



J. A. East

The New Zealand Beekeepers' Journal.

DECEMBER 1st, 1919

ISSUED MONTHLY
FOR
THE NATIONAL BEE-KEEPERS'
ASSOCIATION OF N.Z.



PER ANNUM : **5/-** IN ADVANCE.



ITALIAN QUEENS AND NUCLEI.

Safe Arrival Guaranteed.

All Orders Supplied in Rotation.

PRICE LIST, 1919-20.

Untested	7/6 Each	Tested	17/6 Each
Select Untested	10/- Each	Select Tested	20/- Each

Nuclei with Untested Queen 25/- each. Containing two, three or four frames, according to time of delivery.

TERMS.—CASH WITH ORDER. CHEQUES TO HAVE EXCHANGE ADDED.

Postal Address: M. SHEPHERD, Southbrook, Canterbury.

NICHOLAS' FOUNDATION FACTORY.

BEE SWAX WANTED

In Large or Small Lots to keep our Up-to-date Foundation Factory going at top speed. The capacity of our Electric Power Plant has been greatly increased for 1919.

Highest SPOT CASH Price paid for Beeswax.

Foundation made up at 8d. per lb. or on Shares.

NICHOLAS, 4 CALEDONIA ST., HAWERA.

Don't Forget

Our Store when anything is wanted in the shape of

BEE MATERIAL.

Full supplies of all Beekeepers' Requisites kept in stock. Honey Tin Manufacturers. Agents for Alliance Box Co. and for Benton's Capping Melter.

REMEMBER! If it's for Bees, we have it.

H. BEALE & CO., LTD.,

PLUMBERS, TINSMITHS
and IRONMONGERS,

P.O. Box 129. 'Phone 62.

MASTERTON, WAIRARAPA.

MONEY IN BEES
in
AUSTRALASIA.

Price 8/-

By .
TARLTON-RAYMENT.

MONEY in BEES in AUSTRALASIA.

By TARLTON-RAYMENT. 252 pages; 100 illustrations specially drawn by the author.

Price 8/-

Posted 8/6

A concise, explicit and eminently practical guidebook, conveying the elementary as well as the more advanced phases of practical apiculture. The volume also contains a special section—the first of its kind—dealing with the nectariferous value of the indigenous flora.

WHITCOMBE & TOMBS LTD.,

Auckland, Christchurch, Dunedin, Wellington, etc.

The New Zealand Beekeepers' Journal

The Official Organ of the
National Beekeepers' Association of N.Z.

No. 12

VOL. 3

5/- PER ANNUM.

National Beekeepers' Association of New Zealand.

The object of the Association is the improvement of the Beekeeping Industry and furthering the interests and prosperity of the Beekeepers throughout the Dominion. Membership is extended to any Beekeeper who is in accord with the aims and objects of the Association on payment of fees as follows:—1 to 13 Hives, 5/-; 16 to 50 Hives, 10/-; 51 to 100 Hives, 15/-; 100 to 200 Hives, 20/-; every additional 100, 5/- extra.

OFFICE-BEARERS FOR THE YEAR 1919-20.

President: Mr. JAS. ALLAN, Tasman, Nelson.

Vice-President: Mr. W. WATSON (Geraldine).

Executive: Mr. R. McKNIGHT (Domett); Mr. A. H. DAVIES (Pukeroro Rural District, Hamilton); Mr. J. B. ADAMS (Gisborne); Mr. H. R. PENNY (Okaiawa); Mr. J. S. COTTERELL (Manawatu, Te Aroha).

Secretary & Treasurer: Mr. FRED C. BAINES, Kati Kati.

Editor of Journal: Mr. FRED C. BAINES, Kati Kati.

DISTRICT ASSOCIATIONS AFFILIATED.

Auckland Provincial Branch.—Sec., Mr. A. H. Davies, Pukeroro Rural District, Hamilton.

Sub-Branches:

Lower Waikato.—Hon. Sec., M. P. Millett, Papakura.

Te Aroha.—Hon. Sec., C. A. Grainger, Waibou.

King Country.—Hon. Sec., W. Copsay, Te Kuiti.

Rotorua.—Hon. Sec., F. E. Stewart, Rotorua.

Taranaki Beekeepers' Association.—Hon. Sec., H. W. Warcup, Hawera.

Canterbury Beekeepers' Association.—Hon. Sec., Miss MacKay, Middle Lincoln Road, Spreydon.

Christchurch.

Southland Beekeepers' Association.—Hon. Sec., L. Gardiner, 119 Elles Road, Invercargill.

Waikarapa Beekeepers' Association.—Hon. Sec., Mr. Y. H. Benton, Featherston.

Chelviot Beekeepers' Association.—Hon. Sec., R. McKnight, Domett.

Clutha Valley Beekeepers' Association.—Hon. Sec., G. Cottrell, Greenfield, Otago.

West Coast Beekeepers' Association.—Hon. Sec., D. T. Cochran, N.Z. Railways, Greymouth.

Tairāri Beekeepers' Association.—Hon. Sec., Mr. B. H. Howard, Mure Street, Mosgiel.

Fovearly Bay Beekeepers' Association.—Hon. Sec., Mr. J. B. Adams, Gisborne.

Hawke's Bay Beekeepers' Association.—Hon. Sec., Mr. J. P. Boyle, 400 Lyndon Road, Hastings.

All communications respecting the Association and Journal to be sent to

FRED C. BAINES, Kati Kati.

CONTENTS.

	Page		Page
Editorial	189	A Useful Appliance in Queen-Rearing	198
Market Reports	192	Bill Takes His Pen in Hand	199
Beekeepers for Beginners	193	Correspondence	199
District Reports	194	Answers to Correspondents	203
Canterbury Tales	195	Bees and Beemen of Old	203
Apiary Boundaries	196	Beekeepers' Exchange	204

EDITORIAL.

On the question of apiary boundaries and the clauses arrived at by the Committee appointed by the National, with Dr. Renkes and Mr. T. W. Kirk, of the Department of Agriculture, which were published last month, Mr. James Allan (our President) thinks it is advisable that all these clauses be thoroughly discussed, for and against, in the Journal, so that when the Executive and the Committee meet next February the clauses submitted will have been examined closely by all those to whom this vexed question is so vital.

The clauses have been criticised publicly by Mr. Allan in the "Otago Witness," and by Mr. I. Hopkins, in the "Fruit grower." Their remarks are published in this issue.

It is, of course to be distinctly understood that all criticism is to be for one purpose—viz., to see if it is possible, without either handicapping the industry or attempting to deprive owners of land of their just rights, or attempting to dictate as to what an owner of land shall or shall not do on his own property (the two latter being to our mind absolutely impossible): in short, to see if legislation such as proposed would be to the best interests of the industry.

Whether one agrees with the clauses or not, we all must commend the work of the gentlemen of the Committee, as they did their very best to solve a very difficult matter.

In attempting to legislate to the interest of beekeepers in the same way as other branches of agriculture, we must recognise that a beekeeper does not depend to the greatest extent, on his own labours for the success of his industry; this rests chiefly on the amount of work put in by the farmers surrounding him. Even if the beekeeper is not an expert, but is in a district where the farmers take great care that their pastures are always in good condition, that beekeeper is bound to get a satisfactory return from his hives. On the other hand, the best beekeeper in the land, if he be in a district where the farmers do not trouble to top-dress their land, and the clover dies out for the want of lime and other constituents of the soil—the expert with all his knowledge will not make a success. He can have the finest strain of bees extant; he can bring all his experience to get his hives into the very best condition at the right time; but if after all this the farmers surrounding him have not done their part to the pastures for their own benefit at their expense—not the beekeeper's—the result will not be satisfactory. With cows, pigs, horses, poultry, fruit-growing, and all other branches of agriculture, the benefit to the owners accrues from the amount of labour they put in **INSIDE THEIR OWN FENCES**. With the beekeeper the benefit he gets from the industry is to the largest extent brought about by what has been done at somebody else's expense **OUTSIDE HIS OWN FENCES**. Therefore, we submit that to suggest that these farmers ask our permission, or for us to attempt to legislate in dictatorial terms as to what they shall do on their own land, is pretty near downright impertinence.

Who or what is the cause of this burning question? Is it caused by any two or more beekeepers in the same locality fighting one another over each other's rights to the territory covered by their respective bees? We have never heard of anything of this sort. In the North Island, we suppose the Waikato and Thames Valley apiaries are as thickly placed as anywhere in the Dominion, yet there is no friction between beekeepers there that we have heard of. But it is in this particular part where the Apiary Boundaries question is most keen, and was brought about chiefly by men coming from hundreds of miles away and dumping their apiaries without much and in some cases any consideration for the beekeepers already established in the districts. Now, if these men had bought property in this district and established their apiary thereon, we cannot believe you would be able to get any legislation passed to stop them. But they did not; they stocked the place they rented or

bought, and set out apiaries all over the district. Now, how can this be stopped in an effectual way without interfering at all with the rights of owners of land? Well, it is easier to criticise than construct; but we believe we have found a solution of the difficulty which gives everybody a right to keep bees if he wants to; also that which will give him absolute security from outsiders dumping apiaries to his detriment. The clauses suggested are framed on the absolute conviction that you cannot get legislation to dictate to any owner of land, be he leaseholder or freeholder, what branch of farming he shall not develop thereon. Under the suggested clauses an apiarist desirous of dumping our apiaries would have to buy or lease the sites and reside thereon in the full sense of the term—clearly an impossible thing. The license fee is small, and is imposed for the sole reason that all licensees may have absolute protection, and the right of appeal if their rights are likely to be usurped.

Clause 1.—The owner of ten hives or more can become a licensed commercial apiarist within the meaning of the Act if he so desires on payment of 2/6 per annum.

Clause 2.—No person shall be allowed to start or establish an apiary on any land other than his own residential property, either leasehold or freehold, without the consent of the Apiaries Division of the Department of Agriculture.

We will go into Clause 1 and see exactly what it means. Every owner of ten hives can be licensed as a commercial apiarist, and can thus claim the protection afforded by Clause 2. This clause is quite a voluntary one on the part of the owner, be he farmer, apiarist, side-liner, or hobbyist; consequently there is no offending compulsory condition as to what a man shall or shall not do. If an owner of ten hives thinks he will develop his apiary to the full carrying capacity of the district, and wants to be protected from outsiders jumping his claim, he will simply apply for the license. If, on the other hand, he does not want to increase, he does not trouble to obtain a license, which in itself is evidence that he is not particular whether an apiary is established within his range or not; and if a permit were asked to establish a commercial apiary in that district, it would be granted, and that without any just cause for complaint on the part of the owner of the ten hives. This gives any owner the chance of developing his apiary as much as he likes; but if he has not time or inclination to do this, then he must not prevent another man who is willing to develop to the full carrying capacity of the district. The onus of being protected is entirely on the owner of the ten hives. The Department is not dictating "you shall," "you must," but "you can if you like," and even the dullest person can see that it is to his advantage to become a licensed commercial apiarist if he intends to increase his apiary. So much for Clause 1.

