export their own honey, say a ton or two of their best honey as a trial. * * I think beekeepers themselves are a lot to blame for the low price of honey in informing one and all of the large crops of honey they get, thus inviting competition.

NOTES.

THE DRONE, IN *Australasian*.

I have been asked, seeing that the objections to the shipment of honey to London are so many, what would be the best plan to overcome the difficulties and capture the English markets. As one who has been interested in the shipment of honey home, I can speak feelingly upon the subject, because, though the honey sent was the very best box honey, and the prices realised in London satisfactory, still the result was a loss. The objections to sending honey home under the Government regulations of two 28lb. tins to a packet are (a), that this honey may be purchased in London and sold under another name in retail quantities; (b), that it may be adulterated and sold in retail quantities as Australian, and (c), that no market other than the wholesale is created. The cost of packing in Australia is too great to allow the honey to be tinned or bottled here in small quantities such as 2lb. lots, and yet this is the method that will have to be adopted to dispose of honey in the English market. If we could produce an article that would successfully compete in price against the 2lb. tins of jam now retailed at 8d. in England, then we could be assured of an unlimited demand for Australian honey. This result can be obtained by co-operation, and in no other way. There is a live Beekeepers' Association in New South Wales, which is doing good work there, and if it were to pay a man with experience to receive and grade, as to colour and flavour, all honey received for export, so that no lots should be mixed, light to light, dark to dark, and so on, avoiding blends that could not be repeated, it would in my opinion, be the first step to success. Then an agent, reliable and experienced, should be secured in London, whose duty it would be to receive the honey, and bottle or tin and label it with the required brands, in 1lb, 2lb., and 5lb. tins, or glass. This class of work cannot be done cheaply enough in Australia at present. Bottles or glass jars are best for retailing honey in small

parcels, but the cost of bottling in Australia would be heavy, while the carriage rates and risks of breakage on the journey would be increased. Therefore this portion of the work, to be successful, should be done in London, where the glass would cost a mere trifle in comparison. As to grading the honey, the fact that so long as the honey is properly extracted, and clear, it is really only a matter of taste as to the rest, is always lost sight of in Australia. Because we hear that light honey sells better than dark somewhere else—say in America—is no criterion for us to condemn our dark honey as second quality. Our dark honey has a flavour peculiarly its own, and a liking for it once acquired, it is preferred to light honey, where obtained. Under these circumstances, why should we condemn it as of second quality? It may sell better than the lighter-coloured honey in the long run. Once get the small 1lb. and 2lb. packages on the markets, properly labelled, with a registered trade mark, and with the assurance that the same quality can be supplied regularly, and we shall then be on the high road to success. On the contrary, if some enterprising dealer purchases a ton or two of the New South Wales shipment, mixes glucose with it judiciously, and sells it as Australian, then the market will be shut against the Australian product for a generation. The London market is worth a struggle to get into. Once in, with a scheme matured, such as the above, then beekeeping in Australia will become as profitable as dairying, and our exports of honey will increase in an amazing a manner.

COMB HONEY AT SWARMING TIME.

W. B. RANSON.

I feed, unite, and encourage in every way, brood rearing in early spring to get the bees to swarm early; and when they swarm I take out the queen and let her bees return; and in eight or ten days

they swarm again, a mammoth swarm with virgin queen. Now this is my chance for big work in sections, so I take a hive with starters in brood frames, or combs, if nice and white, and put on a queen-excluder; next put on a super with narrow starters; remove parent colony and place this hive in its place; take unfinished super from the parent, and place on top; put the guard over the entrance, and run the swarm in through the zinc; and if I find more than one queen on zinc, let only the *choice one* go in, and replace the guard *at once* to make sure only one queen gets in. Now take the combs from the parent, and brush all the bees off and out of the hive; let them also run in through the zinc, and take another lot of queens from the zinc, and let the guard remain, so as to keep out any queen that remains in the grass. Replace the combs of capped brood in the parent hive, and close with wire cloth, and place it in some comfortable place to hatch out. If any of these combs have large healthy looking queen cells still unhatched, dequeen other colonies and hang said combs in. In 24 or 48 hours I repeat the brushing, and let the rest of the young bees go in; and if I want more queens I pick up the prettiest and put on those old combs with remaining bees to hatch. On the third day I remove the guard to let the queen mate.

Now I have a colony to fill the hive and two supers with bees, and by brushing young bees as before I can have them fill to the third and fourth super—no fear of swarming again; and if any honey is to be had, this is the colony to find it. It is fun to see all the combs in sections built down at the same time, straight and nice; no need of separators. I learn from the bees that no colony in which a cell hatches out a queen, and she takes her flight, and returns, will swarm again *that year, no matter how populous*. Now stick a pin here; and again, no swarm hived with a virgin queen will build a drone-cell that year.

Now you may set another peg. Therefore I work to get all swarms hived with

virgins, and, as far as I can, have cells given in early spring to prevent swarming. Early fertile queens from the South in spring help to keep down swarming in part only; but the cell given in spring is effectual. Any unhatched brood on hand by this practice is the best property to be had to build up weaklings, from nuclei, etc.

I am no literary man, and make no pretense to rhetoric, but a close hard worker in the bee-yard and the workshop; and what little I know for *sure* is what the bees taught me, and much of that is to some extent at variance with what I read in some of the books; for instance, Prof. Cook's book taught putting supers $\frac{3}{4}$ inch above brood frames, when the bees say, "If more than 7-32 inch we will build in combs." Friend Doolittle, that veteran and esteemed teacher, never told us the $\frac{3}{4}$ inch entrance is too small until the bees raised a fuss about it, then he said $\frac{1}{2}$ inch was right; but my bees say 1 inch.—GLEANINGS.

The price of honey in the United States is on the rise.

G. M. Doolittle, says in *PROGRESSIVE BEEKEEPER*:—If sections are put between broad chamber and an extracting super, the sections will only be second grade, as the bees will work much of the cappings from the emerging brood, and wax from the old combs otherwise with the new comb structure in the sections, giving them a dirty appearance.

G. M. Doolittle, says in *PROGRESSIVE BEEKEEPER*:—If a swarm is given a comb of worker brood as well as starters the bees will build the starters into drone comb. The reason being, the queen does not start laying with the new swarm for some 36 hours, therefore the bees, who have all a supply of wax in their wax pockets when swarming, not seeing the need of building worker comb for the queen to lay in, as they would in ordinary swarming, build store or drone comb, the result being a lot of drones that eat up the profits of the hive.

COMB HONEY.

—ALBERT GALE.—

In the N. S. W. Agricultural Gazette.

I have often asserted that there is no honey so enjoyable as comb honey, one of its advantages, perhaps the greatest, being the fact that adulterators so far have been unable to tamper with this form of produce. Therefore, to the consumer, such honey is most enjoyable; but the disposal of his produce in this form is not so profitable for the apiarist, because every scrap of comb so marketed must be replaced by calls on the stock of honey in store.

