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West Maitland, N.S.W.: E. Tipper, February 28, 1898

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THE AUSTRALIAN BEE BULLETIN.

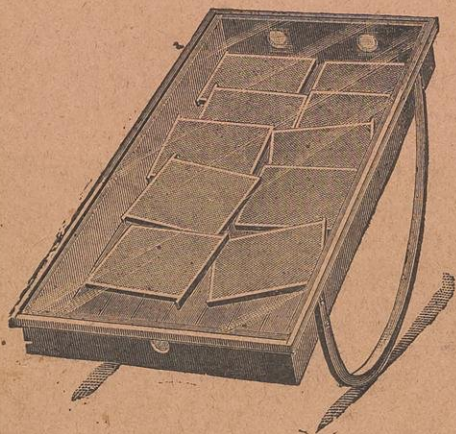
A MONTHLY JOURNAL, DEVOTED TO BEES AND BEEKEEPING.

VOL. 6. No 10.

FEBRUARY 28, 1897.

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Now is the time to melt all scraps of comb and waste wax about your apiary. There are several very good ways of doing this, by the Boardman Solar Wax Extractor and the Steam Wax Extractor.

The former is made similar to illustration with a movable glass sash, 60 x 30 inches. Price, 30/- each.

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Manufacturers Beekeepers'
Supplies,
WEST MAITLAND.

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Highest quality 10-frame American Dove-tailed Hives
IN CRATES OF 10 ONLY.

1½-story Hive, consisting of 1 bottom board, 1 body, 1 half-body, 1 Higginsville Cover, 10 Hoffman self-spacing frames, 1 division board, 1 follower and wedge, 7 section holders and 7 stotted separators and nails for putting together.

Price, 6/6 Each.

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Price, 7/6 Each.

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CHURCH STREET NORTH SYDNEY.

FEBRUARY 28, 1897.]

The Australian Bee Bulletin.

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TWO Tons Pure Extracted Honey.

W. R. MANNALL,
C/o Mannall Bros.,
West Maitland.

"The American Beekeeper"

A Monthly, 36 pages, post paid for
60 Cents. a Year. Now in 7th year.

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30 COLONIES of Bees in Bar-Frame
Hives.

Apply, A.B.B. Office.

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JAMESTOWN, N.Y., U.S.A.

The Beekeepers' Supply Co.

FRANKLIN STREET, MELBOURNE, VICTORIA.

Catalogue for this Season Now Ready, with Revised Price List,

CONTAINING THE FOLLOWING RECENT ADDITIONS—

THE LONGITUDINAL HIVE of 20 frames, with contracting boards, is specially a labor
saver. It may be readily expanded or contracted to meet the necessity of the season.
Two or more queens may be kept in one hive, and the stock amalgamated under one queen at any
time, or the reverse proceeding be instituted for queen rearing. This hive will be found most
suitable for the production of wax, supplying as it does ample clustering room.

THE REISCHE FOUNDATION PRESS.—This is without doubt one of the best recent
additions to apiarian appliances. Foundation may be made at very slight cost of labour. Capacity
3 to 4lbs. per hour. No other appliance necessary. Foundation made by this process, while some-
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COLORS,
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VICTORIA.

BEEKEEPERS In Victoria or Anywhere,
I can supply you with

QUEENS that are unsurpassed in Quality

And Guarantee Safe Arrival and Satisfaction at the following Prices—

Untested—	One, 5/- ; Three, 13/- ; Five, 20/-
Tested—	„ 8/- ; „ 22/6 ; „ 35/-
Select Tested—	„ 15/- ; „ 40/0 ; „ 60/-
Extra Select Tested, the very best,	25/- each.

I procure Fresh Breeding Stock EVERY SEASON, so as not to in-breed (a great factor I think in preventing Foul Brood). I had two from America lately, and expect half-a-dozen from Italy shortly. My colonies have averaged me the past ten years lewt. each—SUMMER COUNT.

JAS. MCFARLANE,
LYNDHURST, VICTORIA.

Australia's Largest, Most Reliable and Most Liberal Queen Breeder.

QUEENS 3s. EACH.

One, Untested, any Strain, 3/-, Three for 7/6
Tested, Golden or Ligurian, 6/- Tested, 13/6. Three, 36/

I have just received per "Alameda" some splendid Cyprian Queens.


— TESTIMONIALS —

Mr. J. Pennington, Beeville Apiary, Inverell, writes:—
I am pleased to say that the Queens are laying splendidly and their bees the best honey gatherers I ever had. I have extracted 90lb of honey from March to August from the hive I introduced the first Cyprio Italian I received from you. My best Leather-Coloured Italian Queen only gave 30lb. of surplus. I have over 100 Colonies

Mr. W. Smith, Bacchus Marsh, Victoria, writes:—The queens I got from you were a good investment for me. I was a bit dubious at first on account of the price being so small (only 2/6) but when I got the queens and they turned out so well I was obliged to confess that my fears were groundless.

R. H. JERVIS,
WREKIN APIARY, MOSS VALE

New Blood.

If you are in want of 

Choice Queens

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Try Us.

You may buy Cheaper, but

We are confident

you cannot get **better**, and

You will be Satisfied

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Untested Italian Queens	5/=	13/6	20/=
Tested ,, ,,	10/=	22/6	35/=
Choice Tested Breeding Italian Queens			15/=	42/=	65/=

Safe arrival Guaranteed. A remittance must accompany every order.

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APIARIES—Peel & Cheshire Creek.

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Orders may be sent to the Sydney Office, or to the Home Apiary, Peel, via Bathurst.

NOTE.—In addition to our own strain, we have purchased from Mr. T. D. G. Cadden, of Windsor (who is retiring from the trade) the whole of his Choice Selection of Breeding Queens.

The Australian Bee Bulletin.

A JOURNAL DEVOTED TO BEEKEEPING.

MAITLAND, N.S.W.—FEB. 28, 1898.

AS will be seen by report elsewhere a most important step has been gained by the committee of the N. B. K. A. which we trust will result in immense good to the beekeeping industry of New South Wales, both those who appreciate the efforts of the N. B. K. A., and those who do not. We mean the promise of the Sydney Board of Health to take steps for the prosecution of those who are now systematically placing adulterated honey on the market. We trust in our next issue to be able to report a few cases where such offenders will have reaped a reward such as they fully deserve.

Large entrances are becoming more and more popular.

Send us names and addresses of your beekeeping friends who are not taking the "A. Bee Bulletin."

The Muswellbrook Beekeepers' Convention is to be held on March 2 and 3. Cheap Trains. Try and get there.

How many of our readers belong to the National Beekeepers' Association of New South Wales. If you do not don't complain you can't get a price for your honey.

Mr. and Mrs. Pacey, of Marrar, paid a visit to our office in West Maitland some week or so ago. We would much like to have seen them at our apiary at Willow Tree. Come up there next time.

At a committee meeting of the N.B.K. A., the president reported a shortage in the matter of subscriptions to Mr. Whittell's testimonial. Donations are requested to clear the matter up.