Clause 2.—As it reads it is perfectly clear, and the machinery to carry this out to be worked in the following manner. (It will be granted that an apiarist who intends to start out-apiries does not make up his mind one week and establish the apiries the next. It requires some months preparation, and he would have his sites in view probably at the fall of one season for the next season's operations.) The apiarist shall apply for permission from the Department not less than three months before it is intended to put the hives down. The National Association, working in conjunction with the Department, will have a space allotted in the Journal for publication of these applications, so that those who feel they would be injured by the intended establishment can lodge an objection by a given date. If no objection is made, the permission would be granted. All objections to be considered by a representative of the Department and one appointed by the National within one month after the date of the publication of the request, and the case decided on its merits. The failure to establish any apiary by a given date after permission has been granted cancels the permission ipso facto.

The need for protective legislation for the established beekeeper has been brought about solely by "dumping." We submit these two clauses would absolutely prevent it, and that without any restrictions on anybody. Every established beekeeper and those just starting in the industry would be sure of absolute protection, and can develop as much as they like with full sense of security. The failure to pay the annual license in itself indicates that the district hitherto held is available for commercial expansion, and the fact that it is an annual fee prevents a good district being held by those who do not want to go in for commercial beekeeping. Those who do not pay their annual license fee cease to get the benefit of the protective clause.

Many of our commercial apiarists have been advertising the fact that they intend establishing out-apiries in their respective districts, but this gives no guarantee that others will not follow should the locality prove a good one. Neither does the fact of advertising give any beekeeper the right of appeal against the intended establishment; he has no one to appeal to except the intending offender; the Department has no authority to stop the move; the National is also powerless; and thus we are in the unenviable position of being unable to stop a glaring wrong. With these clauses embodied in the Apiries Act it would be clearly impossible for a situation to arise as was cited at Conference a year or two ago, where a lady beekeeper, after making every inquiry as to what beekeepers were in a district, and finding none, bought a section of land, had a house built, and no sooner were her hives placed on the ground than she learned that

an outside apiarist had leased a section from a farmer prior to her going to the district for the establishment of an out-apiry almost adjoining her section. Under the suggested clauses both parties would have known of each other's intention three months previously.

We have given a great deal of thought to this question of regulating apiary boundaries, and the clauses submitted are put forward only after looking at the question from all points, and as far as we can see they offer a solution. However, although we cannot see any loopholes for evading the law in them, we give them to our readers for their careful study and criticism, and if they can see any weakness in them, we shall be glad if they will point it out. Will you please understand that the Committee and the Executive will be meeting early in February; therefore all suggestions for a solution and criticisms of our suggestion must reach the Editor between this and the 20th January, so that those appointed to find a workable solution can have the benefit of every suggestion put forward.

Being anxious to increase the number of subscribers to the Journal, specimen copies have been sent to close on 5,000 owners of bees as shown by the Department's lists of registered beekeepers, these being kindly loaned by Mr. T. W. Kirk. As a premium to new subscribers, the little booklet "Beekeeping for Beginners," is being included in the subscription fee of 5/-, and we shall appreciate our readers' assistance in making known this fact. The little handbook has met with very great success; the first edition was exhausted in October, the second 1,000 being now in print. This week we received the following letter:—"I think the handbook very good, and every beginner should have one; it gives all the beginner wants to know to start with; he can then read more advanced ones at his leisure." This is just what the Editor intended when he compiled the book, and it is very satisfactory to him to have received dozens of letters in a similar strain. Please understand that more subscribers mean a better Journal, and we hope our friends will help in this matter.

In the market report from Messrs. Taylor & Co., of Liverpool, dated September 22nd, you will notice that 50 cases of New Zealand honey realised 105/- per cwt., beating Californian by 10/- per cwt. We can all put ourselves on the back at this, as it indicates that we produce the finest honey imported into England, the world's market. The firm's auction sales attract the keenest business men there, so there is no inflated value about it—the intrinsic worth of a superior article. We hazard a guess that this honey was not sold to the retailer as "New Zealand Honey." In any case, it will give the H.P.A. shareholders an indication of what first grade N.Z. honey fetched on the open market, and it also indicates that a fairly substantial bonus should be forthcoming at

the end of the financial year, as the difference between 60/- f.o.b. N.Z. port and 105/- England is something to come and go on, apart from the profit made on the bottling depot in Bristol. Mr. Ryland, we are looking your way just now!

We have received copies of a new monthly publication, "The Bee World," edited by Dr. A. Z. Abushady, and published by the Apis Club, Port Hill House, Benson, Oxon, England. This is intended to be an international journal, dealing with the industry all over the world, extracts from all papers being given, as well as general information on the industry in England. The paper aims at a very high standard, and is a welcome addition to bee literature. The subscription is very small, being only 2/6 per annum.

We learn that Mr. Young has been appointed as additional apiary inspector for the Auckland Province. Mr. Young was for some time at the Waerenga State Apiary, and later in charge of the apiary at the Dilworth Farm, Papatotote, which he left to go to the war. We hope this appointment does not mean that Mr. Goodin's services are being dispensed with, as Mr. Goodin has given, and is giving, very great satisfaction to all the beekeepers visited, as not only is he very keen on his job of getting rid of box-hives and eradicating disease, but his knowledge of practical beekeeping is very much appreciated by all, both commercial and amateur beekeepers. We hope the Department will recognise that in Mr. Goodin they have a man well worth the best salary possible to retain him. One correspondent in the Waikato writes thus:—"He has done exceedingly good work in this district; everybody desires to retain him. The salary he gets is little enough—in fact, too little, I think, for a man of his ability and experience!"—with which we agree.

This being the December issue, the completion of Vol. 3 of our Journal, the Editor would just like to thank all those who have assisted him during the year that will soon be ended. When you recognise that we have not a paid contributor of any description, and glance through the issues of the year, we think that our little Journal is something to be proud of; and this is to the greatest extent the result of the kindness of our friends in so generously assisting by giving their best for the good of all. If the canvass for new subscribers results in a material increase in the revenue, we shall have the greatest pleasure in using this in making the Journal a fixed 20-pp. issue, and printed on better paper if it can be obtained. Since the November issue was circulated, the Editor has received a very large number of very pleasing personal letters, and he takes this opportunity of tendering his sincere thanks.

A VERY HAPPY CHRISTMAS AND
PROSPEROUS NEW YEAR TO ALL
is the earnest wish of THE EDITOR.

Market Reports.

There is a fair enquiry for export at about the rates last quoted, but not for Home Trade. White Californian, at 90/- per cwt.; Jamaican, at 66/- to 69/- per cwt.; West Indian, at 60/- to 69/- per cwt. Chilian.—Pile X, at 84/- per cwt.; Pile 1, at 75/- per cwt.; Pile 2, at 72/6 per cwt.; Pile 3, at 69/- per cwt.; No Pile, at 54/- per cwt. 364 cases Californian offered at 95/-, but are not sold yet.

Beeswax.—Market a little firmer; 90 bags Chilian were offered at auction today, which passed with only £11 10s. bid for one lot; Cuban, value about £10 5s. per cwt.; African, £9 10s.

TAYLOR & CO.

Liverpool, 22nd August, 1919.

We have had an improved demand this month, and an advance on Chilian of 5/- to 7/6 per cwt. for Pile 1. The following sales have been made since our last report: 300 barrels Pile X, at 85/- to 97/6 per cwt.; Pile 1, at 80/- to 90/- per cwt.; Pile 2, at 72/- to 75/- per cwt.; Pile 3, at 72/6 per cwt.; No Pile, 57/6 per cwt. 500 cases New Zealand, at 105/- per cwt. 500 cases Californian, at 85/- to 95/- per cwt. Other descriptions in second hands have been selling at improved prices.

Beeswax.—Steady demand for African at £9 to £9 10s. per cwt.; 85 bags Chilian sold £10 17s. 6d. to £11 7s. 6d.; Cuban, no sales.

TAYLOR & CO.

Liverpool, Sept. 22nd, 1919.

The Director of the Horticulture Division has received from the apiary instructors the following report concerning the honey crop prospects:—

Auckland.—The prospects for the present season seem particularly bright. Good weather has been experienced during the month, enabling the bees to build up well. A few small lines of section honey on the local market have realised 8/ per dozen. This price is likely to be maintained. Beeswax is scarce, 2/3 per lb. being offered.—G. V. Westbrooke.

Wellington.—There is nothing fresh to report this month, as indications still appear favourable for the secretion of nectar in good quantities. Humid conditions, with occasional showers, would assist honey production materially. No lines are at present coming forward to the grading stores. Beeswax is selling at 2/3 per lb. for clean lines.—P. A. Jacobsen.

Christchurch and Dunedin.—The prospects of a good season are excellent in most districts. Bees are building well, and have come through the winter in a satisfactory condition. Good weather has enabled the bees to work the fruit blooms and early flowering nectar plants. In both districts there has been a steady flow, and a good

season seems assured. A few small consignments still come forward for export, and prices are excellent. Beeswax is scarce, and is quoted up to 2/- per lb.—E. A. Earp.

For some time past supplies have been arriving very irregularly, and a certain amount of difficulty has been experienced in keeping trade requirements continuously supplied. All grades have been in light supply, and although the high values have had a steadying effect upon buying, sales as a whole have been quite satisfactory. Dark classes generally in heavy supply, and a problem to salesmen, are lightly held. The season has opened inauspiciously, and this, in addition to heavy losses amongst bees during last season's disastrous drought, is likely to result in a light flow. Latest quotations are:—Choice clear liquid, Western, 8d.; good light liquid, 7½d.; dark and candied, 5d. to 6½d. according to quality.—The Australasian Beekeeper, Oct. 15th, 1919.

Beekeeping for Beginners.

[As these instructions conform to the seasons in the Auckland District, an allowance must be made for difference in latitude North and South. Average bee-seasons in the extreme North are four weeks earlier, and in Southland three weeks later.—Ed.]

The recent boisterous spell of weather has not been the best for bees, and as it has been more or less severe all over the country, we do not expect the bees are as forward as they otherwise would be. In some localities brood-rearing has had a big check, and even feeding at this time of the year has had to be done to keep the colonies going.