Everyone has noticed in old-fashioned rural pictures the straw skips in cottage gardens. Perhaps some of my readers have recollections of the old times, when on some calm, moonlight evening in the autumn we would smack our lips as father made his preparations to sack the straw citadel. No savage horde could have waged war more brutally. Not only were the unfortunate bees robbed of the whole of their store, but the interior of their home was wrecked and the inmates smothered by thousands. It makes our blood run cold with horror to recall such carnage now-a-days; but then we were young, and had but the thought of a delicious scrap of broken comb, the taste of which would linger in our memory long after "strained" honey had begun to pall upon the palate.

It is the production of this comb honey that I wish now to treat upon. The super and its fittings are its first cousin—nay, its great hand-maiden. I frequently feed back liquid honey to my bees for the purpose of obtaining honey in sections; for of all forms in which honey is sent to my table none is so appetising to me and mine as those beautiful, clean, white sections of comb honey.

All the accompanying illustrations are photographs from nature, and will fitly represent what I have to say on the

subject, and all have to do with the super—that part of the hive that gives pleasure to the organ of taste. All supers are adapted so as to be worked for section honey or shallow frames. Fig. 1 is a cradle, with shoulders, and hangs in the hive from the rebates. It will be found that the cradles without the shoulders are more workable. It contains four 1-lb. sections. *a* shows the position in which to fix the starter; it is V-shape. The piece of foundation-comb is larger than I use it. I prefer a strip the full length of the section, wide enough that after attachment it shall be only sufficient to act as a guide for the bees to commence work upon. Some good practical beekeepers put in a full sheet—that is, a piece sufficiently large to prevent the bees from passing from side to side. For show purposes, this is all very well. On it the bees work more evenly, bring the comb flush to the edges of the section and do not produce the pop-holes—those holes seen in the corners of *c* and *d*; but as sections are used exclusively for table purposes, a large piece of foundation is to me an objection. Bees do not work out the foundation, either in the frames or the sections, but work on it. This may be verified easily by cutting through two sections one in which a sheet has been used, and the other on the small starter advised. In the first case the mid-rib will be found to be much thicker than in the latter, and further, it will be found to be composed of wax that has been once melted. Another thing, in eating honey in the comb, if no artificial midrib is in it, the whole of the comb is edible; also in spreading it on bread, it spreads evenly with the honey, and is unnoticeable; whereas the artificial comb can be easily detected in either case. Do not run away with the idea that there is anything injurious or deleterious in the comb; it is a product from honey. In fixing the starters to the sections, they must be firmly attached. There are machines sold for the purpose, one being called the "Daisy Foundation Fastener." It may be done after the starters are cut

into shape by melting one edge in the flame of a candle, and pressing it to the side of the section indicated; or it may be done by placing the full sheet of foundation comb in the sunlight, until it is somewhat softened, and fixing it with the "Daisy Foundation Roller." In whatever way it is fixed, it must be securely done, otherwise the result will be as seen in *b*, where, by the weight of the wax working bees, the V shape starter swerved, resulting in the loss of a section. Fig. *c* is a section of empty comb—one in which they are all worker cells. As a rule, comb in which honey is stored is formed of drone cells. Four drone cells occupy the place of five workers; therefore the construction of the larger cells is a saving of labour to the bees. The comb has been worked from the simple V starter. This is clearly seen from the pop-holes. Bees leave these holes for the purpose of passage ways from one side to the other. Fig. *d* is a section of capped honey, not up to the standard for show purposes, but an excellent one for the table.

Fig. 2 are two sections of honey, the old and the new type—(a) the old type showing bee-ways; (b) the new type has no bee-ways. This season I have the two patterns in work. Perhaps the type without bee-way is filled a little more quickly than the older type. The new type that I have weighed has been a little lighter, being not quite so thick. They have many advantages over the old type. There is little or no propolis used about them, they occupy less space in storing, and fitting so much closer together are kept freer from impurities.

Fig. 3. A half-super from a ten-frame Langstroth hive, fitted to hold twenty-eight sections. In these no cradles are used. The three centre cross-bars have two rabbets, and the ones on either end one; these are for the reception of sections. The sections are tightened from the side as shown. The ends of the sections do not touch within half an inch. The bars on which the sections rest give

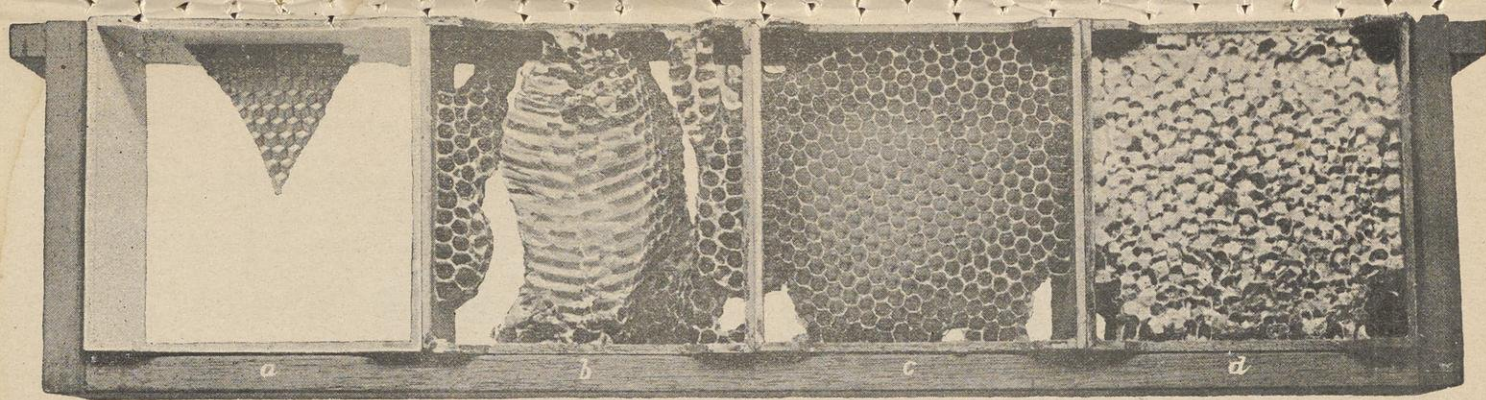
too much space between the sections and the brood-comb, and is always more or less choked with burr-comb. They are not much in use now.

Fig. 4. The section super of the Heddon hive containing twenty-four sections held in six section holders. The end pieces of these holders are the same width as the bee-way sections, $1\frac{1}{2}$ inch, and have a top and bottom bar between which the sections fit. The sections are kept firmly in position by means of thumb-screws. They are not much in use.