Several good articles, including two from Messrs T. Bolton and T. Hadfield, unavoidably held over till our next.

We advise those who put honey up in pickle bottles to be careful what corks they use. Old corks retain the odor of whatever the bottle contained before, and conveys it to the honey, sometimes to its injury.

During the late swarming fever at our apiary one queen-cell was found—larvæ in it—near top of frame, bent upwards. We never saw or heard of such before. Has anyone else? How about the Heddon theory of reversing frames?

We are exceedingly sorry to have to record the death of Mrs. Maxwell, wife of Mr. F. A. Maxwell of Albury, one of the Vice-presidents of the N. B. K. A., and one of the largest beekeepers in New South Wales. Having enjoyed the hospitality of their home, we can feelingly speak of the gloom that must now rest in it, and our deepest sympathy goes out to Mr. Maxwell and his family.

L. Aspinwall in *The Beekeepers Review*: During the swarming period I undertook in the absence of water, to prevent the issue of swarms by smoke. Using the smoker well charged I puffed it freely into the entrance as soon as the swarm began to issue, being careful not to burn the bees. Four colonies were thus treated and in each instance the swarm returned. This was most conclusive proof to my mind that bees are guided, in clustering with the queen, by scent. I have no doubt as to the issuing of queens as well as bees, for although one swarm had returned after a long flight I found the queen, within the radius of their flight, surrounded by a handful of bees, upon a fence; while in another instance I saw the queen return with the bees. I believe these swarms had abandoned all hope of scenting the queen, which seemed evident by their scattered and widespread area of flight, hence they returned, trusting upon the maturing queen cells for a final issue.

We again call attention to the Muswellbrook Convention, which will take place on March 2 and 3.

The January number of the *American Bee Journal* has a very improved appearance. A new and tasty heading. Sub-headings are also new and very attractive.

We received the following a fortnight ago. We make no comments:—"Sir, I wish you to discontinue sending your paper. I sent the last back unopened, and now there is another come which I am sending back. I like the paper, only I see it at a neighbour's, so don't require to take one."

The lineoleum we use and purpose to keep on using, has an absorbent and a non-absorbent (oily) side. The former we place next the bees. It is not cut to exactly fit the hive, so the moisture has room at the edges to ascend, settles above and does not drop among the bees.

The following answer to Mr. A. C. Fraser was inadvertently omitted in our last, second column page 243:—

It may or may not have been foul brood. That attacks larvæ only, and the fact there was no larvæ prior to the young queens laying might have given time to the bees to clean up the cells and get all disease germs away. Would the heat of the weather have had to do with it?

We acknowledge receipt of files of the *Bee Master*, a new bee journal published by John Hewitt & Co., Sheffield, England. It advocates the Punic bee from Africa, which it considers superior to all other kinds for honey gathering, and freedom from foul brood. It also speaks very strongly re the motives and conduct of the editor and managers of the *British Bee Journal*.

In the *Bee Master*, Mr. Hewitt advocates a wax spoon—an ordinary spoon with sides bent up so as when dipped in melted wax a small stream only runs from it—for putting in foundation, in connection with a block for comb guide against which on the upturned top bar the foundation is placed. Two spoons are really required, one to be in the melting pot while the other is being used.

In looking under a hive that had not been seen to for some three weeks, we found a number of dead bees, a spider's web, egg bag, and two large black spiders with red spot on back. Turning up bottom board of next hive we found no dead bees but a clay hornets nest. Opened one compartment of it and discovered two dead spiders, with small grubs (hornet grubs) apparently feeding on the dead spiders! Shall we say, Hooray for the hornet?

We are sorry to see what we may call flippancy on the part of one of the leading Melbourne journals in regard to bee matters. We can speak very positively about the way adulteration is carried on in Sydney. As to Melbourne we were only in it a couple of days last May, but have no doubt the Victorian beekeepers will have a say on the matter. We would not expect it to be so bad there as in Sydney, where glucose is brought in duty free.

In the rage for cricket, which at the present time is absorbing everyone in Australia, it must be pleasant to beekeepers to know that one of the lions of the hour is a beekeeper, Mr. Wm. Howell, of Penrith, who made the phenomenal score of 95 runs in the short space of 59 minutes, and so effectually helped to gain the victory over the English visitors. Among the remarks which the enthusiastic lookers on passed were such as, "How the bees must be humming to-day Bill." He is now regarded as being one of the best bowlers in the world.

We acknowledge with thanks Mr. R. A. Long's kind invitation to be present at the Morts' Dock Employees Picnic which took place on Feb. 19th, and feel assured had we been able to be present we should have enjoyed ourselves immensely, as under such an energetic secretary as we know Mr. Long must be everything was bound to go well. Mr. Long is not only a beekeeper, but we need scarcely tell our readers a good poet, and also takes a special interest in ambulance work, of which at the above sports he made a special feature, getting very good entrances. In reply to a

question by him we would state, ordinary members of the N.B.K.A. can attend committee meetings of the same.

N. B. K. A.

A committee meeting of the above was held at Messrs Hebblewhite's, George Street, Sydney, on Wednesday evening, February 16. Present—Messrs A. Gale, (in the chair), Roberts, J. D. Ward, Bloxham, Dick and Tipper.

An apology was received from Mr Fred Ward (hon. sec.) for unavoidable absence. Mr G. Bloxham undertook his duties *pro. tem.*, on the motion of Mr J. D. Ward, seconded by Mr Dick.

Mr Fred Ward wrote from St Mary's his reason for being unable to attend committee meeting of N.B.K.A.: "Roads too bad, and too much damage here to be repaired. Wind blew with cyclonic force. Fruit trees levelled to ground. Three hives upturned; one heavy cover blown fifty yards; some of the shade covers have disappeared, but they left the bricks they were weighted with behind."

Mr Gale said the greatest question before the meeting was that of adulteration. He and other members of the committee had interviewed the Board of Health, who stated they were willing to institute proceedings.

Mr Roberts moved and Mr Ward seconded that the committee wait on the Board of Health and ask them to institute proceedings for honey adulteration in connection with other prosecutions they were carrying out. Carried.

The President reported in the matter of subscriptions to Mr Whittell's testimonial there was still a shortage. Each member present contributed a second shilling apiece to same, and Mr Tipper was asked to draw attention in the A.B.B. in order to get sufficient subscriptions to close the matter up.

The following gentlemen were appointed to be recommended as judges in apiculture at the forthcoming Royal Agricultural Show:—Messrs Gale, Ward, Trahair and Tipper.

On the motion of Mr Roberts, seconded by Mr Tipper, it was resolved that Mr J. D. Ward be a delegate from the N.B.K.A. to the proposed Convention at Muswellbrook.

DEPUTATION TO BOARD OF HEALTH.

On Friday, February 18th, the following members of committee of N. B. K. A. waited on Dr. Andrew Stuart, President of the Board of Health:—Mr. A. Gale (President), J. D. Ward, Roberts, Dick, and Tipper.