The season so far has not been good for the industry, as the prevailing high winds have meant a big mortality amongst the old flying bees, resulting in depleted hives. Very little rain has fallen on the East Coast, consequently the growth of the pastures is backward. Two or three days good rain, with a spell of sunshiny weather afterwards, would mean a great deal to us all.

There is a light flow of honey just now, and it is the best time for 'treating' hives affected with foul-brood disease, as they will have a good chance of building up to strength in both bees and stores before the honey flow is over. The beginner who is not experienced in detecting the disease is advised to carefully examine the brood combs for the appearance of cells having a sunken appearance, and slightly darker than the surrounding cells, with perhaps pin-holes in them. On breaking open the capping, instead of finding a white larva, a dirty brown jelly-like substance will be found, into which, if a stem of grass is inserted, when pulled out the substance will stick to it and pull out perhaps an

inch. It is most necessary when examining a suspicious cell not to use your hive-tool, because if it proved to be foul-brood and you were not careful in sterilizing the hive-tool afterwards, you would be risking spreading the disease to other hives. Should you inadvertently use your hive-tool, the best way to sterilize it is to open your smoker, push it well down to the embers, and give a few puffs to get the fire round the tool then take it out and dig it into the ground a few times, and it will be safe to use. The beginner is particularly advised not to tinker with the disease, even if the hive shows only one or two cells but treat it immediately. I learnt beekeeping with one of the most successful beekeepers in the country, and his advice to me was, "Treat foul-brood as your biggest enemy," and it is sound teaching.

There are a number of so-called short-cuts in eradicating foul-brood, but, like trying to take a short-cut to a place you're not certain of, it frequently means the longest way in the end. Therefore, the beginner is advised to treat all diseased hives by the McEvoy system, which is the best by test.

At sundown, when the bees have finished flying, take a clean hive bottom board and cover to the stand. The hive to be filled with frames having only starters, these having, instead of a full sheet of foundation, just about ½ inch fitted in. With as little disturbance as possible, remove the cover and mat of the old hive, take each frame out separately, and shake every bee off into the new hive, replacing the frames in the old hive, which is immediately shifted, and the new hive placed in its position. Take the old hive into your shed, where there is no possibility of the bees getting into it, and, according to the state of the hive, either render the combs for the wax, or burn the lot, being careful to bury everything afterwards. The hive, bottom board, and cover can be washed with a strong disinfectant, stood out in the air and sunshino for a week or so, and they will be safe to use again. On the third day, go to the treated hive, and take with you frames fitted with full sheets of foundation. Shake the bees off the starter frames and replace with the new. Render the starter combs into wax at the first opportunity. I quite admit it seems a lot of trouble and loss to put up with, but the first loss is the cheapest in the end.

I was asked by a correspondent what to do in a case where the hive contained a good queen in her first season who was laying well; she had plenty of room for her business as well as the bees for storing, yet queen cells were continually being built which were broken down, but only to be built again. One comes across a hive like this now and then, where it is not a case of supercedure, else there would not be so much brood, neither is it a case where plenty of room and ventilation seems to have the desired effect. I

suppose it is caused by the swarming trait being particularly strong in the queen, and she wants a change of home. This I gave her in the following way:—Have a complete hive fitted with empty combs or frames of foundation; go to the swarming colony, find the frame with the queen on, and be careful to crush any cells that may be built. Place this in the new hive, examine five more combs, and crush all cells, placing them with the adhering bees in the hive with the queen. Make sure there are queen cells in the frames left in the old hive; fill both up with the empty combs, remove the new hive with queen to a new stand. The old hive will contain four frames of brood, but will be strengthened by the flying bees from the old hive going back to their old location. The old hive will be weakened by the loss of these, but as they have the queen she will soon equalise matters, and thus you have the two hives of about equal strength, and both in normal seasons will build up and give a surplus. I have not yet met a queen that swarmed after this treatment.

NUCLEUS HIVES.

Nucleus hives are used for taking care of young queens from the time they are hatched until they are mated and laying. These are usually made from lighter timber than the ordinary hive, and accommodate only three or four frames. Petrol cases are just the thing for making these, and if the end is sawn down exactly in the centre lengthways, cut 9% in deep, and a complete box with a movable cover made, it will hold three frames nicely. Bore a 1/2-inch hole at one end, and over this tack a piece of wire gauze.

At this time of the year it is easy to build a few nuclei, and at the same time keep down swarming. In a hive that is preparing to swarm, queen cells will be found on almost every frame. First find the frame with the queen on, and place it against the side of the hive; then get two frames of brood, making sure there are queen cells on them; place these with the adhering bees in the nucleus hive, and another frame, either empty or with only a little honey, and put the cover on. Put two empty frames in the place of the two brood frames taken from the parent hive. Place your nucleus hive in a shady spot for about 48 hours, and remove the wire gauze from the entrance hole about sundown. The strength of the parent hive will determine the number of nuclei that can be made from it.

F. C. B.

Am pleased with the Journal, and trust you will long be spared to conduct it. Am heartily in favour of the badge for members of the Association—queen bee, of course.—R. S., Crookston.

The Beginners' Handbook is going strong. Post free, 1/7.

District Reports.

TARANAKI.

The spring to date must go down as the worst, as far as flow is concerned, that we have had during my nine years here. At no time to date has the scale colony shown anything that could be weighed. We were very lucky with the big storm, and my total was one cover off and one colony blown over. I expect our Wairarapa correspondent will have something to say on the storm. I have not forgotten last year's experience, as I was in Featherston Camp at the time, and we were blown out of Canvas Town.

I think our friends will come to a dead-end on mating queens inside hives; but I wish them luck. It seems against Nature, as it would be in-breeding, and the consistent bad results from mating during bad weather are to me sufficient evidence that is most unlikely. A testimony like the one from D. Hunter, in the "British Bee Journal," is worthless. Even suppose it were possible to get weeks of weather when you could guarantee no bees flew. I would doubt it then, as bees do some funny things at times. It is quite possible that a young queen had been reared and mated, and was present at the time the old queen was killed, and that Mr. Hunter left a virgin as well. I have often found an old queen and her daughter of, perhaps, a week old together, and also cells at hatching point in rough weather. It would be quite a simple matter to try mating in the hive. Set out some nuclei and give them a queen cell; see that there are some drones inside, and tack some queen excluder over the entrance. I would prefer to leave the excluder off.

"Lizzies" are all the go here, and four of us have fallen victims. To anyone who is thinking of going in for one I would advise them that they cost a bit, but are well worth it. An ordinary two-seater is very easy to convert into a lorry; no need to move the seat. A nice size for the back is 5 ft. wide by 4 ft. 6 in. in length, and it needs to be built up 6 in. above the tyres to allow for loading. They will take a half-ton load anywhere if required, but 8 cwt. is enough for constant loading.

Re wheelbarrows: I made one like Mr. Ward's some years ago, but found the wheel under the weight was no use, except on very level ground, as it tips over too easily. I have put my wheel forward again.

H. R. PENNY.

Okaiawa, 16/11/18.

[We found it required a deal of nicety to get the wheel in the right position on the barrow: if too far forward the weight is all on the arms; if too far under the wheel takes all the weight, and you cannot keep it from capsizing; but if put on as Mr. Ward's line-drawing indicates, it will be found just about right.—Ed.]

MALVERN.

After one of the coldest and most boisterous springs I have ever seen, the weather has at last become reasonable. Following on a sharp fall of snow on the 2nd of the month, we have had a spell of nice warm sunny days. This has put quite a different aspect on things concerning the bee industry. Clover is coming into bloom quite freely, and the bees are working on it during the warm part of the day. I have just finished examining mine, and find they have come through very well. Some are just a little short of stores, but this is not to be wondered at considering the weather this last month or two. Most of the hives are full of bees and brood, so if the weather holds now they should go right ahead. I am making a fair increase this spring, and am trying the Alexander plan. My old enemy (foul-brood) seems to be absent this year, so I am looking to have a good time. By the look of things now there should be a good season in store for those who handle their bees properly.

J. E. YEOMAN.

AUCKLAND PROVINCIAL BRANCH.

The annual Field Day will take place on February 4th, 1920, at the Ruakura State Apiary. A meeting of the Committee to arrange programme will be held at the Bath Buildings, Hamilton, on 11th December, at 11 a.m. I shall be very glad to hear from anyone willing to assist at the Field Day, either by demonstration of appliance, or by reading a paper on a branch of the industry.

I was told the other day of a capital frame-holder that holds 10 frames whilst they are nailed together, and that it works capital. I hope the maker will bring it along to the Field Day; and there must be others that have time-saving appliances which we should be glad to see.

The weather has been very trying these last few weeks; brood-rearing has had a serious check, and the high winds have taken their toll of the flying bees. Dandelion and clover are yielding small quantities on suitable days.

We are sorry to report the loss of Mr. M. P. Millett, late secretary to the Lower Waikato Branch, owing to him having sold his place. Mr. Millett was a very keen supporter of the National, and we thank him for the work he has done for us. We hope shortly to get someone to carry on his work.

We have secured most of the books forming our reference library, which can be loaned on the following conditions:—Applications must be accompanied by 3d. in stamps to pay the postage. Books must not be kept longer than 10 days, and returned in good condition, else a fine of 1/- will be imposed. If book asked for is on loan, it will be sent as soon as available. Any member may have loan of a book on payment of 1/-. The full list of books available will be published next month.

A. H. DAVIES.

Canterbury Tales.

By E. G. WARD.

Brother Howard, the first paragraph in your last month's report might have been written by "disciple," it so closely describes the conditions under which "Canterbury Tales" are evolved. I offer my sympathy; let us mingle our tears, and console ourselves with the thought that "virtue is its own reward," and be thankful we can fall back on the weather when all else fails.

As regards weather, Canterbury has another record to its credit (here again I'm in sympathy, but I'll keep the brakes hard down), for on 2nd November rain set in heavily, and then turned to snow; from 1 inch to 5 inches were recorded in various parts of the Province. Fortunately, the ground was warm, so the snow did not last long, but for a week the weather was anything but ideal from a beekeeper's point of view. However, on the whole the rain and snow will have done, perhaps, more good than harm. We have just experienced a week of nice warm weather, and clover is coming on nicely. I'm mighty glad of it, for there's a lot of mouths to fill in the hives, and stores are approaching vanishing point.