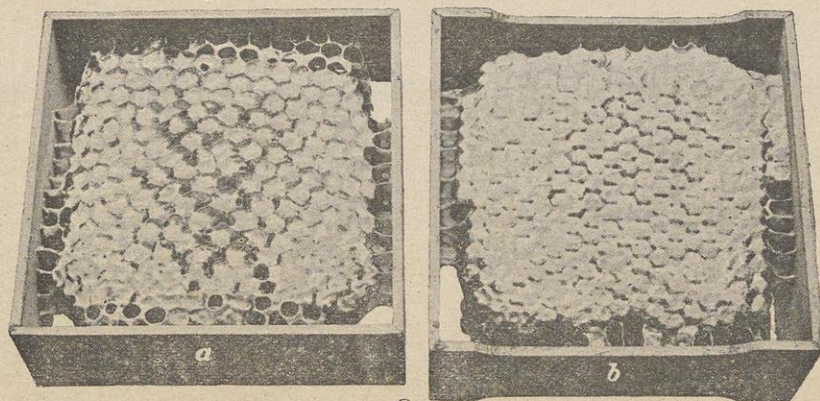
Fig. 5. Lower side view of shallow super for an eight-frame Langstroth hive, showing six cradles with bee-way fitted with new style sections and "fence separators." The cradles rest on metal cleats. The usual bee-space between the super and the brood chamber is given in the latter in the usual way. Its superiority is noticeable in the bottom bars of the cradles being so free from burr-comb, &c. There is no bee way between the side pieces of the cradles and the sides of the super. There is only bee-way from the brood chamber by the bee-openings in the sections. The sections in use are those without bee-way.

Fig. 6. is a Langstroth half-super, containing the latest improvement for lb. section manipulation. There are two dozen sections, four of which are of the old type. The cradle rests on tin slats, as shown in Figure 5. The view is taken after the removal of the quilt. I do not know that I ever saw a cleaner super of sections—certainly I never had one that worked with greater ease and freedom. I have mentioned some of the troubles of Figs. 3, 4, and 5. In the one under review these do not exist. In Fig. 6 a cradle or a section can be removed with the greatest freedom and replaced by others almost without disturbing the bees—certainly without ruffling their tempers to stinging point.

Some years ago comb honey was produced in boxes. These were about 15 inches long, and the other two measure-



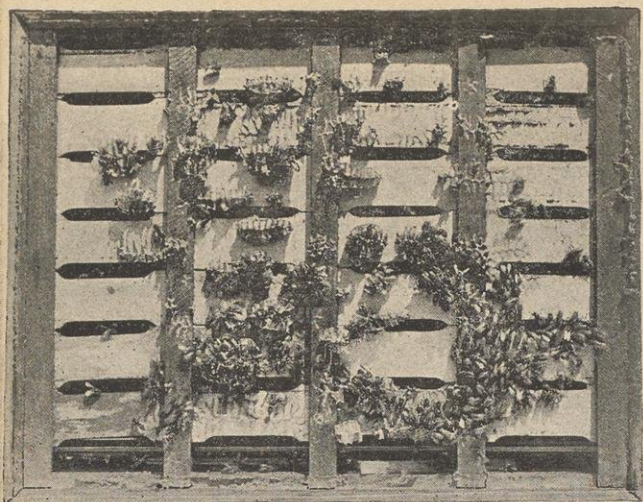
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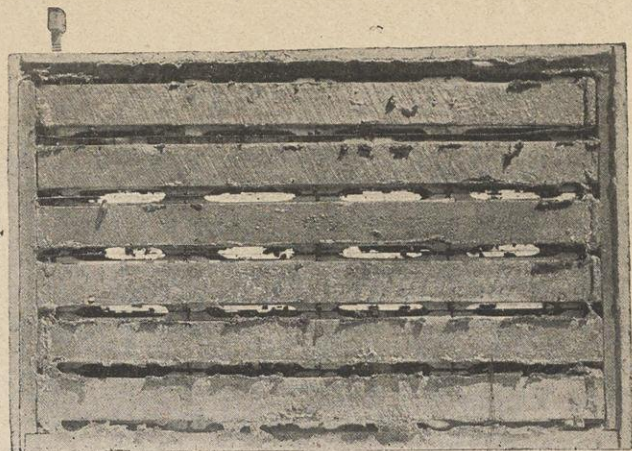
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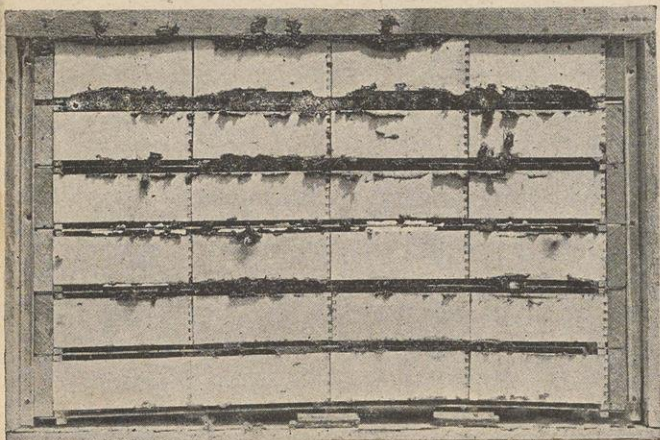
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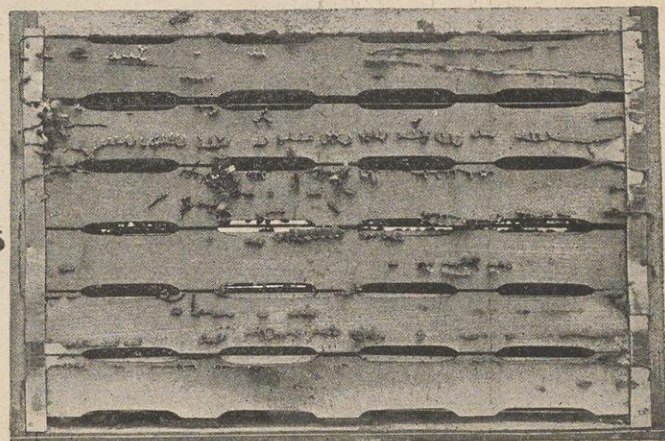
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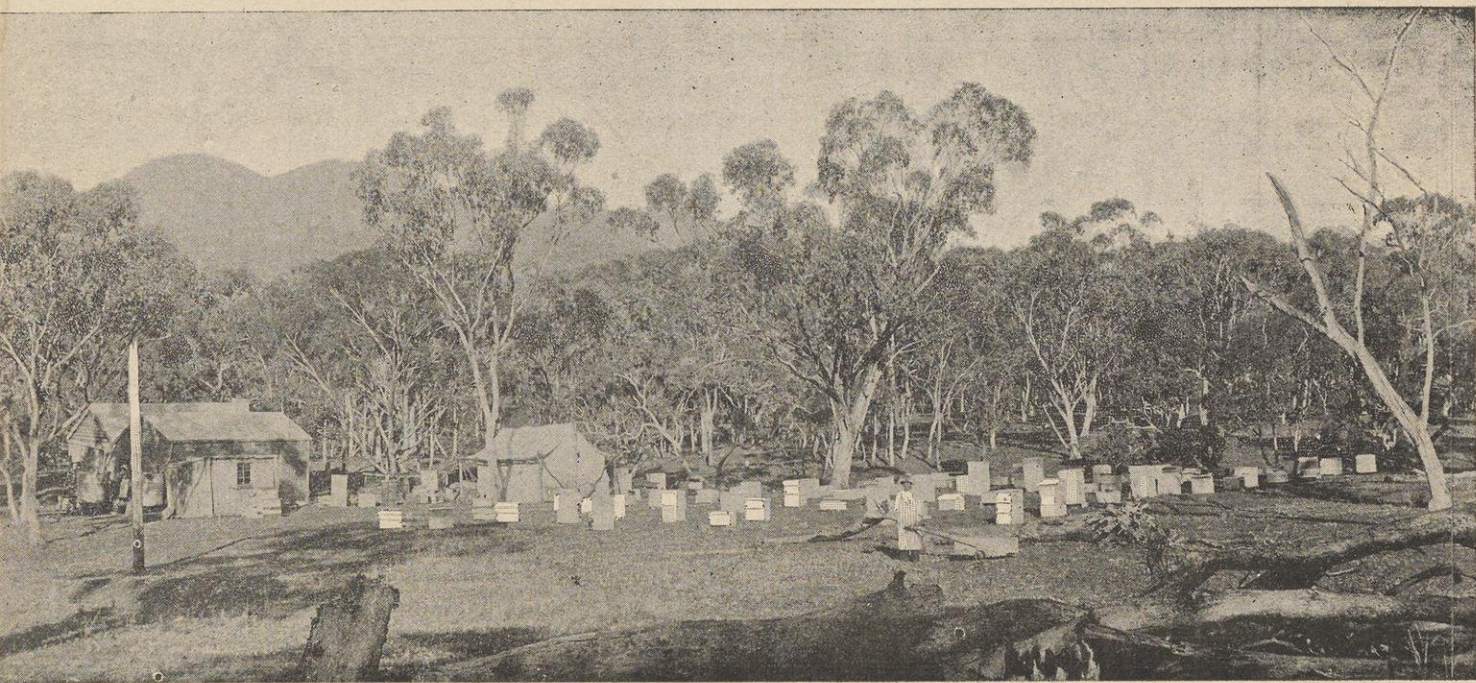
4