Mr. Gale introduced the deputation, and explained its objects, spoke of the extent to which honey adulteration was carried on in Sydney, how the N.B.K.A. committee had interviewed the Agricultural Department, who had referred them to the Board of Health, and they now came to ask what they could do to help the Board in the matter.

Conversation took place in which the various members of the deputation took part. After which Dr. Stuart said the Board, although established some twelve months had not things yet in order. Their chemical laboratories were not ready and they had only the Government analyst on their list. They wanted a special analytical food analyst. He read and explained portions of the Act. Recommended that the beekeepers themselves should take the matter up, thinking it would have better effect. Ultimately he promised that if names of supposed adulterators were submitted he would undertake to follow the matter up and prosecute.

This, the members of the committee promised to do, and thanking him for his courtesy and reception withdrew.

Dr. Gallup reports in *American Bee Journal* a case where the queen was compelled to leave for want of room. The colony swarmed and left, leaving a pint of bees, sealed brood the size of the hand, the rest of the combs solid honey—no queen cell or unsealed brood.

WHITEMAN'S CREEK.

T. R. O'GRADY.

I do not understand properly what Mr Bolton is driving at in his last communication. Surely you can equalise your colonies just as well in Root's boxes as in Heddon's. It is merely an interchange of frames, and if you can control swarming, as he states, why not prevent it as well when required? It seems absurd to permit an unrestricted increase as he suggests. Australian Yankee's figures in October number A.B.B. are instructive on this point; one hive in thirteen years may increase to twelve figures, and would require millions of men to work them. How about "needless direct loss of time and energy" before these figures, Mr Bolton? Kindly give us a little more light as to what you mean. It is true, colonies can sometimes be united in the spring, though seldom necessary in this locale, with proper management. In such a wet season as the present, when we have had quite two months' almost incessant rain, the swarming rate is very large, as the bees, being unable to work outside, live longer and devote their energies to brood rearing to such an extent that when the weather cleared the swarming rate was excessive, and in spite of the restriction I practised, my colonies have about doubled, even though I did not want much increase, being about to remove a short distance. Now I am gradually coming to the conclusion that too much brood space encourages swarming, and that restricted brood and plenty of honey room is the correct idea to reduce it, in spite of all you read to the contrary. On another point it appears that of necessity we have bred our bees from the excessive swarmers, as they are the more likely to increase, and as soon as I get settled in my new place I intend to raise all my queens from good honey gatherers, with the least swarming propensities. I note what Mr Beuhne says about getting paralysis from Queensland. I have had a good many queens from there, but have had no disease of any sort, with the exception of one box, apparently paralysis, and then the queen

was of my own rearing, so I can blame no one. I have also had a queen from a man ten miles from here some five seasons ago, who has paralysis every year as bad as possible, millions of bees dead and fluttering about before his hives every day, so that if it comes from the queen I ought to have it. I think locality, that is, any place where poison or unwholesome food is to be got at, has more to do with so-called paralysis than queens. I say so-called, because I do not think it is always correctly diagnosed. I fancy bee keepers who are resident in towns put down poisoned bees to paralysis. Confectioners and others who are annoyed in their business poison them. In my case the bees were to every appearance, and under the microscope, exactly like paralysis I have seen elsewhere. I tried salt and sulphur without effect, but cured them at once by simply uncapping some of their honey, therefore I can only conclude they were eating unwholesome food, though should that be so it is strange only one hive was affected. It would appear that bees instruct their hive mates only where a supply of food is to be had. This point would be interesting to experiment in for anyone who could spare the time. Have you noticed how nearly Prof. Gillette's figures re a bee weight and load agree with mine published in the A.B.B., Feb., 1894:—Gillette's, 5,578 unloaded bees to the pound, mine 5,645 empty bees; just 67 bees difference, which would allow for the honey Gillette's bees carried out. Gillette also makes the number of loads to the pound of honey 10,965, and I made it 10,294. As I did not allow for honey carried out his figures would be more correct in practice. However, it is very close, considering I only weighed four bees. When independent observers agree so closely it ought to upset the absurd things you see in print about bees carrying more than their weight of honey. The wet here deprived us of quite a third of our honey crop; nearly all the apple tree and swamp mahogany flowered and went out during its continuance.

QUESTIONS.

P. WHITEHEAD.

141.—What is the best method for the clarification of dark grades of honey?

142.—Honey kept for a time in copper or brass vessels, does it produce verdigrise like water does, or in any way injured?

T. BRADLEY.

143.—I have to sell my honey as soon as I extract, it granulates so soon here. Is there any way to stop that?

A. C. FRASER.

144.—What is the most amount of honey got from one hive in a season, and amount of wax, and how many casting in one season from the same hive?

EVERTON.

145.—If an apiary of bees is completely prevented from raising drones, may that be taken as a certainty that they, the bees, will not swarm while they are kept in that condition?

T. R. O'GRADY.

142. Verdigris is an acetate of copper, generally formed by acetic acid. Should the honey ferment at all that acid would be generated. I am doubtful even about using a copper boiler for mead making, though the old preserving pans were of copper, and did not hurt if kept clean. Honey has an acid re-action, and might act on the copper.

J. A. BRIEN.

142.—I do not think so, but have had no experience.

143.—There is only one way that I know of to keep honey from granulating and that is to keep it warm. Leave it in the hive until it is all capped, then you are sure that it is quite ripe.

145.—I do not think it would prevent swarming, I have had bees attempt to swarm with very few drones. It would be almost an impossibility to prevent an apiary of bees from rearing drones.

A. A. ROBERTS.

141.—Never tried to clarify. Don't think it will pay to fuss with it.

142.—Yes. Why use such vessels? They are too expensive.

143.—Thoroughly heat the honey and seal up while hot.

144.—Don't know.

145.—No, certainly not. How are you going to keep the bees from rearing drones? I would not like the job, would sooner manage swarming

W. REID.

139.—Yes, in pickle bottles, 2lb tins, and 60lb tins.

140.—On east side of high hill or mountain at foot, well sheltered from south or west with abundance of spring wattle or other early spring bloom, also abundance of late bloom, March and April, muzzlewood or any other tree blooming every year. With a good flat on east, abundance of clean water, also a great variety of blooming trees so if possible to keep up a perpetual bloom during summer.

141.—Sell it as you obtain it. Some like white honey, some dark.

145.—Quite a number prefer granulated honey, why not sell it as such?

JOHN BASSETT.

141.—Do not know. I put my dark honey in tins by itself and sell it for what it is worth.

142.—Do not know.

143.—I had honey the same last year. Beautiful honey combs in the hives granulated. If I can get it in the tins that is all that troubles me; put it into a large vessel of water and let it nearly boil.

144.—300lbs, three lbs of wax, 100lb of honey to get one lb. of wax. Do not know.

145.—You cannot prevent any swarm from having drones, even if you have no drone comb. The bees will rear drones in worker cells, if it were possible. What about our virgin queens? My opinion is that if the bees are strong and plenty of honey coming in they will swarm.

A. M. ROSE.

141.—Clear it off to market, otherwise if a clearer flow follows, extract right down to winter and then feed dark honey back to the bees.