I've carefully read the suggestions of the Committee appointed to deal with Apiary Boundaries, and agree with ye Editor when he says "there are many debatable points," and that it is "an honest attempt to get over the difficulty." Mr. McKnight sent me a copy a short time ago, asking for comments. I gave my views and wound up by expressing a hope that a way out would be found, and in conclusion said that I was unable to assist, but would certainly not hinder. Right here I have to bring in the personal element. An apiary has been established within 1½ miles of me on the north, and 40 or 50 colonies have been brought from another district and located half a mile from me on the east. I don't know whether either of these apiaries will do me any harm, but it is a dead sure thing that if I wished to extend in either of these directions I could not do so. I have been in the district six years, but I don't see how a case of this kind could be dealt with even if I were to protest, which I have no intention of doing.

Mr. Miller, you're a real sport. Accept my thanks for promise of queen to try out. Like the canvassers for subscriptions and others "of that ilk," I may say "the smallest donation will be thankfully received." I trust your efforts will be crowned with success.

Mr. Earp has had his hands full lately, I see. Assisted by Mr. Dick, he gave a demonstration of handling bees at Mr. Stanton's apiary, Rangiora, on 30th Oct.

I understand he has also got the bees into position at the Aynonhead Settlement. I understand this apiary will be conducted on similar lines to Ruakura, and will be used chiefly as a training school for returned soldiers who intend taking up apiculture for a living. I hope to pay a visit later on, and tell a "tale" about it. Mr. Earp has also been on the "war-path" in South Canterbury. Several beekeepers in Claudioboy district have had to appear before the "beak" for keeping bees in box-hives. His Worship evidently had a soft heart for one, and all got off by paying costs only, in spite of the fact that it has been illegal to keep bees in box-hives since 1907. Mr. Earp has also been judging honey at the Agricultural Show, and has now gone to the West Coast on business connected with his Department.

We had an Industrial Fair in Christchurch lasting over a week, and I paid a visit in the hope of seeing an exhibit of "Imperial Bee Honey." It was conspicuous by its absence. Now, I'm not going to criticise, but would just like to point out in a mild sort of way that these are the kind of functions where we might get a "leg" in. Everybody seems to have run out of jam, and somebody said a little while ago there was going to be a shortage of sugar. Is our honey all sold, or have we "missed the bus"?

I am not going to let Canterbury beekeepers forget that the next Conference is to be held in Christchurch, and have already a few ideas in mind which will help to make it a success. In the meantime, Mr. Editor, what about that badge of membership? Seems to me it would be a good idea if it were to materialise in time for the "auspicious occasion."

[We have secured quotations for the badges from Australia, and are now waiting expert advice from there as to the best firm to entrust our order. When this arrives the matter will be laid before the Executive and probably put through. There is every chance of having these available before Conference.—Ed.]

Apiary Boundaries.

By JAS. ALLAN, in "Otago Witness."

The Committee appointed by the National Association of Beekeepers has, after consultation with the Department of Agriculture, evolved six suggestions for consideration by the Executive of the National. These are as follows:—(1) Any apiary of more than ten colonies shall be considered a commercial apiary. (2) Every commercial apiary and out-apiary shall be annually licensed by the Department. (3) Before any new apiary or out-apiary can be licensed, the apiarist must make application to the Executive of the National

Beekeepers' Association, which shall examine the site, and if in their opinion there is room for another apiary they shall recommend the Department to issue the license. (4) In the event of any bona fide farmer desiring to become a commercial apiarist, he will make application to the National Beekeepers' Association, who will recommend the license. Notice shall then be given to such apiarists as are not bona fide farmers to remove within a specified time any out-apiaries owned by them which would interfere with the profitable working of the farmer's apiary; provided that no such notice shall be served on an apiarist who holds the freehold or registered leasehold of the said apiary site. (5) No commercial beekeeper to be allowed to work on shares such an apiary as is described in Clause 4. (6) In the event of any application for a new apiary site not being recommended by the National Association, the applicant may appeal to the Department, and the decision of the Department shall be final.

It is very easy to criticise such proposals as these, and the more difficult the subject that proposals of this kind have to deal with the easier it is to criticise. A great many beekeepers—ourselves amongst the number—hold that this subject is not only difficult, but altogether impossible. While saying this, we cannot but commend the evident good intentions of the Committee appointed. They have gathered from north and south, and spent their time freely to try and solve the problem. They have tried to narrow down the issues, and to give us the results at which they have arrived in concise form. They have met with Dr. Beakes and Mr. Kirk, who have discussed the matter sympathetically with them, and yet we think it quite probable that the amount of consideration they have given to it will only serve the purpose to open the door to the real difficulties that they are up against, and show them the hopelessness of it all. We hope when the critics get to work on their proposals that the Committee will realise that beekeepers in general sympathise with work faithfully done, although the effort may produce results that lay them open to criticism.

Suggestion 1 is an attempt to define a commercial apiary by calling all apiaries of 10 colonies or more commercial apiaries. The true definition would, of course, be all apiaries the products from which are marketed in the open market. Probably the plan adopted is the better one, and it then becomes a matter of the number of colonies. Suggestion 2 deals with licensing. Under existing law anyone can keep bees who likes, but he must register. Registration is merely the enrolling of those who choose to keep bees. Under license, the license is the title to keep bees at all, and necessarily it would limit him to the place in which he could keep his bees. If there is restriction, then there must be license, and we make no fault with this; it simply cannot be done otherwise, or, at all events, that is the simplest way of doing it. But

suggestion 3 says that new applications must be made to the National Executive, who shall examine the site. It is quite evident that flying machines did not come any too soon. The simplicity of this arrangement made by men who travelled from Auckland and Christchurch to Wellington is to me a marvel. Suppose just 100 of these applications were to come to our Mr. Baines for one season. Poor Baines! He would absolutely refuse to go for his mail! What would our wives and kiddies and our bees say to all this? I am afraid that Committee will have to try again—it is too altogether simple! I wonder what Mr. Adams thinks about it. I enjoy just meditating on the possibilities for adventure for the Executive of the National if this were carried out. Then, in case of appeal, it is to go to the Department, and its decision is to be final. If the united wisdom of beedom says "No" to a license, then an officer of the Department can recommend Mr. Kirk to upset their decision and give the man his license. I am afraid that the Department of Horticulture would require a considerable addition to its list on the Estimates that go before Parliament, because if many licenses were refused they would surely have a goodly number of appeals. Somebody will say, "Your criticism is levelled only at the machinery clauses: what about the principle that lies below these?" My answer is that I don't know, because I have not been able to find it. Just who are entitled to have licenses and what are the qualifications is not stated. There is just a suggestion of two principles being in the mind of the Committee—one is the ability of the locality to support the bees, and the other the prior right of the "bona fide" farmer to first consideration. I am not going to go deeper in this critical mood. It takes a "stout heart for a stey breeze," and, as I have said, I admire the pluck of the Committee, and hope their effort will be treated in perfect good humour. Let me say that to my thinking wherever a man has established his home on leasehold or freehold, big or little, he must have the right to keep an apiary, and to keep it just the size that suits himself. But I would treat out-apiaries quite differently, and would hedge them mercifully with restrictions. Now, friend Hopkins let that vein of humour that has kept you a boy for 80 years have full play on those six suggestions. We shall watch the result with a good deal of interest.

COMMENTS ON PROPOSED LEGISLATION.

By I. HOPKINS in "N.Z. Fruitgrower."

I do not think the above title is now quite appropriate to the question we have been discussing all along, seeing that the result of the Committee's recent deliberations with the authorities in Wellington shows practically a complete volte face

from the original proposition of defined boundaries. It will, however, do in the meantime, for who can say what further changes may take place?

It will be well, perhaps, to discuss each clause in the schedule separately.

1. Any apiary of more than ten colonies shall be considered a commercial apiary.

This is a very useful clause, as it defines what constitutes a commercial apiary.

2. Every commercial apiary and out-apiary shall be annually licensed by the Department.

Licensing apiaries is quite different to the present form of registration; by the latter regulation any person may keep bees, but to be licensed means one must obtain formal permission from the authorities to keep more than ten colonies anywhere. This certainly seems an extraordinary and uncalled-for formality, and I am not aware of any such ordinance ever having been suggested before. But more extraordinary still is the suggested authority to be given to the National Beekeepers' Association as contained in clauses 3 and 4.

3. Before any apiary or out-apiary can be licensed, the apiarist must make application to the Executive of the National Beekeepers' Association, which shall examine the site, and if in their opinion there is room for another apiary they shall recommend the Department to issue the license.

In this clause it will be seen that it is proposed to delegate powers that legitimately belong to the apiary section of the Department of Agriculture to the National Association—a semi-private institution. The more one looks into the matter the more irregular and extraordinary the suggestion appears, and I cannot imagine how such a clause could have been adopted. Why pass over the official apiary inspectors? Surely they should be more competent to give a correct opinion of the capabilities of their several districts which they are constantly travelling over than a scratch selection from the National Association. Then, again, who is to pay the National Association inspectors their travelling expenses and fees? I cannot believe that the law officers would pass such a proposition, and in any case it is open to doubt whether the National Association could legally assume such an authority.

4. In the event of a bona fide farmer desiring to become a commercial apiarist, he will make application to the National Beekeepers' Association, who will recommend the license. Notice shall be given to such apiarists as are not bona fide farmers to remove within a specified time any out-apiaries owned by them which would interfere with the profitable working of the farmer's apiary, providing that no such notice shall be served on an apiarist who holds the freehold or registered leasehold of the said out-apiary site.

If there is any one clause that indicates more than the rest the utter hopelessness of the Committee arriving at any reasonable solution of the question they engaged to settle, it is the above—No. 4. Here we find that the Committee have executed a complete somersault from their original proposition. Both Messrs. Ireland and Hora, two of the Committee, previously suggested publicly that beekeepers should have control over all honey gathering within certain definite boundaries; that neither farmers nor other owners of land within the boundaries were to be allowed to keep bees. Now they propose to give bona fide farmers power over beekeepers, so that if a farmer takes it into his head to set up eleven colonies (a commercial apiary) he can compel the owner of a neighbouring out-apiary to remove his bees, whether one or a hundred colonies, or more, no matter how long such apiary has been established unless he owns the freehold or a registered lease of the site—the mere renting of such site will not do. Could any suggestion appear more ridiculous, or more calculated to injure specialist beekeepers and the industry generally? I doubt it.

5. No commercial beekeeper to be allowed to work on shares such an apiary as is described in Clause 4.

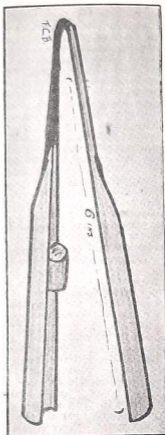
The meaning of this clause is, to say the least, very obscure. Does it mean the farmer's or the banned apiary? And why deprive a skilled commercial beekeeper from working another person's apiary on shares if he wishes?