6



5



OUR APIARY TWO YEARS AGO.



FIRST CONVENTION HELD MAITLAND, 1892.

ments 5in. x 5in.; both ends were of glass. They were unattractive, inasmuch as they were more or less covered with propolis and burr comb. They contained about 12lb. of honey—too much for any family to use at one sitting; therefore the combs had to be cut. The honey from the cut cells made them more unsightly still by dripping and disfiguring the otherwise clean cappings of the remaining comb. These drawbacks caused them to be unfavourably received.

Fig. 7, a section in the flat for the purpose of showing the best side on which to fasten the starter. If it be the sections with the bee-ways in the top and bottom, then chose the one indicated but if it be the more modern type* the starter should be attached to either piece that contains the dove-tail. From experience I find that the sections should always be placed in the cradles with the dove-tails uppermost. No matter how dry the wood is the heat of the hive always causes the dove-tails to more or less shrink. If the dove-tails rest on the bottom bar of the cradle the bees generally glue the two together, and in withdrawing the section the dove-tails are frequently drawn asunder, resulting in a damaged and unsightly section of comb honey.

* In reference to this "modern type" we may mention the American beekeepers are at variance whether the so-called "modern type" is an improvement, some practical and experienced beekeepers speaking disparagingly of them.

SPRING WORK.

Many times we find it recommended to place an empty comb or foundation between two brood combs to stimulate brood rearing in spring. Some writers praise this practice very much while others entirely reject it. If we place this empty comb between two brood combs with capped brood in the centre, while open brood and eggs are on the outer edges, the queen will perhaps de-

posit eggs into this empty comb and the beekeeper thinks he gained very much.

But as soon as the brood in the adjoining combs are gnawing out of the cells the queen commences to lay into these now empty cells. Now the new comb contains capped brood where the queen expects empty cells; this disturbs her very much and many times she does not pass this comb at all; the brood nest on one side of this comb is neglected by the queen entirely at least for some time. So the advantage is changed to a remaining disadvantage. Many times the queen does not lay at all into the new comb, but the bees fill it with honey and so it is the more a disturbance in the brood nest.

To avoid this the empty comb should be placed between two brood combs containing the least number of capped brood cells, but young larvae and eggs in the centre. At the beginning of a new period it should be placed in the centre, later on the outside of the brood nest.

This rule is important for practical beekeeping and shows that scientific speculation is not so very useless as some of our beekeepers seem to think. I used to practice this giving of empty combs on a large scale and it seemed to me that these combs should be placed between two combs with open brood, but I could not give a reason for it.

Similar caution is necessary if a colony is strengthened by brood combs. Gerstung is not in favour of this, but he gives the following rule: The comb should be given between two similar ones. This is not difficult, but more difficult is it to rearrange the strong colony which has given the brood comb for strengthening the weaker one. Wait till young bees are gnawing out from an outer comb, take this comb and give an empty one in its place. Generally this comb will be right for an outer comb of the brood nest in the weaker colony also, because in the same apiary the breeding periods commence generally at the same time in every hive.—SOUTHLAND QUEEN.

LARGE V SMALL HIVES.

Mr. C. Dadant, one, if not the oldest beekeeper in America, is carrying on a discussion in *GLEANINGS* with Mr. G. M. Doolittle, re large versus small hives. In *GLEANINGS* of April 1st, he makes the following remarks:—

The nine Gallup frames, on which the colonies of Doolittle are confined, can not have 41,400 empty cells to be used by the queen, for the workers always take care of storing pollen and honey as near the brood as possible. Then if one of these nine combs is filled with victuals the queen will have but 37,400 cells, or room to lay but 1800 eggs per day instead of 3600; hence the population will be smaller yet.

Mr. Doolittle writes that the queens in his ten-frame Langstroth hives did not lay more than enough to fill nine Gallup combs. I think that the cause of so poor a laying was the small number of bees in the hives in early spring. A large population and a large provision before winter give a large stock of workers in spring; but these requisites are difficult to obtain with small hives.

"But," says our friend Hutchinson, "if your queens lay so many eggs they are soon over-worked and die." I can not see why our queens would die younger than those which are provided with small hives. The queens doesn't lay at will. The eggs come out when they are ripe, and the queen cannot stop their exit.

If you drum a swarm from a box hive you can ascertain whether the queen is with the bees by putting a black cloth under the swarm. After two or three minutes, if the queen is with the swarm you will see, on the cloth, the eggs dropped by her, as she was unable to keep them; and not only these few eggs are lost, but during the twenty or twenty-five minutes of your drumming she lost her eggs, being unable to keep them or to deposit them in the cells, on account of the trouble caused by your drumming. It is the same when a queen goes from a comb to another in search of empty cells.