142.—Honey produces verdigris, but it don't spread through honey so readily as it does through water. I don't think it would be safe to use copper vessels.

143.—This is a matter should be referred to the Technological Museum by beekeepers, en masse. I am sure they would there try some experiments for us free. Chemists can tell us the components of honey and how many chemicals act thereon, and therefore if any harmless drug can be used to prevent granulation, they ought to know it. Some beekeepers assert they know a plan but they seem either too selfish or too business like to make it generally known.

144.—3 cwt. Cast one swarm.

145.—Had no experience, but provided the queen is a good layer, I think they would swarm, other things being favourable

R. BEUHNE.

141.—Clarification, I understand in this case to mean to reduce it to a lighter shade of colour. This can be done but not so far as my experiments go, profitably, as the employment of discolouring agents involves the thinning down and subsequent evaporation to its former density, involving sufficient waste to make it unprofitable. Selling it in bulk for manufacturing purposes I found the best way of disposing of it.

142.—Depends upon the character of the honey. Some honey will produce verdigris in contact with brass or copper and will even corrode iron.

143.—The granulation of honey depends upon the relative proportion of the different sugars constituting it and the percentage of water, and any treatment to prevent granulation would have to be varied not only with honey from different sources, but also in different seasons. I succeeded once completely but I failed more or less in all attempts afterwards. I should not hurry its sale on account of its liability to granulation, but liquify it and solder down while warm just before sending to market.

145.—To prevent an apiary completely from raising drones, would involve more attention than looking after moderate swarming. I have numbers of hives which have not swarmed for several seasons although they have raised the average number of drones.

QUESTIONS NEXT MONTH

146.—Do florets as a rule secrete only one drop of nectar or a succession of drops each day they exist? i. e. If wet weather occurs while a certain tree is in bloom, would the nectar in such be lost in each floret without being replenished?

147.—Have Australian Bee Conventions hitherto been successes? And if not, why?

148.—What is the average weight of a Langstroth frame of sealed honey.

BEES AND FRUIT.

Not only in New South Wales is the value of bees to the orchardist a debatable point, as it appears that in Florida some fruit growers raised determined objections to their presence. In order to as far as possible, set the question at rest, it was determined to make an experiment at one of the Agricultural Stations. Two peach trees were taken from the orchard into a green house; a colony of bees was also moved in, and then the trees were forced to bloom at midwinter. One of the trees was so protected as to prevent the bees from getting to it, while they were allowed free access to the other. During the time of bloom the bees worked industriously on the blossoms of the tree to which they had access. As the season

advanced, the fruit on both trees set and grew without appreciable difference until stoning period, when the fruit dropped from the tree that the bees had been kept away from, while that on which they had fed held the fruit until ripe.—*Contemporary.*

VICTORIAN NOTES.

R. BEUHNE.

DEAD BROOD.

Brood as described by the Editor will often be found in odd colonies during very hot weather probably the result of overheating during a certain stage of transformation after feeding by the adult bees has ceased. The linoleum may have contributed but I do not think it was the cause. American leather, as we call this material, is not suitable for quilts, particularly for winter, as the moisture condenses on it and drops back down amongst the bees.

IMPORTED HONEY.

The "Drone" in the "Australasian" gives four cents to thirteen cents as the price of honey in America and doubts whether it would pay to send honey to Australia. Professor Cook gives three to three and half cents as the price of best extracted honey and he certainly ought to know. This refers to California, the most favourably situated region for shipment to Australia, where it could be landed at probably less cost than in the eastern states of America, and the transaction should certainly be profitable.

ARTIFICIAL POLLEN.

Your correspondent, P. W., Lake Macquarie, was unable to induce the bees to take meal of any kind as a substitute for pollen. When bees really want pollen and cannot get it they will readily accept flour (best roller). Make a shallow box four inches deep and about the dimensions of a Langstroth hive for each 50 colonies, put the flour into it and press down as hard and even as you can with a board four inches square with a handle fixed to the back of it. When the box contains about three inches, put a crating of $\frac{1}{2} \times \frac{1}{2}$ inch slats with $\frac{1}{2}$ inch spaces between on top of the flour, and stand the box convenient to the apiary, protecting it from rain and dew at night. Put a few flowers visited by bees on top of crating and lightly sprinkle with flour. My bees have always taken it in this way, even when they could obtain natural pollen and sometimes native bees $\frac{1}{2}$ the size of hive bees would carry away great quantities.

POISONING BEES.

That case of Poisoning Bees which appears on page 242 has gone the round of the principal Victorian papers, and if the editor has not received a corrected version of it from Mr. Willan himself I would refer to "Notes, by the

Drone" in the *Australasian*, January 15th., as the case must be of great interest to others similarly located or in search of a site for an apiary.

Relating to Mr Beuhne's remarks we copy from the Drone's contribution to *Australasian* :—

"The Drone" is not noted for the clearness of his handwriting, and thus, when the compositor set up Mr. Willyan's name as Willigan in the New Year's issue of "The Australasian," the mistake is excusable. Mr. Willyan has since written to a friend of mine, explaining the cause of the loss of his bees, and I am allowed to use portions of his letter, which will be found of interest to many beekeepers. He writes :—"As to how my bees were lost, I did not spray my vines, but amateur gardeners, acting in accordance with amateur newspaper advice, did. Poison used? Paris Green. For what? To kill caterpillars. Result? Killed all the flying bees in my apiary; left the young bees without providers; starvation swarms, &c. Moral—Beekeepers should avoid fruit growing districts, for if so placed they are at the mercy of the ignorant and malicious." I knew a man once who a few badly-planted, half-dead, fruit trees that refused to bear anything but a few flowers and stunted fruit. In his ignorance he scattered sulphur at the base of the trees to kill his neighbours bees, which he thought were doing the damage, "changing his peaches into plums," as he said. Fortunately, sulphur does bees no harm, and trees good, so all parties were satisfied, but the malice prepense was shown nevertheless. How long will it be before orchardists learn that poison sprayed on blossom is useless. It should be sprayed on after the blossom has fallen, and the fruit is forming. There is one satisfactory feature in the position, and that is that worker bees die from the poison before they have stored the honey in which it is contained. The public need not fear eating honey on the score that it may contain Paris green as an ingredient, because the Paris green will poison the bees before they can bring it home to have it stored in the cells. This argument applies to all poisons, because the preparation of the honey is such that, if it contains poison, the bees making the honey will die before it can be stored. In brief, no danger from poisoned honey is possible, because what will poison a human being will effectually poison a bee, and prevent it from storing the honey containing the poison.

We again call attention to the Muswellbrook Convention which will take place on March 2 and 3.

SORROWING FLOWERS

BY R. H. LONG.

I watched the bees fly homewards
With burdens for their comb,
Down thro' the airy highways
That lead to their peaceful home.
And I thought in my idle wonder,
How many bees will die
Ere the light that is faintly dawning,
Shall fade in the western sky?