6. In the event of any application for a new site not being recommended by the National Beekeepers' Association, the applicant may appeal to the Department, and the decision of the Department shall be final.

Why should it be necessary to constitute a court of appeal? Why should the Department not decide in the first place through its own officers? The only reply to this suggestion is, that either the Department has not sufficient confidence in its officers, or it desires to avoid as much of the responsibility of such absurd and impossible propositions as possible. It is left for the National Association to battle with, and one can scarcely believe that the Executive will consent to relieve the Department of such responsibility as should be undertaken by its own officers.

A Useful Appliance in Queen Rearing.

Mr. G. V. Westbrooke, Auckland Apiary Instructor, called on us recently and introduced to our notice a splendid little appliance for queen-rearing. This was obtained from Mr. Stephen Anthony, of Coromandel, who received it from Switzerland, and sent a duplicate to Mr. A. B. Trythall at Raikura to experiment with.



The illustration will give a clear idea of the appliance, which is made of a piece of thin brass bent over to form a pair of semi-circular tweezers, which will cut a hole about $\frac{3}{16}$ inch to $\frac{1}{2}$ inch in diameter right through the comb, thereby removing "baby, cradle and all." Mr. Westbrooke, after cutting out the cells, runs a little hot wax into the wooden cell cup, and attaches the back part of the cell which is on the reverse side of the comb, and this is of sufficient length to prevent any of the "cradle" and its baby being injured by the hot wax. Mr. Westbrooke's first attempt in comparison with transferred-larvæ was the whole of the cells cut with the appliance were accepted, against six out of twelve with the transferred. Another attempt gave 26 accepted out of 32. He found no difference whether the cells were trimmed well down or left the full length of the cell. It is pretty difficult to trim a newly drawn comb down. Mr. Trythall found he could do this satisfactorily with a sharp pair of scissors after the cell was cut out. The appliance works better slightly warmed in hot water.

We think this appliance is going to mean a lot to those who rear their own queens, as transferring the larvæ requires very good eyesight and very careful work to avoid injuring the minute larvæ. The use of this appliance does away with the necessity of wax cells and royal jelly; also the queens are raised from the larvæ in

the exact position they were hatched, which has always seemed to us a much better job than we could do. If there is anything in the belief that transferred larvae do not develop into such good queens as those raised from the egg, then this appliance is going to mean a great deal to the industry.

The small circular piece in the centre of the appliance is to act as a guide, and prevents the cutting edges overlapping.

This is not a patent: anyone can make one or get it made.

F. C. B.

Bill Takes His Pen in Hand.

Miss Anita Baldwin:

Dear An: They tell me you're the head of the society. For the prevention of cruelty to animals. I know a bee is an insect. But wouldn't you go so far. As to prevent cruelty to a bee?

You know how busy bees are. Making honey and minding their own business. And you know that they get on the job early. And work hard all day. As long as it's light. And if anybody tries to stop 'em. They sting him. And it serves him right.

Well, I know a guy. Who's going to put electric lights. In his yard. So the bees can see to work nights. He ain't satisfied. Having his bees work all day. Like the dickens. Making honey for him. At 35 cents a comb. And boarding themselves.

He says bees will work. As long as they can see. And he's going to give 'em every opportunity. If I was a bee. And anybody put this over on me. I know what I'd do. I'd lay for that guy. And I'd sting him so doggone hard and often. And in so many different places. That he'd look like he'd broke out. With the hives or something. The big profiteering stiff.

And I think he's the same guy. Who has his chicken coop lighted up. With electric lights. So that the chickens will lay eggs at night. And he's getting 60 cents per dozen. For eggs which cost him no effort whatsoever.

Suppose you was a hen. And had done your duty in the daytime. By laying a egg. And at night you went to bed. For a little rest. And during the night. Somebody turned on the juice. And woke you up. And you thought it was the new-born day. And you went and laid another egg. Wouldn't it jar you?

Hoping you will take this matter up. And discipline this guy. For his cruel methods. I am,

Yours for a fair day's work,

BILL.

—Los Angeles Express.

Correspondence.

[The publication of any letter does not necessarily imply our agreement with the subject matter, and we do not hold ourselves responsible for the opinions expressed by correspondents.]

(TO THE EDITOR.)

Sir.—When I wrote you a while ago that I intended going Home, it was not my intention to make the trip via America. However, owing to the passenger service via Panama and Suez being suspended, it had to be America or not at all.

Six days out from Wellington, and we dropped anchor off Rarotonga. "Well," says some buddy, "what in Sam Hill does Rarotonga interest me?" Just here, brother: it has been suggested, and probably will be put forward again, that the Cook Islands (Rarotonga is the chief) would make an ideal place to raise queens for New Zealand. I just want to say, "Dont!" I was not able to discover anyone who kept bees, or whether disease existed, but I do know that Rarotonga is the hottest place I ever struck. The atmosphere is moist and heavy, unpleasant with the smell from rotten cocoanuts and bananas and rank vegetation. Queens for New Zealand need to be hardy, and I think after a few generations of breeding in Rarotonga they would be anything but hardy.

After being examined "umpteen" times by health officers and customs and military in San Francisco, and nearly locked up for looking like a Bolshevik, I was finally allowed aboard the 20th Century Limited, bound for Chicago. Two days and nights crossing a howling wilderness of sandy desert, and a similar time passing through the prosperous Middle West and Central States, brought us to Chicago. I stayed here a couple of days, nosing around, and located the A. I. Root Company's branch. So I drifts in and has a yarn with the manager. He was very keen that I should go down to Medina. Time was limited, and I had my wife and kiddie with me, but I managed to get it in. Right here let me say that if anyone of you who read this ever happen along this way, just let the Root Company know, and they will meet you with a car at Cleveland. Medina is 25 miles from Cleveland, and the best way thereto, barring automobile, is per electric car. A line operates over a hundred miles into the country, reaching many villages that are not touched by the big railways. The country looked like very good bee-country, but the weather just then was something fierce—cold, wet, dowsing rain, worse than New Zealand winter. The trolley car set me down right alongside the Root plant. I made myself known, and Mr. Tollafield, the export manager, took me under his charge. Mr. Tollafield, by the way, set sail from England about six years ago bound for New Zealand via

America. He pulled up at Medina, and there he's got "rooted." He tells me he's the only Britisher on the plant. Well, I started right down with the lumber in the yard, and went right through the whole outfit. And it occurs to me that I had better say here that I hold no brief for Root's. In fact, along with other supply manufacturers, they make a good many articles that they endeavour to persuade the budding beekeeper as necessary that I consider extravagant, useless expense, and sometimes an absolute hindrance. Now, having said that, I want to come right out and tell you that, having seen and heard what I have, I believe the Root concern are doing more work as a single organisation, in finding out how to "keep better bees better," than any other body I know or have heard of. Three hundred and fifty men and women all bent on the job of supplying the beekeeper with his needs or handling his produce. The factory is a straggling sort of a place. I suppose they never thought of it growing to the dimensions it has. A building tacked on here, then another at the end of that, until it is a sort of square, with bits jutting out of it. Then across the road is a fine block of offices. A thought hit me right on the spot where the grey stuff is, and I wondered, "Guess it will be a long time before the H.P.A. have a home like this!" I reckon there must have been near thirty men and girls there, just handling the office work. A fine dining hall right handy built and maintained by the firm enables the employees to get good meals at practically cost. I know they gave me a dinkum good lunch!

Well, Mr. Editor, I guess I will have to cut out some of my notes on the factory. But I will try to be brief.

When the A. I. Root Co. want a machine to do a certain operation—and new machines are constantly being devised—they go to the head of the machine shop and say, "We want so-and-so." Then the fitters and turners and mechanics get together, and they build that machine right there, every part of it, except, of course, the heavy iron base. I saw machines punching out queen cages, thousands of them; frames in hundreds of thousands; sections in millions; machines working on the various parts for smokers, extractors, excluders—well, I got dizzy before we were through. In one room were several girls making nothing but veils. As for hives—well, I dunno where all the bees are coming from to put in 'em. And types, too; alongside of a big order for O. Poppleton of this country, who puts his money on the "Long Idea" hives, there stood a lot of little dinky eight-frame hives. Gee! the contrast made me laugh!

The honey bottling room deserves an article to itself. At the time I was present they were busy on tiny individual glass pots that are so popular in the high-class trade here. They hold about 3 ozs., and they do look tempting and attractive. But in the dining cars on the trains they

charge one 25 cents (1/-) for these self-same pots. How's that for price!

From the wax room, where tons of wax stand piled up maturing, while other tons are being melted and refined, I moved on to the room where the "Weed" machines were at work. Some process, believe me, that wax goes through before your bees start work on it. And just here I heard a whisper that Root's are going to bring out a new stunt for making foundation that's going to make the "Weed" process look "dippy."

I need not tell you that Root goods are known the world over. Their proud boast is that they are no longer national, but international. As a point in fact, and also an item of great interest, I learned that they have at this moment an exhibit of bees and appliances in charge of a qualified Russian beekeeper moving across that unfortunate country. This exhibit is part of a general agricultural travelling outfit equipped and maintained by the American Y.M.C.A., which is lecturing and demonstrating to the Russian peasant on modern methods of farming. Business and benevolency—what? At this moment I believe A. L. Boyden, the general manager, is himself in the devastated regions of France, but whether on business or benevolency, or both, I do not know.

The end of a very pleasant and exceptionally interesting visit came with a short chat with no less a person than A. I. Root himself. I can tell you I felt immensely pleased when Mr. H. H. Root said in his deep, burring, typically American drawl, "Would you like to see father?" "I sure would," says I. So we run along the sidewalk under the dripping plane trees (I guess the tree-lined streets of Medina are restful on a hot day) to A. J. Root's house. But in spite of the wet cold day, and only back from Florida sunshine a couple of days previously, he was not at home. We locate him finally poking about in the garage. He took me out in the rain to show me the bee-house he built when he first kept bees. With a rain-coat buttoned up to the chin and cap with ear-flaps well down, the old man seemed to defy the weather. With pardonable pride he told me he was near eighty years old. Of medium height and spare frame, he has a thin face with high forehead. With blue eyes that fix on one intently when speaking, he yet has a very quiet even voice. Like all Americans, he confused New Zealand with Australia. His talk was mostly of Florida and his wind-driven electric plant, which evidently interests him greatly.