"But," adds Mr. Hutchinson, "Mr. Doolittle has experimented on the matter. A queen which had laid 5000 eggs per day, in the whole season, was unable to live more than one year."

This report of Mr. Doolittle's reminds me of the Englishman who, going from London to Paris, arrived by boat at Calais, before sunrise, and went directly to the stage coach going to Paris. In Calais he saw but one woman, and she was cross-eyed. Then he wrote in his diary: "In Calais the women are cross-eyed." We have never made experiments on one or two hives, for such experiments prove nothing, but on 30 or 40 of each kind of hives, during several years, to be sure of the result. If our queens were killed by over-laying, not in one but even in two years, we should lose on the 80 colonies at home more than three queens every month; and during the six months when there are no drones to mate the young queens, fifteen of our colonies would die every year; yet our winter losses, although we winter our bees on their summer stands, do not exceed two or three per cent on an average, in our home apiary. The death of a queen in winter is the death of a colony.

Although this winter was very hard on bees, my son wrote lately to the editor of the *AMERICAN BEE JOURNAL*, "We have just had a good day for the bees. The colonies are strong. There is next to no loss," etc.

For twenty years or more we had a number of colonies in ten-frame Langstroth hives, in the same apiary, with about the same number in eleven frames, Quinby. We were then selling queens, and colonies of Italian bees, and our customers wanted mostly Langstroth hives; but the comparison, in the quantity of honey produced and in the losses in winter, was so unfavourable to the Langstroth hives that we transferred their bees to our large Quinby hives, and we have now these old hives rotting behind one of our shops. Their number will increase this summer; for when our friend Hambaugh went to California three years ago we bought of him his

hives and fixtures, and left them on their place at spring. We have there a good young man to take care of them. He wrote us lately:

Have lost 12 colonies—10 in Langstroth hives. All died with plenty of honey but two. The honey was too scattered.

We had there 80 colonies—50 in Quinby eleven-frame hives, and 30 in Langstroth ten-frames. So one-third of the colonies in Langstroth hives died, while only one in 25 in our large Quinbys died. Do you not think that such a comparison is in favour of the large Quinby-Dadant hive?

Of course, if our bees in Langstroth hives had been wintered in a cellar this loss would have been avoided; but how could we have a cellar in every one of our five outside apiaries? Besides, cellar wintering is not always successful. When we built our house we partitioned a part of the cellar to winter bees in it; yet we found it difficult to keep a uniform temperature in it during the whole winter, and we noticed also that the bees were not as healthy in spring as those wintered on their summer stands; so we resolved not to winter them any more in the cellar, and this wintering outside of our large hives gave us the best results.

CAPPINGS.

From American and other Bee Journals.

Prof. T. S. C. Lowe, the great balloonist of the Federal armies during the rebellion, and now a resident of Pasadena, has given many valuable suggestions in the line of rain making. Los Angeles spends many thousand dollars nearly every year upon a fiesta, which is ninety per cent foolishness. Prof. L. says that an equal amount spent in an effort towards rain making would result in much good. He says it is not necessary to bombard the skies by firing cannon. The release of certain gases and the creation of smoke will answer as well. I hope the experiments will be tried, and hope to report the results a little later.—J. H. Martin, in GLEANINGS.

The SOUTHLAND QUEEN says good competent beekeepers in that country demand about \$1.00 per day, with board. If by the year, about \$20.00 and board per month.

At a meeting of the Senate of Canadian beekeepers—Mr. Holtermann asked if there was one man in the Convention who would take his oath that he had no foul brood. Mr. Shaver replied that no man could swear to that, not even Mr. McEvoy himself. He (Shaver) did not think he had, but would not be positive.—CANADIAN BEE JOURNAL.

R. C. Aikin, in AMERICAN BEE JOURNAL, maintains that 10 Langstroth combs and 25 lbs. of section honey, represents just about 3 lbs. wax, and that the commonly received notion of 15 to 25 lbs. of honey being consumed for each pound of wax made into comb is wrong, and that probably not more than 4 $\frac{1}{2}$ th is consumed.

TO PRESERVE FRUITS IN WAX.—Take the fruit a little before it reaches maturity, being careful that it is in every way without bruise or blemish, and retaining the stem. Holding the fruit by the stem, dip it in melted beeswax that is not too hot, and gently remove it. It will have a thin envelope of wax, and if put in a cool, airy place, will keep nicely for several months.—A. BEE JOURNAL.

The curative properties of honey are strongly lauded in an item in CENTRAL-BLATT. A lad had his knee badly injured by falling on a hard object, and the physician said it was a serious matter of several weeks. In spite of the different remedies applied there seemed no diminution of the pain and inflammation. The father then resorted to the use of honey, wrapping well the injured part with it. Within a quarter of an hour after the application the lad fell asleep, peacefully sleeping several hours, and on awakening declared the pain was all gone. The remedy was continued, and in 10 days he was about as usual.—A. BEE JOURNAL.

Dr. Miller says, "Many think that if you have your bees in dense shade, then you will have them cool, and there will

be no danger of combs melting down. The most combs I ever had melt down was in a place where the sun didn't shine all day long. If you live out in the country where you can get long slough-grass, put a good armful on the hive, and put a stick of fire wood on that. I don't know of a better covering, and it is a good non-absorbent; it gives shade and protects from the heat of the sun. You can put some kind of a board covering on, a temporary rough one, but I believe I would a little rather have long grass covering." Also, "What to do with candied honey in the brood frames. Spray the combs with warm water and give to the bees, repeating the spraying as often as necessary."

All beekeepers should have a common interest in influencing producers to send their honey to market (whether in large or small quantities) neat and attractive in appearance, and thereby sustain prices and make our product more pleasing and satisfactory to both dealer and consumer—two very important personages to our success. A clean, neat, attractive case is, to my mind, quite a factor to that end. Where the honey is shipped a long distance by rail, cinders and dust work into the car, and after the honey has been handled about twice at its destination, the cases are more or less begrimed, and the "bloom" all gone. For years I have made a practice of covering my honey, when in transit, with cotton cloth, to protect it from cinders and dust, which insures a clean, neat appearance when it reaches its destination. The expense is trifling, as the cloth cover is billed with the honey and returned for future use. I brought this before the Buffalo convention as one of the little practical things for beekeepers to do. Also, the putting in the bottom of every case a light manilla paper, to hold the drip and prevent the cases from being besmeared by honey, is a good thing.—Capt. J. E. Hetherington, in *A. BEE JOURNAL*.