Will they be mourned by flowers
So beautiful and blest,
When their wings will no longer bear
them,
And they flutter down to rest.

I watched the clustering blossoms
Gleam pale in the dewy dawn,
And I sighed for the bees that had
perished
Thro' the hours since yester morn,
And a sound like their angel pinions
Fell on my listening ears,
For the dew-drops were softly falling
And the flowers were all wet with tears.

Tears for the countless dying,
So innocent, so blest,
When their wings grew weak and weary,
And they fluttered down to rest.

STATISTICS.

We take the following from Coghlan's Statistical Register for 1896 for N. S. Wales :—

Total number of Beehives	
Productive,	32,557
Unproductive,	9,343
Quantity of Honey	
	1,378,039 lbs, about 61½ tons,
Average yield of	
Honey per hive	42.3 lbs.
Beeswax	31,842 lbs, say 13½ tons.

ARMIDALE & GLEN-INNES DISTRICT SHOW.

Apicultural prizes to be competed for on March 16, 17, 18 :—

- 8lbs Honey in Comb, 7s 6d; 2nd prize, 2s 6d
- 6 Jars of liquid Honey, 7s 6d
- 6 1lb Sections of Honey in Comb, 7s 6d
- 6 Jars Granulated Honey, 7s 6d.

REMOVING AN APIARY.

BY J. S. D.

Only once did I buy and import to my district a colony of bees. The result was every comb broken up and bees all dead. I have also read in your paper of the great disaster some persons have met with in removing an apiary from one district to another, more so of a removal in Victoria. As I have removed an apiary of 40 colonies 185 miles by sea, 190 by rail, and 4 by bush road, I will give you an account of it, as it may be useful to some beekeepers who may have to shift their apiary. Having removed them by two stages I shall describe both and result. The first was from a coast town north of Sydney, when I had the bees carefully fixed up the beginning of October; the entrances were fixed up so as to allow plenty of air, the tops removed and bagging tacked on instead, the hives carefully placed on board steamer and landed at Sydney 24 hours after, placed on a tug and at once removed to Middle Harbour. Upon opening such a mess: half the bees in each hive dead! They recovered and were fine colonies by the end of December but little honey to be had and horrible tasted stuff that did come in. I decided on another removal and last week Feb 1, I again packed for removal out west. The colonies consisted of 40 two story 8 framed hives, or say 600 combs in the lot. Having had bad luck with the first shift and in cool weather, and for the second very hot, I turned to remove all combs from top story and extracted the honey and packed in lots of 15, then with 1 inch wire nails tacked all combs in brood chamber, bought 16 yards of wire gauze and after removing all tops covered the hives with it, placed them on a tug, landed on Railway wharf, carted to platform, placed them in a covered van and travelled to the west 186 miles. Landed and then carted them over a bush track 4 miles, and did not have a single comb broken or have a pint of dead bees in the lot. Such I attribute to the use of the wire gauze. The cost was but

trifling. Wire gauze can be had at 7d or 8d. a yard. I may say the Railway officials gave every assistance, placed a covered truck at my disposal and carried the lot 19cwt. 3qr. 14lbs. the distance for £3 10s 6d. I stayed two days with the bees and they were bringing in honey fast.

POINTS IN JUDGING.

The following are the points in judging adopted at the Convention held in the Girls High School, Sydney, on June 22nd to 24th, 1893:—

<i>Hive Bees.</i>		<i>Honey (Candied.)</i>	
	POINTS.		
Purity of strain	15	Flavour	25
Color of queens	5	Color	15
Strength of stock	5	Fineness of grain	10
Temper of bees	5	Total	50
Quantity and Regularity of Brood	10	<i>Comb Honey.</i>	
Evenness of combs	5	Evenness	10
Utility of hive	5	Fulness	10
Total	50	Appearance	10
<i>Queen in Nucleus.</i>		Neatness	10
Purity	20	Flavour	10
Color	10	Total	50
Form	10	<i>Wax (white.)</i>	
Size	10	Colour	20
Total	50	Clearness	20
<i>Hives and Implements.</i>		General appearance	10
Utility	25	Total	50
Workmanship	10	<i>Wax (yellow.)</i>	
Other Merits	15	Same points.	
Total	50	<i>Comb Foundation.</i>	
<i>Honey (liquid extracted)</i>		Impression	25
Flavour	20	Quality of wax	15
Aroma	5	Color	10
Clearness	10	Total	50
Color	5	<i>Collection of Articles made from Honey for Domestic Purposes.</i>	
Density	10	At Judges Discretion.	
Total	50		

Mr. W. Witherspoon, Newcastle, writes:—I like your paper very much, and read it with interest.

WORK FOR THE MONTH.

In our own locality there was a fair white box bloom that lasted into December. It would have been over before but for last year's drought, which delayed its coming out into bloom much earlier, and possibly interfered with the quantity of nectar produced from it. We expected a yellow box flow to succeed, but were disappointed; the flow of that was very light this year. By Christmas time all flow, even thistles, had ceased. The apple tree started in bloom second week in January. In three weeks it was all done. Although a great many trees in bloom it does not seem to yield honey in same quantity as the boxes. The boxes are now starting in bud, but we do not anticipate any honey flow again till next spring—some eight months. We will therefore handle the hives as little as possible, only to see they have stores and queens. Where a number of hives are to be looked at—and the less exposure of combs means less danger of robbing—it is as well that any examination should be conducted by two persons—one to manipulate, the other to take charge of the smoker, and make himself as useful as he can in any little way he can see. One sure sign of honey not coming in is the presence of robbers on nearly every occasion when hives are opened. You soon know them by the way they fly about, trying to effect an entrance in any possible way. Make the hive entrance as small as possible, say only passage for one or two bees at a time, so as to enable the bees in the hive to defend themselves.

A PLEASANT EVENING ENDED TRAGICALLY.

The night was dark and stormy. Big cloud masses were driven swiftly across the sky from mountain top to mountain top, the young moon now and then shyly peeping between the rifts. The poultry are safely penned, save one hen and her seven half-grown chickens, who had

taken possession of an unsafe position under the house. The tea table cleared, the lamp lit. A visiting clergyman from the township, 15 miles away, staying for the night. The local railway station-master and his good lady had faced the dark, and by the aid of a good lamp crossed the creek by the stepping-stones, and mounted the hill to our isolated domicile. This does not yet boast a piano or o'her musical instrument, but a few old choir identities sufficient to make tenor, treble and bass. Some good music and the trained harmony and melody of human voices produce music unequalled. Several of the best Australian weeklies and readings therefrom, a friendly cup of tea to wind up with, and the guests, cloaked and umbrella'd, were just departing, when, lo! a screech! Another! Murder was undoubtedly being perpetrated under the apartment where so much happiness and peace had been reigning. Quickly gun and lantern were seized and applied to one entrance of the chamber of horrors. A clothes prop and the dog manned the other entrance. The desperado attempted to charge out past the gun and lantern, but drew back into the inmost recess, where the light or its carrier could not penetrate, and the dog could not follow. But he was not safe. A hammer and chisel speedily removed a flooring board above, and there he was. Dazzled by the glare of light suddenly coming on him he remained motionless, till a well-directed charge of small shot terminated his existence. It was a native cat, after the aforesaid hen and her chickens. After-examination proved he had killed four of the latter.