So I came away, very glad that I had been able to see Medina and the Root organisation, to which the little town almost wholly owes its prosperity. Two hours later I boarded the Overland Express at Cleveland bound for New York.

I am, &c.,

A. C. ASKEW.

New York, U.S.A., 24th May, 1919.

(TO THE EDITOR.)

Sir,—I see by the October Journal Mr. Allan has an article on Apinary Boundaries, in which he makes some startling statements, which would warrant one using his own term of "ridiculous" to them. He says that if a beekeeper possessed the three-mile radius, it would be granting him the exclusive use of 5,000 acres or 32 farms to pasture over. I will now proceed to show how this is absurd. A bee flight is anything from three to five miles; Doolittle places it at the latter distance; but say it is only three miles. Take the case of a man who has an apinary to the north, south, east and west of him, each three miles apart. It is clear that he has not a single acre to his own use, but shares his three mile area with four other men. I was looking out for a site for an out-apinary this spring, and came to one which had an apinary about three miles distant in one direction, but not another for a good many miles in any other direction. I found the willow-trees humming with bees, as if the whole district was already occupied. How would that be for having the exclusive use of 5,000 acres or 32 farms? Mr. Allan, in working out this problem, has considered one feature of it, and ignored every other one, and so came to a wrong conclusion.—I am, &c.

A. IRELAND.

Ellesmere, 17th Oct., 1919.

(TO THE EDITOR.)

Sir,—Referring to Mr. Bryaa's method of making foundation, Mr. Holditch used moulds roughly 3 ft. long, and had good success. I am making some new moulds, with the height of side $2\frac{1}{2}$ inches high x $\frac{5}{8}$ inch thick; white pine seems better for the rims than anything else. The ends of the rims should go right across the board, with the sides let into the ends. They are hard to make watertight, so require to be well put together. The levelled end of the slab, of course, starts through plain rollers. The temperatures we found best for plain rolling were up to 115 deg., and for embossing from 94 deg. to 98 deg. But this is just where the trouble in foundation-making lies in getting the wax too hot, or cooking it. It then sticks to the other sheets or the rollers; work heat up, not down; that is, start on the cold side. I have two thermometers, which vary 6 deg.; so be on the cold side; if too cold sheets will break. We are very thankful to Mr. Bryans, as it does away with the tiresome job of dipping; also it is a lot quicker and easier. When winding up sheets, wind as much as possible on roller. If, when cutting, you make a sort of ladder rack, then the number of sheets cut at one time may be as desired. The rolls are put on the movable rungs.—I am, &c.,

J. M. RUSSELL.

South Featherston, 17/10/19.

(TO THE EDITOR.)

Sir,—In your last issue of the Journal reference was made by Mr. Bartlett-Miller to a statement which is said to have been made by myself at the meeting of the Auckland Provincial Branch of the National Association on 25th September last. Since Mr. Bartlett-Miller has chosen to broach the subject in the Journal for the information of all and sundry, I take it he has fully considered the chances of further publicity by way of my response, so naturally he also accepts responsibility for any information which the aforesaid "all and sundry" may obtain. I would just like to remind him, however, that I write this as President of the Association he refers to; but I could write a very interesting letter upon his apinary as local inspector, but of course I refrain. However, I would not like my friend to be labouring under a delusion of a false nature any more than I would care to have him convey to others a false impression; so for the benefit of those interested I will give the particulars. At the meeting above mentioned a representative of one of the sub-branches asked the support of the Branch for the appointment of one of its members to the position of local inspector, which support was readily given. I thought it my duty, even though I had gained the information as local inspector, to bring to the notice of members the utmost importance of exercising the greatest care in recommending anyone for the position of local inspector, and I pointed out that one previously recommended by the Branch had proved to be quite unworthy of the authority, since a visit to his apinary disclosed a state of affairs which could only be expected in the apinary of a very amateur beekeeper. Of course, no names were mentioned, and in reply to a question as to whether the authority so held could be cancelled, I replied that steps were being taken in that direction. Friend B.M. suggests that I should not use such information gained in an official capacity; if that is so, the Department have only to notify me of the fact, and my resignation will be sent in by the next post. When I accepted the position of local inspector, I did so because I was well aware of the ravages of foul-brood and the urgent need for its location, and generally for the betterment of the industry as a whole, but I did not undertake to seal my lips also. While I am not of a very talkative nature, like my friend B.M., I am not going to sit still and say nothing when I see a very grave danger threatening the existence of the industry and the welfare of members who compose the Auckland Branch of the National Association, who were evidently sufficiently satisfied that my past efforts had been for the furthering of the Association's interests to give me the honour they did. However, I take full responsibility for the statement I made being perfectly true and unbiassed, and if the Association or the Department object to my inclination to wage war on foul-brood, then either or both have only to acquaint me of

"A laugh is worth a hundred groans in any market."—Charles Lamb.

the fact. In reference to my friend's suggestion of measurement of intellect, I am quite willing to admit that what he does know would fill quite a number of volumes, but what he does not know would fill a good many more, and if he has a sincere intention of following up research work for the general good of the industry, then I would just like to suggest that he endeavour to cross bees with glow-worms and get them to work overtime.

In conclusion, Mr. Editor, I would just like to challenge Mr. Bartlett-Miller to produce a hive of bees of the strain of "Immunity" that will resist foul-brood when affected in the manner he states.—I am, &c.

E. W. SAGE.

Ohaupo, Nov. 15, 1919.

THE DREAM.
(TO THE EDITOR.)

Sir,—A hard day's task in the searching sun and smiting wind brings another day's toil to the well-earned resting-tone. The little wife returns from the Post Office, whither she has been to collect the mail. A delightful smile plays upon her pretty lips as she, more briskly than usual, comes tramping up the winding garden path. "Good news to-night, old boy—something that you have been expecting to turn up for a long, long time." "Well you look pleased anyway," I answer; "but surely I have not been anticipating anything special by mail; is it from Homo?" "No, no; you've been waiting so very long for—can't you guess?" she replies, in a way which ladies have of their own. "Waiting!" says I. "Pon my word now that does recall a far-off thought—surely not a bonus from the H.P.A.?" "Yes," she answers, "and ever so much more than you expected! Look!"—Ah, hard lines! I opened my eyes, and, yes—it was only a dream!—I am, &c.

HUGH C. JONES.

Box 33, Pirongia.

[Hugh, old chap, what do you drink with your evening meal?—Ed.]

EXPERIENCES: INCREASE BY ALEXANDER METHOD.

(TO THE EDITOR.)

Sir,—Having read with interest the experiences of Mr. Oldham in last issue of the Journal, and having made my first attempt at dividing by the Alexander method this year (myself being practically a novice), I thought I would give you my experience in making increase from a very populous hive, which had capped queen cells when I commenced operations. Well, to begin with, I decided to make my increase on three hives. The first one I opened had capped queen cells, which I broke out (6th November). I lifted the old hive off the stand and put a new one on containing foundation; taking out the centre comb, I put the old queen down with a frame of brood, and put my excluder on. Next, I lifted the

old super of frames on top of that, seeing that there were no cells in either super, and left for five days, when I examined both boxes, cutting out all started cells, and left them for another two or three days, till nearly all the brood was capped; then I took off the old super, and put it on a new stand and gave it a new queen (13th November). About 10 a.m. next morning I got a call to go home at once, as my bees were swarming; so off I went full-speed. When I got home I found they had turned the hose on the bees, and got them mostly all back into the hive. I at once set to work to finish the job, and got all but about half a cupful back. I examined the box to find the queen, but could not see her; but as there were so few bees out I reckoned she must be in, and to prevent her absconding again I immediately put on an Alley trap and left. I examined them at dinner-time when I went home, and all was quiet. Again about 5.30 p.m. I went out to have a look in the yard, and noticed a little knot of about 20 bees outside the trap on the bottom board; going a little closer I found her majesty "outside" quietly discussing the "look-out," and apparently settling down to a night on the doorstep. I lifted the trap and let her in, and she calmly walked in as if it was quite the usual thing to do. The next two days were too rough to open hives, and so the job was not done till this morning, when I found everything as usual; broke out a couple of cells with uncapped brood, leaving the trap on till they get settled down to work again. Needless to say, I also put traps on the other two hives to be prepared for eventualities, but these never came, as they apparently had word to say they would only be sent back if they attempted to swarm; anyhow they have been very quiet. Now, these two latter were not so far advanced towards swarming when I first began operations on the 6th. Do you think the condition of the first-mentioned was the cause of the swarm issuing after the old brood had been removed? Being a new chum, I am at a loss to account for it, unless for this reason. What is your opinion? Or have any of your readers had similar experiences? Next time I want any increase, I think I shall start a little earlier. I consider myself very lucky to get my queen safely back; she was the best one I have; her brood chamber on the 6th November was just about as full as you could expect it to be brood being abundant on all ten frames. I also had on a full super and a-half of sections to give plenty of working room; the half had been on all winter and the full super about a month, and wherever there were combs it contained honey, and they had begun to draw out the foundation. The old brood with the new queens seems to be in good form; plenty of life in the hives, and plenty of brood still to hatch; queens apparently accepted without question. To-day I saw two of them apparently satisfied; the third I have not seen yet; she must have been

hiding. My letter is rather long, but I hope interesting enough to your readers.—
I am, &c., GEO. M. BLIZZARD.
Picton, 17th Nov. 1919.

[You are correct; you had left it a bit late: the bees had got the swarming fever, and out they came.—Ed.]

A MEAN THEFT: DANGER IN FEEDING IN LARGE QUANTITIES.

(TO THE EDITOR.)