When giving the matter of how I killed cross bees, some years ago, someone wrote me that if I would make a skeleton paddle and cover each side with wire cloth, it would be superior to the wooden paddle, inasmuch as that the air would pass through the wire cloth so that the bee would be hit every time, whilst the wooden paddle tended to blow the bee out of the way of the stroke, thus making it difficult to hit the bee the first time. Thinking that this writer had struck the right thing, as it looked so reasonable, I made two or three of these wire-cloth and wood paddles, and upon thorough trial I found that I could hit a bee just as often with the wooden one as with the other. To be sure, I could hear the air hiss as the force of the blow drove it through the wire cloth, but when it came to hitting the bee I could do so every time with either, unless the bee happened to dart out of line of the blow just before the paddle got to it. But there was one thing I found that was in favour of the all-wood paddle that the wire cloth did not possess, and that was, that every time I hit a bee with it, that bee was a dead bee; while with the wire cloth, fully one-half were only maimed, to die a lingering death, or to come back at me with redoubled fury. Now of all the things which hurt me the most, it is to see anything die by torture; and a bee maimed and hurt takes me many steps out of my way to finish killing it, while a dead one is thought no more of. In striking a bee with the wire cloth, if the bee's head or thorax goes between the wires or in the meshes, it is not killed, while with a wooden one the head and thorax are paralyzed at once. At least, this is as I found it after making careful observations. Keeping down cross bees in this way saves lots of stings and annoyance, and I think it pays as well as any of the little things in the apiary.—G. M. Doolittle, in *AMERICAN BEEKEEPER*.

Unequaled and Invincible Woods' Great Peppermint Cure for Coughs and Colds, 1/6.

[Our way is to clap our two hands together on the noisy bee. It does the thing straight away—ED.]

PUBLICATION RECEIVED.

We acknowledge receipt of a copy of THE COCOON, the official organ of the Victorian Silk Culture Association, edited by Mr. A. Brown, hon. sec. of the Association. It is quite an eye-opener on the possibilities of silk and scent production, and has a lot of valuable information on same. On the title page the following figures are given:

Comparative table of some National Industries. Silk Cocoons, Italy 1893, £8,115,917; Gold, Victoria 1896, £3,220,000; Wool, ditto £2,759,000; Butter, ditto £1,547,000; Wheat, ditto £1,418,205; Wine, ditto £282,226. Also, small farmers should plant Lavender, African Geranium and White Mulberry, combining Silk and Scent Culture as adjuncts to ordinary Farm Work.

Mr. W. L. Davey, contributes an article on "Beekeeping as a Hobby," in which he states:

"The only way to produce tons of honey is to go through a course of training covering three or four years, in a successful apiary; then you'll have a good chance, not unless. Beekeepers are not grown like mushrooms, they need a keen intellect, a very observant mind, a persistent or persevering nature, a taste for carpentering, a love of the bright sunshine and beautiful country air, and last, but not least, they must not be afraid of hard work (as beekeepers get their fair share of it.) Add to these enumerations a four years' experience, and you should be practically an expert at bees."

FORMING NUCLEI.

W. W. SOMERFORD.

I now have six apiaries, and of necessity I had to invent a way of increasing rapidly and satisfactorily, with but a little attention given to each division. To begin with, remove the queens or cage them in all of your fancy stock. After getting the brood nest well filled with brood (the more brood the better—8 or 10 frames in a hive if possible) wait ten days after removing the queen, when the bees will generally have cells on each and every comb, and be in a broody or listless condition, waiting for cells to hatch. Dive, and remove the frames quietly, giving each new hive two frames of brood and all adhering bees, and one good frame of honey, using it

for a division-board (and, by the way, such division-boards are to my notion the best in the world); put the two frames of brood and bees next to the wall of the hive, and let the honey frame be the third from the side of hive. Be sure to see that you have at least one good ripe-looking cell in each new hive, or division, and don't forget the frame of honey. As soon as each division is made, stop the entrance of the hive by stuffing full of green moss. If you haven't any green moss, use green grass or leaves, and be sure to stuff them in tight—as tight as though you never intended the bees should gnaw out, and be sure there are no cracks or holes that a single bee could get out at; for if there are, your division will be ruined by all, or nearly all, the bees that can fly leaving it. Each parent colony should make four or five good divisions that will make booming colonies in 40 or 50 days, and I have had them the best in the apiary in less time. Leave or loose the old queen on the old stand (if not too old,) and the bees from it will work straight ahead, as they don't have to be confined to make them stay at home.

Don't be uneasy about the divisions that are stopped up, unless you failed to stuff the entrances well, for they will not smother, but busy themselves with gnawing at the moss or grass for two or three days, possibly four or five, if you have done an extra good job at stuffing the entrance. At the end of that time you will find them all gnawed out so has to have egress and ingress. Then you can move enough of the grass or moss to give them a clean entrance, $1\frac{1}{2}$ or 2 inches wide; and by looking into them you will be astonished at the quantity of bees you have in each hive (and they, too, well satisfied,) having consumed so much time in gnawing out that the queen had time to hatch and kill off her rivals and be ready for the wedding trip by the time the entrance is cleared. So, instead of in a week's time, having a worthless weak division with a chilled inferior queen, as is the case in the old style way of dividing

where nine-tenths of the bees return to the old hive, you have a strong vigorous queen and a nice little *satisfied* swarm of bees, ready for business in the way of pulling foundation before they are three weeks old.

I have succeeded with nineteen out of twenty divisions made in the above way, when I did not even see them until the third week after dividing them as above.

In the above method of increasing, you have no queens to buy, no robbers to bother with, and but little time lost, as an expert can make 20 divisions an hour.—GLEANINGS.

CAPPINGS.

From American and other Bee Journals.

J. A. Green, in GLEANINGS, considers it very doubtful economy to use foundation that has been long exposed to the air.

C. P. Dadant, says thin food in spring, if not unreasonably thin, will stimulate more, and save many trips for water which often costs heavily in bee life.

GLEANINGS says that *good* extracted honey is a scarce article, $1\frac{1}{2}$ to 2 cents higher than a year ago. A good article of comb honey could be bought a short time ago for 10 cents, and now "fancy" brings all the way from 12 to 14, and No. 1 from 10 to 13.

Mr. A. C. Sanford, says in A. BEE JOURNAL:—With the money I made from my bees I paid off the indebtedness on my farm, built a large brick house, improved my farm, and purchased a young herd of purely-bred shorthorn cattle in 1891, which have been kept on my farm, and have now increased till there are 30 head; also many have been sold.

Chickens should not be allowed in the apiary during cold weather. Their scratching and picking around the entrances to the hives disturbs the bees not a little. Then if the apiary be protected from the wind, and the day clear, yet too cold for bees to fly, chickens are very apt to jump on top of the hives, thereby

causing many bees to leave the cluster and perish.—W. W. McNeal, in A. BEE JOURNAL.

Bees are not all that make honey in Mexico, because we found a big red ant that gathers honey. Now, you may doubt this story, but nevertheless, it is true, because we saw the ants with the honey, and ate some for our meal, and as far as we could tell it tasted like bees' honey. The ants do not build comb, but put the honey in small, thin, gelatine like balls about the size of a medium buckshot.—SOUTHLAND QUEEN.