INTERESTING.

W.F.E., Tooloom, Feb. 5th—I wish to draw your attention to what I consider a very important occurrence with reference to the beekeeping industry. The winter before last my bees wintered well, and were otherwise in a very satisfactory way to commence the season. There was a

fair amount of blossom, and frames were well filled with brood, but I could not get them up to anything like working strength. I thought that there must be some unseen enemy at work, but I could not find out what it was, for with the exception of a few birds about the apiary, such as the bee eater (*merops ornatus*) and the leather head (*tropidorrhynchus oorniculatus*), and they not very numerous, I did not think that I had much to fear from them. I was aware that in the early spring a Wisteria that was growing round a neighbour's house proved very disastrous. As it is only about 200 yards from my bees I was able to observe the effect, and when the vine was at its best the bees were strewn thick between it and the apiary, many of them falling at the entrance to the hives. One day some boys were playing cricket in the line of bees, and one of the boys came to tell me that something was wrong with my bees, as they were tumbling down in the paddock by hundreds. As this vine only lasts a short time, and it only proved destructive two seasons out of five, I cannot account for this, as the bees seemed to work on it about the same each season. However, I did not fear much from this, as it was only temporary. But the result was that I had only a limited supply of honey, and no increase of bees. The present season so far has been far worse than last, although the queens were laying well, and quantities of young bees, still I cannot get them strong. A neighbour of mine, with about twenty colonies of black bees, told me a short time since that there was a tree (a red gum) near his bees in blossom, and under it there was fully a swarm of dead bees. On further investigation he saw a number of leather heads catching the bees and then dropping them, so it would seem that these birds have found an easier way of getting honey than searching the blossom for it, by catching the bees and squeezing the honey from them. This bird is also known as the friar bird, and is I believe very numerous over a great part of New

South Wales. It is only a few days since that a neighbour sent me word that my bees were laying two inches thick under some trees around his place. He knew them as mine are the only Italian bees about here, so you will see that things are far from gay for the bees, as well as their owners, up this way. As I have seen no mention of this in the A.B.B., I hope that this bad habit is only local, and that the leather-heads will forget it before another season comes round. In the meantime it may be advisable for brother beekeepers to pay attention to the above when there is blossom and birds within easy reach, as it is in the forest where the mischief is done. It may escape the observation of many.

CAPPINGS.

From American and other Bee Journals.

F. B. Smith, in *Southland Queen* relates how he saw a young queen mated the third time, and turning out a drone layer.

Mr. Danzenbecker is using a cheap section cartoon. It folds over the section, but the two sides are not covered. A flap folds on the front side over a round hole in which the honey may be seen when this flap is lifted. A rubber band encloses the whole.

BEELESS HONEY.—The following is reported as a portion of a conversation recently held by Mr. and Mrs. Citybug: Mrs. Citybug—"Our grocer now delivers his goods in one of those new horseless waggons." Mr. Citybug—"Horseless waggons, eh! Well, he's been giving us cowless butter and beeless honey; I suppose the next thing will be henless eggs."

—*American Bee Journal.*

SMOKER FUEL.—In a large dish stir about $\frac{1}{4}$ pound flour into cold water, making a thin pap. Into this stir $\frac{1}{4}$ pound saltpeter, previously dissolved in hot water. Add two quarts of warm water and mix well. Then fill the dish with coarse sawdust and knead thor-

oughly as a baker kneads dough. Form with the hands into egg-sized balls, squeezing out the superfluous water. When thoroughly dried break into nut-sized pieces and use in bee smoker.—*Gravenhorst's deutsche illustrierte Bienenzeitung.*

Dr. J. P. H. Brown recommends a four L framed hive and a half gallon of young bees for queen rearing, while Dr. Gallup, no doubt, would prefer a half bushel of all ages. And if a ten framed hive is filled with combs of brood, place it over a prosperous colony with an excluder between, and 11 days later remove all cells in the upper story and shake all the bees from the bottom body into it, placing the latter with queen elsewhere; he will have bees in the right condition to accept, start or build cells, and the brood or prepared cups should be given as soon as the bees show the queenless sign.

An American writer says:—It is by organized effort and a community of sentiment that laws are made and enforced. They neither make nor enforce themselves. Public sentiment must be created before laws will be enacted; and, when enacted, public sentiment must support the officers who try to enforce them, or such laws will soon become "dead letters."

L. L. Skaggs, in *Southland Queen*:—If you want the best hive cover, get the old style flat cover and run four saw kerfs through it from one end to the other, about half way through the wood—about equal distances apart—put the kerfed side down. This cover will never warp nor curl up at the sides. If you want your frames to go in and out of your hives easily, just sharpen the ends of the top bar, cut from the sides and top, not from the bottom, the point will cut through the wax, that is, on the rabbit. Try it and see how easy it is to slide the frames, you will be surprised. I do not need any crow bar to move my frames. No honey dripping from the frames and no smashing of bees.

W. Pridgen, says—I prefer combs of all¹ sealed brood to empty ones, in a cell building colony, but when the bees have been long enough queenless to seal the brood place the hive on the stand of a populous colony, shake the bees from said colony into it, and place the brood and queen on the stand from which the cell builders are taken, and the operation can be repeated indefinitely by adding brood as soon as the cells are sealed each time, and waiting until the last brood given is sealed before doing so, whether it is placed over a colony with an excluder between or not. To attain the best results, a colony prepared for cell building must contain an abundance of bees of all ages, with at least half of them just deprived of their queen and unsealed brood, and also hatching brood, with some of it drone, preferred. Such a colony usually accepts cells better in a few hours than a day later, and every one can bring about this condition in the way that suits him best, whether it be by first placing the brood over a colony with excluder between, simply making a colony queenless, or otherwise.—*Southland Queen.*

Mr. John M. Rankin, of the Michigan Agricultural College, U. S. A. says, writing to *The American Beekeeper*:—Now I beg to inform you that there is at least one Experimental Station that has an Apiary Department. It was started in April '97, and although no practical assistance was given to the beekeeping world at large, still some work was accomplished during the past summer. You, as a beekeeper, know how much work is connected with starting an apiary and equipping a honey house and but little more than this was done. However, we tested the new drawn foundation with the thin, and started some experiments with bee paralysis and breeding bees with longer tongues. We have not gone far enough on them yet to make the results public, but I will say that we are on the *right* road to get a strain of bees that have tongues as long as their bodies if need be. By

actual measurement we have increased the length of one strain two-tenths millimeters in the past season. This was done by crossing. We are also experimenting on the mating of queens to desirable drones. Next summer, these and other experiments will be carried out and we hope some of them will be of use to every beekeeper.