Sir,—I would like to acquaint readers of our Journal with my experiences in feeding rich sugar syrup to bees this spring, and to give them (readers) some indications of the risks involved. For some considerable time I have fed on top of cluster in a 5 lb. lever-top tin, with a small hole the size of a large darning needle punched in the bottom; by this means the feed is fed slowly, and takes the bees a week to ten days to empty the feeder. The syrup used was half sugar and half water, pretty rich, as some unprincipled person discovered, for on a large number of hives the entire contents of the 5 lb. tins had been removed, and on examination of the combs they were found to contain not an egg-ful of syrup, and this only a day or so after feeding. The actual placing of the syrup in the feeders I saw to myself, but deputed to others to see if the feed was being taken down by the bees, and it was only by accident that I discovered the mean theft. On my ten-day examination of hives from Oct. 1 I could not account for the backward condition of the bees, seeing that pollen was present, but with no syrup stored in the combs; whilst others were on the verge of starvation, with chilled brood and dead bees lying in front of the hives. The position now is that more than half the apiary is reduced to a nuclei state, after feeding each colony an average of 9 lbs. of sugar and honey to augment their own stores; and the balance of the apiary is only in fair condition. Under the circumstances the best course appears to be to allow natural swarming, and use the brood to strengthen weak colonies. At the present time I am forced to feed some hives, and that during a heavy flow; this is quite a unique experience in my quarter of a century of apiculture. It seems advisable in future to see to the feeding of the bees personally, and inspect the feeders from time to time where large tin feeders are used. Needless to say, all tin feeders have been removed and recourse had to the Alexander feeder, with its daily evening work of putting in thin warm syrup. In some instances dry sugar feeders have been used within the hive, the sugar being readily taken by the bees, and on the weaker colonies thus fed they have outstripped others who, six weeks ago, were in a more prosperous condition. Virtually my apiary is in a less prosperous condition than it was six weeks ago, in spite of constant attention and feeding, as above outlined.—I am &c., J. S. COTTERELL.
Nov. 14th, 1919.

Answers to Correspondents.

W. H. H., Hartville.—Drones are usually tolerated, whether they belong to that particular hive or not.

V. G., Dunedin.—Much amused at your remarks. You say you "saved your bacon." We suggest you couldn't have been "rasher."

Bees and Beemen of Old.

By BASIL H. HOWARD.

(Continued from November Issue.)

The book opens with a brief exordium, which I shall reproduce.

"Next I shall sing of honey, the heaven-sent gift of the air; here too I ask thy favour, Mæcenas, while I tell of the wondrous history of a tiny state, of high-souled leaders, of the life of a whole nation; of its character, its pursuits, its tribes and its battles; slight is the theme I work on, but not slight its fame, if but my evil star permit me and Apollo hear my prayer."

"Honey, the heaven-sent gift of the air," refers to the supposed origin of honey from dew. Vergil suggests the superstition that it fell like dew on leaves. No doubt the belief arose from the existence of honey-dew. In any case, the ancients had no idea that honey was drawn from the nectar of flowers. Hear Pliny:—"Honey comes from the air . . . especially when Sirius begins to shine, but never before the rising of the Pleiades. So in the early dawn the leaves of the trees will be found sparkling with honey. . . . But, whether it be a moisture from the sky, or a saliva thrown off by the stars, or a juice condensed from the air, we could wish that it retained the pure, liquid, and natural qualities it had when it first fell. As it is, falling from such a height it is, in its fall, tainted and infected by the exhalations from the earth; further, it is sucked up from leaves and straw by the bees, and stored in their stomachs—for they disgorge it later. Yet, despite the fact that it is in their stomachs mixed with the juice of flowers, and so weakened and changed, it still conveys to the palate much of the delicious flavour due to its heavenly origin." Pliny's honey must have partaken of the nature of ambrosia.

As for what follows, I must remark that I regret that the poetic beauty of Vergil's work is wholly lost—system and poetry are incompatible.

THE APIARY: ITS SITE AND SURROUNDINGS.

First, the hives must be in a spot sheltered from the wind; there should be no gattle in the neighbourhood, for these

trample down the flowers and scatter the dew. Further, the bees must be protected from the attacks of insectivorous birds and from lizards. It would seem that the latter considered a well-conditioned bee a rare delicacy, for Columella remarks that they mount guard at the hive entrance with mouth agape and gobble the bees as they leave the hive.

Water is essential, and with it trees to give shade and tempt the issuing swarms to cluster. The neighbourhood should be planted with casia, wild thyme, and violets. The ancients seem to have known little about honey-bearing plants. Those most frequently mentioned are:—Thyme, wild thyme, Cretan thyme, heath or heather, broom, casia—(I retain the Latin name because I think it better known than its equivalent taken from a dictionary, Spurge-hound!). The thyme was clearly the most important, for we read of an attempt by Roman beekeepers to acclimatise the thyme of Helicon in their own districts. The scheme apparently failed; the plant's natural habit was on the dry chalk limestone hills of Greece.

Vergil insists on the necessity for water. It may be running or at rest; but in either case willow branches and stones must be thrown in so that the bees may gather there to sun themselves or dry their wings. Aristotle, Columella, and Varro too recommend this. Varro, however, suggests that the stones be placed there for the bees to sit and drink!

(To be continued.)

Your Beginners' Book is good, and fills a want. Blessed is the man who, when he has said all he has or needs to say,—shuts up. '—S.A., Coromandel.

A man struck a match to see if his petrol tank was empty. It wasn't. Pip! Pip!

Extract from a letter from Scotland:—“My best hive gave me 149 1-lb. sections, which I sold for 3/- each.”—[Let us all go to Scotland, eh?—Ed.]

Beekkeepers' Exchange.

ADVERTISEMENTS on this Page will be inserted at the rate of 3/- per 36 words per insertion.

NOTICE TO BEEKEEPERS.

I have ESTABLISHED an Apiary at Dargaville, and am putting out-apiaries in the District.

ALEX. COSTELLO,
Dargaville.

NOTICE TO APIARISTS AND INTENDING APIARISTS.

Please note that I have Secured the Sites of FOUR OUT-APIARIES, two to three miles, north, south, east and west respectively, from my Home Apiary, and on some of which bees are now located.

During the season these locations will be fully stocked.

J. S. COTTERELL,
Shaftesbury, Te Aroha.

NOTICE TO BEEKEEPERS.

I have ESTABLISHED a Commercial Apiary at Gapes Valley, South Canterbury, on my Property.

H. COOMBES.

FOR SALE, One (Root) 4-Frame EXTRACTOR, in good order. Also 15 lb. No. 30 FRAME WIRE, in 1-lb. spoons; 2/9 per lb; separate pounds or the whole lot. Postage extra.

T. J. MANNEX.
Box 20, Waihou.

FOR SALE, One 6-Frame (Root) Automatic HONEY EXTRACTOR, in first class condition; hand power. Price £17 10s. Address,

BOX 47, Featherston.

FOR SALE, 12 Danzenbaker SECTION SUPERS, Complete; £2 5s.; all sound and in good order; would suit a beginner.

C. SMEDLEY,
Te Awamutu.

DO NOT WORK WITH OBSOLETE KNIVES.

HAGERTY'S PATENT No. 40726 STEAM CAPPING KNIFE.

IT IS A PLEASURE TO THE APIARIST.

Steam Knife, complete with Can and Tubing, posted to any part of N.Z. Price, 40/-

Can and Tube, 5/- extra.

Or send your Bingham Knife, and I will convert it for you. Price, 30/-

Workmanship Guaranteed.

WILLIAM HAGERTY, Electrician, WINTON.

1919-20 PRICE LIST OF ITALIAN QUEENS

PRICES:

	1	2	3	4	5
Untested	7/-	12/6	18/-	23/-	27/6
Select Untested—1/- extra per Queen.					
Tested	12/-	21/-	28/6	37/8	45/-
Select Tested	15/-	28/-			
Breeders	25/-				

Queens guaranteed free from all disease, and bred from Pure Stock, which have been selected for hardiness, disease-resisting, good-working & non-swarming qualities.

Ninety-five per cent. of Untested Queens guaranteed purely mated.

TERMS.—Nett cash with order. Cheques to have exchange added.

P.O. Order Office, Tapanui.

Tested Queens for delivery from October 20th; Untested from about November 20th to end of March, 1920.

NOTE.—Owing to high cost of all material, no reductions can be allowed on list prices for larger quantities.

POSTAL ADDRESS:

R. STEWART,
CROOKSTON, OTAGO.

Success in Comb Foundation.

WE HAVE MUCH PLEASURE in reporting the close of our Biggest and Most Successful Season for the Manufacture of Comb Foundation since we commenced making, some nine-years ago. We are convinced that Beekeepers appreciate the opportunity of saving money on the Foundation Bill, and getting at the same time a Superior Article; testimonials received show that we do not exaggerate the quality. By advertising our exact terms we gained the confidence of our Clients, and saved much time in correspondence. Our only regret is that we were not prepared to handle a greater quantity, as, unfortunately, we had to refuse more than a few orders which offered too late. We have now (October 24th) completed the last order, and in spite of shipping difficulties and railway restrictions, our Clients will all have received their Foundation in good time. We have to thank them for their patience, and the District Traffic Manager for his courtesy in lifting the restrictions on Wax and Foundation.

OUR FUTURE PLANS.—We estimate that we have handled fully one-third of the 1919 Wax Crop, and next season we expect to more than double the quantity. As a result of our further experience, we believe we can effect improvements which, coupled with a doubled turnover, will enable us to REDUCE the Price in future, and improve the quality of work still more. We cannot announce the amount till our preparations are complete; but, depend on it, you will do well to wait for our terms before you send your Wax elsewhere. We are also prepared to buy your SURPLUS WAX NOW, so as to build up a stock of Foundation from which we can supply you DIRECTLY we receive your Wax to make up. This is real progress, which means success to you and to us. Remember that we are the pioneers in manufacturing Foundation of QUALITY in New Zealand, and that the demand for Wax made it worth more to you this year. Picture the position if you had to depend on imported Foundation at 5/- per pound, with your Wax a glut on the market.

Wishing you one and all a most successful season,

We remain,

Yours faithfully,

BARRETT & BRAY.

Postal Address:

BARRYS BAY,

via CHRISTCHURCH.