Dr. Vieta, of Cuba, with only two apiaries can produce one hundred and eighty tons of honey in one season, and that honey brings 40 to 50 cents net, per gallon, in Havana, Amsterdam and Holland, etc. If extracted honey can be produced at a profit at three cents per pound, as was clearly shown at the recent convention of the U. S. Beekeeper's Association at Omaha, a regular bonanza awaits the energetic Yankee who can produce 180 tons or more each season and sell it so as to net 40 or 50 cents per gallon.—BEEKEEPERS' REVIEW.

Mr. Hutchinson says, the presence of a laying worker can be detected by a large number of eggs being deposited in one cell. The eggs are seldom in the bottom of the cell. Perhaps the worker cannot reach to the bottom of the cell. They are always on one side and near the bottom. When the eggs hatch all of the larvæ soon die except one, and when the cells are capped over they have a conical or raised capping the same as the capping over drone-brood. It is very seldom that a laying worker is seen. Once or twice I have seen a worker laying eggs, or at least it *looked* as if she was laying. I caught and killed her, but it did not stop the laying of workers. I presume that there is more than one in a colony.—A. BEE JOURNAL.

Mr. Bingham, at the Michigan State Convention—There is no question that the use of plain sections allows of a saving in shipping cases, but there are other considerations. Here is one: With tight

or closed separators the bees will begin upon only a few sections in the centre of the super, and if the flow is slow, or if it is near the close of the harvest, they will keep on and finish up those few sections that they have begun working upon, when, with no separators, they are more inclined to spread out and begin work upon a large number of sections, and perhaps not finish any of them. With tight separators there will be less unfinished sections than with no separators, and it seems as if open separators might have a tendency in the way of encouraging the bees to spread out and begin work upon more sections than they can finish.—A. BEE JOURNAL.

Mr. James Heddon has an extractor which he considers the best in the world. "The slip gear, which lets the revolving frame whirl by its momentum without dragging the crank and horizontal shaft, works to perfection—beyond my most sanguine hopes. It is as practical as a shovel or pitchfork. The foot-brake under the machine, on the extended shaft, resting in the floor, is also a piece of perfection in its practical workings. I think it was over ten years ago that I wrote about these improvements; yet I'm not aware that they have ever been put into operation until I did it last fall; and now I am sitting up nights hating myself that I didn't adopt them sooner. A foot-brake is well-nigh indispensable upon honey extractors of large diameter. The stopping of the motion is more trying to the muscular system than is the starting or running of the machine; especially is this true in summer extracting."

It has been going the rounds of the bee papers for many years that sometimes a young queen will lay drone eggs at first and then get down to laying worker eggs. This is all a mistake, according to my experience. Many times laying workers begin their work, sometimes in one or two days after a colony has been made queenless, and when those workers begin laying they do not stop, as a rule, till they are dead, and

thus the young queens have help and have to bear the name of laying drone eggs into worker cells, when it is the workers doing the work, but as soon as the workers are played out that were laying at the time the queen began you will see no more eggs that make drones in worker cells. At least, this is my experience, and I have tested it in hundreds of cases. Of course there will be a queen once in a while that will begin laying drone eggs in worker cells and scatter some worker brood along with it, but she never does any better as long as she lives. If a queen is mated right and is all upright in every way she will lay worker eggs from the start, and drone eggs only when needed for the welfare of the colony, or mostly at or near swarming time.—SOUTHLAND QUEEN.

DO BEES LIVE AFTER STINGING.—I had a horse stung so badly by bees that it died. I was somewhat interested, and watched to see what hive or hives the bees came from; but I could not see any dead bees around any of the hives—that is to say more than usual. Wishing to experiment a little, and to find, if possible, the cause of death of the horse, on the 12th of September I procured an old horse and a swarm of black bees in an old box hive, and let the horse and bees become well acquainted with each other. In fact, I placed the hives so that the horse tipped it over. I let the bees sting him for about twenty minutes. I expected to find a large number of dead bees, but I did not. I did not look to see if the bees that were left had lost their stings, but I was astonished not to find more dead bees. The colony did so well that, in the last week of September I transferred them. When I packed them for winter they were a fairly strong colony, and I wondered what became of the bees that stung the horse, for it did not seem possible to me at the time that they could have built up to the numbers they were after the depletion there ought to have been if those that stung the horse had died.—George L. Vinal, in GLEANINGS.

[Is such cruelty justifiable?]

To first make candy, use good powdered sugar, setting it near the stove for four to six hours, till thoroughly warmed through, when some good thick extracted honey (of any kind which is wholesome to the bees) is warmed till it feels quite warm to the hand. The two are now stirred together, adding sugar till it can be worked with the hands, when enough of the sugar is kneaded in till a loaf is formed which will stand up of its own accord without flattening down when placed on a flat surface. It is now set away in a warm room for a week or so, when it is ready for use, using granulated sugar, as above, when the weather is warm or the queens are to go to some climate where it is warmer than it is here. Before the granulated sugar is added, candy that will stand up nicely in a temperature of 75° will all go down and slowly run about if kept in a temperature of 100° for half a day. But after the granulated sugar is added it will hold its place, even when the temperature is above 100° . From what I have seen, I am convinced that more queens are lost when sent to a warm climate by the candy getting soft and daubing the bees, than from all other causes put together, so it is well to guard this point as strongly as possible for it is at best a hard jaunt for bees and queens to any of the foreign countries.—
GLEANINGS.

G. M. Doolittle, says:—There is no such thing as pure mating of queens where apiaries of different races are located "within a mile or two" of each other, and he who thus breeds, expecting to reap any certain results, is destined to an uncertainty of affairs which is not pleasant to contemplate. All familiar with the flight of drones know that they have places where they congregate by the thousands, if not millions, coming to these places from all over a region from five to seven miles around, and when the queen comes to these congregating places

she is apt to meet a drone from a "scurf" breed as she is one of those choice, nice yellow "gentlemen" you would have her secure as her partner. Late in the fall, or in the early spring, drones nor queens fly so far, consequently we are more sure of pure (?) mating with Italian bees than at other times of the working season. For this reason I select combs of drone-brood from my choicest colonies, near the close of the honey season, and mass this drone-brood in a colony kept queenless and fed bountifully, so that these drones are kept after other drones are killed off in the fall, when they are "hand-picked," so that only the best remain when young queens are reared, and a satisfactory result obtained.—A.
BEE JOURNAL.

CORRESPONDENCE.

C. L. M., Gladstone, Queensland:—Accept many thanks for the labels, which arrived safely. I am very pleased with them, and think your charge is very reasonable, cheque enclosed. I shall be glad when this Federation is accomplished, as I have $5/6$ duty to pay on the labels, which is far too much. With kind wishes for the coming season, etc.

R. H. G., Glen William, June 6:—The A.B.B. is a paper that all beekeepers should have, I would not like to be without it now. The past season has been a very good one in this district. I have extracted 4 tons from 25 hives (spring count) but the prices are very low. Wishing you and your paper every success.