Mrs L. Harrison, says:—There is much more in a colony of bees than the honey and wax they represent. They offer to any intelligent and inquisitive mind a rich field of thought. Nature is rich in resources, and honey-bees are in close relation with it. Sex in plants is now attracting more attention than formerly, and bees act as marriage-priests; while gathering the pollen to make the bee-bread for their brood, they disseminate the father dust from flower to flower. The cultivation of the honey-bee opens up a new world to a woman of inquiring mind, for every plant that grows possesses new interest to her, for it may mean dollars and cents to her purse. The little, modest white clover, wherever it rears its head, is petted and caressed as it holds within its petals nectar—fit food for the gods. There is a lesson to be learned from the inmates of the hive.

“So work the honey-bee—
Creatures that by a rule in Nature teach
The art of order to a peopled kingdom.”

The government of a colony of bees is all in the hands of the females, and a woman may gain inspiration by its study as to how best to manage her household. When the young bee issues from its cell, weak and downy, it has not strength to roam the fields and carry heavy loads of honey and pollen—it is then given the care of the young to feed and nourish; digest the food and feed the queen and drones; secrete wax and build the comb, and is daily given a play-spell in the open air to locate its hive, and gain strength for the heavy labours of the field.—A. B. J.

L. A. Aspinwall, says in *Beekeepers Review*:—It is a well established fact that single walls are insufficient for pro-

tection against the cold of our Northern states; hence, something equivalent to about two inches of packing on the bottom, sides and end must be included as a requisite to successful wintering. Above the frames I would recommend about four to six inches of packing for protection. The warmth of the colony naturally ascending necessitates a greater thickness above to prevent its radiation. With hives well packed on the bottom, ends and sides a tray of saw-dust about six inches deep will conserve most of the heat generated by an average colony. Preferable, the tray should have a muslin bottom, which when filled with saw-dust will conform to, and fill the shallow bee space above the frames. With no packing at the bottom or sides the thin walls allow a constant radiation of heat from the colony and when the temperature becomes sufficiently low, we find consequent condensation of moisture. Under such circumstances a slow upward current is necessary to carry it off. In order to accomplish it planer shavings chaff should be used in the tray instead of saw dust. The reader will readily comprehend that an upward current can only be obtained at an expense of the vitality of the colony, and in consequence must draw largely upon their stores to maintain the requisite degree of warmth. This explains why the consumption of food is greater in out-door wintering than in cellars or special repositories. Let us bear in mind that converse is also true with a perfect system of out-door wintering. Never in all my life experience with special repositories or cellars has the consumption of food been less, than with hives properly prepared for open air wintering. With sufficient packing on all sides and bottom together with suitable entrance protection, the warmth of the colony is almost wholly conserved. A hive without entrance protection may be compared to a house with suitable warming appliances and having the door left open. I often have wondered why so many have attempted to construct warm hives, and leave the front door wide open. Of course to con-

tract the entrance of an ordinary hive without first constructing some anti-clogging arrangement would prove disastrous—the result would be suffocation. Without packing an increased amount of food is consumed necessitating an undue number of cleansing flights, which is one cause of dysentery. I have found three essentials prominent in successful out door wintering. Outside packing—entrance protection—and a small filth chamber or box below the entrance to receive all dead bees which are carried there during warm spells. This prevents all clogging which is so common with the ordinary entrance.

Hybrid bees, that is the cross between the Italian and black, when bred from and remated again and again with Italian drones, soon return to the regulation three bands, but invariably attain a richer orange marking than the original parent Italian stock had. The bees are larger also, and not so quiet to handle. The cross between the Cyprian and the Italian as a rule decreases the size of the Italian, leaving the progeny with a very black tip to the abdomen. They are capital workers, and the queens are very prolific.—*The Drone in Australasian.*

Prof. A. J. Cook says:—I do not believe the bee-moth larvæ feed much on the wax. I think it is more the bee-bread or pollen. The wax is not a perfect food, and seems so indigestible that we should hardly think it would serve for food at all, yet the wax-moth larvæ may have become adapted even to this food. It may do them some good, yet I think without doubt the bee-moth larvæ feed for the most part on the bee-bread. The jelly fed to the brood may serve in part for their food. I do not think that they ever feed on pure wax. I have never known them to do so, and am sure that pure wax could not sustain them. The insects usually pass the winter in the pupa state, and in the hives endure the rigors of the most severe climates that will permit the bees to pass without

Dr. Mason suggests in *The American Bee Journal* about preparing bees for exhibitions. Take two combs of bees and sealed brood from the colony having the bees you desire to exhibit. Set them in a hive. Put a queen in a cage on top of the frames. Shut up the hive and keep it shut up until towards night the next day. Keep it out of the sun while it is closed. When it is opened set it by the side of the old colony. In a day or two most of the old bees, that is, the flying bees, will have returned to the old hive. Now release the queen. Do this a week or two before the bees are to go away. The day before they are to go away take them to a new stand. Shake the bees from one of the combs, returning it to the old colony. This gives an abundance of young bees that can bear confinement. The day that the bees are to go away, set the comb of bees into the little single comb hive in which they are to be exhibited. There must be an abundance of room and plenty of ventilation. There must be room at the bottom, top and sides, and one side of the hive should be wire cloth, the other of glass. Don't take bees without a queen, as queenless bees worry more. With bees prepared in this manner I have had them build great pieces of comb, and when bees do this they are not suffering.

Professor R. L. Taylor says:—In July last, the rainfall being so great that more than the usual amount of cracking was anticipated, I decided to determine, if possible, whether grapes from which bees were excluded, but still left on the vines, suffered in any different degree from those to which the bees had free access. To shut out the bees, paper sacks were used, folded over the clusters and pinned. More than a thousand sacks were put upon grapes of the 13 varieties I am about to mention. Many of these became ripe early in September, and by the 24th all were ripe except Jefferson and Iona. In the case of the following, there was no damage either inside the bags or out, viz: The Agawam, Eaton, Eumelan, Iona, Lindley,

Niagara and Ulster. Brighton suffered none in the sacks, little out. The Diamond a little in and a little out. The Jefferson, a very little in and the same out. The Delaware, Duchess and Salem suffered much in, and somewhat less out. In the case of the three kinds much injured, it became constantly more evident that the damage to those in the bags was greater than those to which the bees had access. This was especially true of the Duchess and the Delaware. So evident was it that the reason of this lay in the fact that the juice oozing from the cracked grapes in the bags was communicated to contiguous sound grapes, causing weakness of skin, cracking, and incipient decay, that by the middle of the month of September I hastened to remove the bags from these varieties, that the bees might gather the juice from the broken grapes. To my mind, the conclusion is inevitable, that not only do bees not injure grapes, but that by gathering the juices of cracked ones they prevent decay, and thereby the destruction of sound grapes.