UNIQUE POINTS

in the

BARTLETT-MILLER REDUCERS

1. You can obtain a size to suit your pocket and your business—there are five of them.
2. The BARTLETT-MILLER REDUCER is self-contained, there being no loose parts, and there is nothing out of sight or reach.
3. You can regulate the heat of your honey before it leaves the Reducer. No other Reducer has such a feature.
4. You can get at every part of the Reducer without the slightest awkwardness—everything is straight in front of you and open to view and hand.
5. BARTLETT-MILLER REDUCERS have a much larger heating surface than any others, and so do faster work than any other Reducer ever invented.
6. Only in the BARTLETT-MILLER REDUCERS can the operator open the spaces at the bottoms of the tubes—WIDE OPEN,—and clear right down. This is being patented.
7. Only the BARTLETT-MILLER REDUCER delivers the slumgum on a tray, ready for removal as often as desired, and entirely separated from the honey.
8. The BARTLETT-MILLER REDUCER is the only one invented that keeps all slumgum entirely away from all honey after it has once left the melting surfaces. This is extremely important.
9. The BARTLETT-MILLER REDUCER is the only reducer in which you have no slumgum to shovel away when you have finished your day's (or hour's) work. The solid matter last left in the tube spaces just drops on to a screen, placed there for the purpose, and this screen is withdrawn and dumped wherever desired. The Reducer is then bare and clean, and there is no further dripping of anything.
10. The BARTLETT-MILLER REDUCER was first invented among those now on the market, and first it is going to stay!
11. The BARTLETT-MILLER REDUCER is the only one that does not need large pieces of pollen-filled comb being pushed out from between the tubes. They one and all fall out as soon as the bottoms are lowered.
12. The BARTLETT-MILLER REDUCER is the only Reducer that provides for each tube space being emptied singly. Others empty all at once, or none, and some do not empty at all.
13. The BARTLETT-MILLER REDUCER is the only reducer which can be so regulated as to prevent unmelted cappings from slipping through in one tube space, and yet permits AT THE SAME TIME big lumps of pollen and slumgum to go through in any other tube space or spaces.
14. The BARTLETT-MILLER REDUCER is the only reducer with so large a heating surface that honey holding too much moisture can have that moisture safely and satisfactorily reduced by putting it through the Reducer. (Special tube fillers are supplied extra for this work.)
15. It is the only reducer that, by reason of its tall tubes, is satisfactory to use in reducing to liquid state for re-tinning any candied honey.
16. It is the only Reducer which caters for different tube depths, as needed, for its special requirements.
17. BARTLETT-MILLER REDUCERS are procurable with tubes from five inches to nine inches in depth.
18. Lastly, it is the only Reducer that is selling so well that the manufacturer makes this monthly two-page advertisement pay—AND NO WONDER!

How much Heat do the B-M. Reducers need.

I note that quite a number of users of the B. M. REDUCERS are going the proper way to ruin their honey through not applying enough heat to the machine. Such persons have failed to correctly reckon what an enormous amount of heat is held by a hundredweight or so of honey. Take for example the melting of 100 lbs. of honey in an hour. First we must remember that the wax also has to be melted, and wax absorbs a large amount of latent heat, of which it shows no evidence to the operator. Every 100 lbs. of honey has $\frac{1}{2}$ lbs. to 5 lbs. of wax to be melted with it. Now, if we had, say, 105 lbs. of water to raise to a heat, say 5 deg. above the melting point of wax, we should need to raise that water from the usual temperature of well water, which is 55 deg., up to 150 deg., to raise an equivalent quantity of water to boiling heat, we would have to raise 64 lbs. (nearly), or roughly $6\frac{1}{2}$ gallons of water from well heat to boiling point in one hour.

Now, just consider a moment what a tedious wait we sometimes endure while a blue flame Perfection stove boils us a paltry quart or so of water for a hastily-needed cup of tea. If that stove boils that water in seven minutes we are quite proud of our success, yet we appear to expect that when a BARTLETT-MILLER REDUCER is on that same stove it ought to boil water at the rate of a whole gallon (a little over) every ten minutes. IT WON'T! Well, you try it.

Now, a BABY Size Reducer might well be run by a one-burner Perfection stove, but if you have a larger size, you must learn that nothing less than a double-burner will do your job, and provide whatever heat your particular size of Reducer requires.

To give purchasers some idea of what heat is necessary, I here give the calculations of the quantities of ordinary well water that your heat supply must be capable of raising to boiling heat in minutes or hours, and I venture to state that the quantities will prove an eye-opener to most of those users who have not made the calculations for themselves. I also want to impress upon all of you that it is imperative that enough heat must be supplied constantly so that the honey may flow rapidly away from the machine without getting spoilt, for that is the B-M.'s special merit, and if you provide too little heat, you are baulking the Reducer from doing the very thing it is constructed to perform, because you are delaying the honey in the troughs, while it overheats and gets discoloured. Besides this, you are spoiling your temper and wasting time, and blaming the inventor through ignorance of what your Reducer needs, the very same pattern of Machine that other persons are making such a success of that they write me that they wonder how they ever did without it.

Different Design.

The BARTLETT-MILLER REDUCERS are not now made to have a lamp placed underneath them. It is much more advisable that they should be made so that when required to put delicate coloured honey through, it should be possible to apply a heat-reducing medium to the machine. To reduce the heat of the honey after it has passed through the tubes, this may be accomplished by either keeping the lower compartment filled with cold water, or even, if necessary, having cold water flowing through the machine. The tubes are now supplied with steam apart from the bottom of the Reducer, and are supplied in the same manner as all the other Capping Reducers are. For the smaller sizes of the B-M. Reducers, a kettle of water with a piece of rubber hose leading from the spout to the Machine is sufficient, but for BOON and larger sizes something much more effective than a mere kettle must be provided, if you expect to get anything done worth doing. Remember, the same amount of heat as here given is needed, whatever pattern or make of Reducer is owned by the operator.

Heat Equivalents.

As before stated, BABY can be worked by a Single Burner Perfection Stove, for its capacity is only 70 lbs. an hour.

BOOSTER needs at least a Double Burner Perfection, and see that you keep it well going, or your honey will be kept back and damaged.

BOON, EFFECTIVE, & GLUTTON

all must have a large source of heat, as these are all built to do big work, and as that work is all done by heat, it cannot be accomplished if you do not supply the heat. Remember that it is your heat and not the actual Reducer that melts the honey; the Reducer only supplies the medium for the heat to act upon. Some persons seem to entirely forget this fact.

An ordinary oil-drum makes an ideal steam supply, with a hose as a lead for steam. Remember that if you use the machine only for cappings, you must supply all the heat that will be wasted by radiation; but of course you will not need so much as if you were going full blast with full combs.

Calculating the heat used in the wax, pollen, and slum-gum, and leaving out all wastage of radiated heat, each several Reducer needs as follows—

	Equivalent of cold water to be boiled	Per hour.	Per minute.
BOON	18½ gal.		2½ pints
EFFECTIVE	24½ gal.		3¼ pints

GLUTTON needs a small steam boiler—say, about 1 h.p.

NOW, WHERE IS THE EFFICACY OF YOUR PERFECTION STOVE—ONLY A HONEY SPOILER.

[ADVT.]

Honey for Export

A WORD and A WARNING

WE ARE BUYERS.

But owing to lack of Shipping Space and Congestion of Stocks awaiting shipment, we have been unable to buy during the past season.

But we will be in a position

TO BUY AGAIN NEXT SEASON.

Producers know the prices we were paying in 1918.

Do not tie yourselves or your future outputs up so that you are unable to take advantage

OF THE FULL CASH PRICES

(equivalent to the English value), which we pay you here in Auckland as soon as your Honey arrives and is graded.

Competition for your Honey is healthy--keep yourselves free to sell at the highest price.

A. S. PATERSON & Co., Ltd.,

No. 1 Custom St. West, Auckland.

Telegraphic Address—'ASPASIA, AUCKLAND.'

CIVIL WAR IN NEW ZEALAND.

For many years, from the early days of the Honey Industry, and until the birth of the CO-OPERATIVE MOVEMENT, the BEEKEEPERS of the Dominion entered each year into a commercial war, each producer competing against each other producer in order to sell his crop.

The result of this suicidal policy was that honey was often bought for threepence per lb (or less) by merchants and speculators, who naturally sold again at best advantage to themselves.

The producer did not count in those days. TO-DAY the Co-operative Movement has ended the commercial war for the bulk of the representative honey producers of the Dominion, over 500 of whom market their honey through their own concern (the N.Z. CO-OPERATIVE HONEY PRODUCERS' ASSOCIATION LTD.), and thus obtain individually the whole of the proceeds resulting from the sale of their honey, less a small deduction to cover the actual cost of running the business.

The operations of the N.Z. Co-operative Honey Producers' Association, Ltd., and the loyalty of its members, have made Beekeeping a profitable industry in New Zealand, and have raised the New Zealand producers' nett returns by over 100 per cent.

Even greater results can be achieved if Beekeepers are true to their best interests and join up with the movement.

The Association is opening up new markets in various foreign countries, in addition to its English trade, and has also properly organised for the sale of honey throughout the Dominion.

There are excellent prospects of splendid returns for the 1920 honey handled by the Association, and every Beekeeper should CONSULT THE ASSOCIATION before parting with any portion of his 1920 honey crop.

BEEKEEPERS' SUPPLIES.—The Association can now provide Beekeepers' Requisites at reduced prices, including complete colonies of Bees, for those wishing to commence beekeeping or to increase honey production.

Get into touch with us, Mr. Beekeeper. Let us tell you about ourselves, because your financial welfare is the reason of our existence.

You can become a member on the easiest possible terms. Write to the

GENERAL MANAGER,

New Zealand Co-operative Honey Producers' Assoc., Ltd.,

P.O. BOX 1293, AUCKLAND.

DO IT NOW!

Head Office and Depot:
Stanley Street, AUCKLAND.

TO attain the Utmost Success in Bee-keeping, get 'Alliance' Hives and Equipment!

The Prices for Honey are so good these days that every Apiarist naturally wants to get as big an output as possible. To do this, increase the number of your Hives, and see that they are of the famous "ALLIANCE" make—as used by leading Beekeepers in the Dominion. The best proof possible of the superiority of these Hives is to compare them after one season's service with any other make; then is the time you will appreciate what real value means! You want also to utilise the best Equipment, for that undoubtedly is Cheapest in the long run. The "ALLIANCE" Brand, being of the Highest Grade, gives uniformly satisfactory results, and reduces the expenditure in Time and Trouble to a minimum.

SEND FOR A COPY OF THE NEW ILLUSTRATED CATALOGUE.
It will be posted free on request.

ABC and XYZ of
BEE CULTURE.

ALLIANCE COX CO., Ltd.

We are booking orders for the 1919 Edition of this standard work. The first shipment will arrive within the next few days.

MASON STREET - DUNEDIN.

Early application is desirable.

BENTON CAPPING AND COMB-HONEY REDUCERS

Can now be had in two sizes—one size for cappings, and one for both cappings and comb-honey.

Extracts from letters received, etc.:-

"With cappings your machine works like a charm, taking them as fast as they drop from the knife."—MR. A. B. TRYTHALL, State Apiary, Raukura.

"Your machine is the best of the lot, and I have tried them all."—MR. H. BEALE, Masterton.

"I don't care how much thick honey I get now."—R. H. NELSON, Martinborough.

"Your machine reduces cappings splendidly."—MR. C. F. HORN, Waihau.

"Your machine gives every satisfaction."—E. SHAW, Okato.

"The best machine on the market."—J. M. RUSSELL, South Featherston.

"It works lovely."—H. HARDCASTLE, Rotorua.

AND MANY OTHERS.

Address: Box 47, Featherston.