W. P., Marrar, June 12th:—The winter is upon us and I must tell you that the drought has nearly done for our bees in this part. The past season has been one of the worst experienced here. We have had no use for the extractor and in consequence there is no honey in this part of the country. The wax moth has been very troublesome here, the boxes with combs and no bees in them suffered. Beneficial rain has fallen here just recently and we hope for a change for the better in the future.

W. E. B., Broadwater, May 28th:—Would you kindly let me know what you think of this Government export scheme, are many beekeepers taking advantage of it, or is it going to fall through. Would have sent some, but all our honey candies in this district, and Mr. Stephenson informed a deputation at Lismore that he thought it would be no use in sending candied honey.

Candied honey, if the tins containing same are placed for a time in boiling water, not allowing the honey to boil, it will not candy again for a long time.

A. P. H. jun., Henty, June 4:—I am just a beginner in the bee line, and hope you will not criticise if I ask simple questions. One question I would like to ask, if you allow me space in your valuable *Bulletin*. Would bees accept colonial pine (that grows in Narrandera district), or would it be injurious to bees or honey.

We don't know your particular pine, but ordinary colonial pine is as good as far as the bees and honey are concerned, for hives as any wood we know of. The only objection to it we have had is its brittleness, too much given to splitting when being nailed.

Mr. W. Manson, Sydney, in reply to A. H., Harden, says:—Messrs Dalgetty and Co., will convey a case of honey to London per steamer for 10/6. The case may contain one tin (60lbs) or two tins (120lbs.), as in either case the freight is the same. The same firm also offers to take honey in good packages to London per steamer for 40/- and 5 per cent primeage per ton of 20 cwt. Per sailing vessel the freight is about 35/- per ton weight. The Orient Co., would deliver the 60lb. tin of honey at any address in the United Kingdom for 20/-. * * I have done very well this season increasing from 12 to 17 and taking nearly 1½ tons of honey. This I disposed of at from 2½d to 4d per lb. Considering the low prices consequent upon the glutting of the Sydney market I have reason to be pleased. By a letter just to hand from Liverpool, England, I find that

honey is being sold there wholesale in jars containing 14 lbs. at 6½d per lb. It would be interesting to know how much the producer got for it. The honey labels you supplied were A 1, but I have not used many as I sold chiefly in bulk. The A. B. B. still fills the bill and should be in the hands of every beekeeper. Trusting you are well and have had every success.

The "Drone" in the AUSTRALASIAN, speaking on the formation of the new Victorian Association, says:—The days of giving lectures to assembled beekeepers on the beauties of modern apiculture are over. Beekeepers want active assistance in selling honey more than foul brood acts, or a heresy hunt after adulterated honey. It is no use talking about a subscription fee of half-a-crown per annum to accomplish this. It will need a commission on honey sold; it will also need a paid secretary (active) and an organiser to bring it to a successful issue. If the new body is prepared to go seriously into the matter it will have the support of the professional beekeepers, who are now selling their honey at 3d. per lb., less carriage and commission, while the public are paying 100 per cent. more. If, however, the new body is afraid to tackle this matter, it should change its name into something akin to its objects—such as "Amateur Beekeepers' Instruction Association," and it may then keep alive vicariously. The struggling beekeeper is distinctly off associations from which he can hope to obtain neither pleasure nor profit, and half-crowns are now so scarce with him that he will keep them for painting hives rather than for fares to town to attend useless conferences.

A. J. R., Beecroft, June 13th:—Referring to Mr. Bolton's letter in your last issue, re bees carrying eggs from one cell to another, I am most decidedly of opinion that they do so, and although I have been assured by a prominent bee-

keeper that such is not the case, I still believe, from my own experience that it is a positive fact. This last season I have had several cases occur, where eggs have been removed from the brood frames, and placed in the centre of the honey compartment, and queen cells reared from them. In each case I was running the hive for extracted honey, and using an eight framed two story hive, with a queen excluder between compartments. I have been told that by some means the queen had got on the frames and laid there. Nothing of the kind. The frames referred to had never been near the queen at all, being in each case new combs, and up to that time not used for anything but honey; besides, who ever heard of a queen getting through an excluder, laying one solitary egg and then returning through the excluder again. Of course queens do play us some funny tricks at times, who knows, but that some queens have a vein of humour somewhere in their anatomy, which induces them to play such tricks, and when they see the puzzled beekeeper trying to account for the way the egg got there, they wink the other eye. Yes, sir, I am of friend Bolton's opinion, that bees do remove eggs, and until someone shows me how those eggs could have got where they did, except by the bees removing them I shall still continue to be so. I may add that in every instance the queen cells thus reared were inferior ones.

Mr. H. L. Jones, Goodna, Queensland, writes:—Am very pleased to see that you are going to have a Convention in Sydney in a fortnight's time. It is quite possible that I shall manage to get there also, I shall try hard anyhow. I presume that you have noticed the interest that the Americans are now taking regarding the introduction of *Apis dorsata*, and I think as we are nearer the natural habitation of these bees, we might also have a finger in the pie. If you think it will be of interest, I will read a paper on these giant bees, as I

have just received some samples and can give a good deal of information.

By all means, let us have it.

J. and E. T., South Lillimur, Victoria.—We have only about 38 colonies of bees now, but they are in good order, which is more than we have been able to say for a long time.

G. G., St. Ives:—I was very pleased with those labels, they have sold me a lot of honey, and orders coming in daily from people who have seen the labels, and tasted the honey. I am selling out rapidly to private customers mostly in 7lb tins.

W. L. Davey, Hawthorn, Victoria:—Your paper (I think the fraternity should call it *our* paper) is invaluable to the industry, from the front page to the last its real enjoyment. I love getting into touch with other beekeepers, and we often have a talk together on your paper. Even our friends across the water, Dr. Miller, Doolittle, and many others, occasionally find their way amongst Australians, and I think we benefit thereby. The present wish of myself is that the BEE BULLETIN may speedily have to increase her borders, pull down her barns, and build greater, that is "become an illustrated beeper."

NOTICE.

A MEETING of the members of the Victorian Silk Culture Association will be held at W.C.T.U. Rooms, 141 Flinders Street, at 7.30 p.m. on Thursday, June 29th, 1899, for the purpose of altering the name of the Association and the adoption of Rules. At 8 p.m. after the conclusion of the above business, a Public Meeting of those interested in promoting the Bee Industry will be held. All those interested are cordially invited to attend and bring samples of their produce for exhibition. The President, Mr. J. Brake, M. L. A., will preside.

At first its wind and then its rain,
Its cold, then hot, then cold again,
Such trying climate brings on chills,
And must increase the doctor's bills;
But what is that which saves expense,
Which we can buy for eighteen-pence,
Which drives away all colds for sure?
Why, Wm. E. Woods' Great Peppermint
Cure.