Mr. Hewitt in *Bee Master*, says:—In rearing queens much stress has been laid on getting queen-cells started from the egg, "authorities" advising the destruction of the first cells. Now, it seemed to me that if the instinct of bees directed them to select larvae two days old to save time, if these larvae were removed, they would again select others just as old, and all my experiments convinced me that such is the fact. But if you insert a comb containing eggs into a queenless hive that has the swarming fever on, they will at once start cells on these eggs, no matter how many cells they may have already started, or how many sealed, or how many young queens, hatched or piping; and they will do this even on drone eggs in drone cells, proving, as I think, that Dr. de Planta is wrong when he insists that bees can discern between worker and drone larvae in the first stages. There is another important fact, viz., the bees keep the young queens in their cells two days, and will not allow them to destroy any

cell, or kill one another. This I discovered in 1887, and it worked well even in the bad season of 1888. I think I have now got it to perfection; therefore, to rear queens in a wholesale, and at the same time, in a natural manner, all one has to do is to insert eggs from time to time, and keep the "swarming fever" on, to secure a daily or weekly supply of queens, from one hive all through the season. It will be thus seen that while I condemn cell-cutting, queen-nurseries, nuclei-rearing, &c., I can really get very many more queens without such means, for no matter how many cells may be grouped together, I get the queens. These I catch in the swarms as they come off from time to time and let the bees go back. At this age they are not fit to send a distance, but must be introduced to a fairly strong colony for two days at least, so that, with the risks, &c. virgin queens, as a matter of trade, cannot be sold for "tuppence apiece," yet they can be sold at such a rate as will induce bee-keepers to prefer buying queens to rearing them, so long as the breeder will devote his skill and time to selecting, obtaining, and breeding the best stock.

M. M. Baldridge, says:—My plan has been for several years past to uncap combs filled with candied honey, and extract any liquid honey there might be in them, and then fill the empty cells full or part full of water. Of course, I also wet or sprinkle both honey and comb in so doing. I then hang these frames of comb in the hive, either in the story where the bees are, or in an empty story underneath, and late in the afternoon. The honey will then be quickly removed, and will be found nicely liquified, and with no loss of comb or honey whatever. As a rule, I find it necessary to water the combs two or more times before the last grain of honey is liquefied. In this way I have saved many choice combs filled with candied honey, and with no loss whatever. Try this plan and you will be pleased with the result. I know it is a success, for I have been "through the mill" a number of times.

At a two days honey fair, tried by the Hanover B. K. A. in Germany, a minimum price of 25 cents for comb and 20 for extracted was set, but the average realised for comb was 30 cents, and extracted 22½ cents.

Abbe Dubois says:—It is a dead loss of wax to give the bees no chance to build comb in time of harvest, but to allow them to build too much is at an expense of honey, not compensated by the wax produced.

In reply to a question, will queens be of any use which are reared after all drones are killed off in the fall, Doolittle says:—A colony having a queen, be she laying or otherwise, will remain much more quiet during the winter months than will a queenless colony, also come out stronger in the spring, with less consumption of stores. Let her remain with the colony until you are able to procure a laying queen.

HONEY CAKES.—Much is made of what the Germans call *lebkuchen*, in the fatherland. They are manufactured in large quantities, keep an indefinite time, and one of the treats the children expect when *vater* comes home from the fair consists of these same. They are somewhat inappropriately called gingerbread in English, as there is no ginger in them. F. L. Thompson has been getting some recipes, which appear in Review. Here is one of the simplest:—Two pounds of honey is brought to a boil with ½ pint of water, then take from the fire, and while still warm mixed with 2 pounds of flour. The resulting dough is kneaded well and then set to cool for some time. After some days (the longer the dough stands the better), it is put on a board, and three yolks of eggs, with flour, stirred in, and plump 1½ ounces bicarbonate of soda added, previously dissolved in water. The whole is then well mixed. Next are added according to taste, 2 pounds sugar, some crushed cinnamon, cloves, citron and chopped almonds; the whole is well worked, rolled out to a finger's thickness and laid on a tin, or put in a mould, and baked in the oven.

Botanists' theories don't always pan out as expected. C. E. Bessey writes:—“Where the dry air is likely to check the honey by drying up the nectar, we must look to it that we select flowers for nectar that have deep cups or tubes. In the case of the white clover we have almost—not quite—an ideal plant. And while they are crowded together, they protect the honey, so that there is practically no evaporation.” The white clover is not an ideal honey plant in the dry districts here; in fact, the bees seldom visit it, unless when the dew is on the flowers in the early mornings. The gum trees beat white clover hollow as honey producers in Australia, and their flowers are not tubular, neither can they be described as bell-shaped. Hot, dry weather seems to stop the honey flow at any time. I have seen bees working on *mignonette* during the heat of the day, and avoiding better-looking flowers, but whether for honey or pollen I could not say.—*Drone in Australasian.*

Dart in *A. Bee Journal* says:—If there is but one part of bee-keeping that I have learned to handle to my perfect satisfaction as a bee-keeper for fifty years, it is to prevent second or after swarming. It is from the Heddon plan, only I go further than he recommends. Hive the first swarm and place it on the stand of the old hive. Turn the old hive around facing to the back of the new hive close by the side. The third day from swarming turn the old hive around facing the same way with the new hive. The third or fourth day the young will begin to fly from the old hive and when well out, turn the old hive around facing the back of the new hive. The young bees out will all pass into the new hive. The next day turn the old hive around fronting the new one. Repeat this turning around of the old hive every day you see the young bees flying to the seventh or eighth day from swarming; put the old hive on a stand, and your swarming is through with for that hive. In 30 colonies handled by this plan, not one cast a second swarm. The old colonies built

up fast, and gave me twice the honey I ever had from old colonies that were allowed to swarm themselves down to nothing.

GARDEN HONEY LAND.

BY R. H. LONG.

CHILD :—

I hear thee speak of this honey flow,
But where do the flowers that yield it grow ?
Father ! oh where does that garden lie ?
Is it too far for your bees to fly ?
Is it far away on some unknown strand
This wonderful Garden Honey Land ?

FATHER :—

Not there, not there, my child,
Eye hath not seen it, my gentle boy,
Ear hath not heard its deep hum of joy.
Dreams cannot picture that garden fair,
Honey and bees may not enter there.
But pickle bottles and glucose thick,
Flavouring acids, a tub, a stick,
A dead beat loafer to stir them round,
And there will your garden of honey be found.
Yes there, it is there, my child !

CORRESPONDENCE.

J. S., Kendall :—I may say this is the worst bee season ever known here. I may send you along something when things improve. Bees have enough to do to keep themselves going. It is out of the question to think of extracting. "Going extracting," & some items of that sort I consider very interesting. I presume they are from your pen. If so don't be too modest ; trot out plenty of the same sort is the wish of yours truly.

H. S., Hastings River :—Bess are doing fairly well in this neighbourhood though not as well as last summer. The early part of the season was exceedingly dry. Latterly, we have had the other extreme, in fact, we have scarcely had three consecutive days fine during the last six weeks.

To hand Part 4 of the "West Australian Settler's Guide and Farmers' Handbook." The present number is devoted to Sheep Husbandry, and is written by "Bruni" (Geo. A. Brown), of *The Australasian*.

J. M. W., Binalong :—We have had a very fair season so far, but times have been pretty bad on account of the drought.

W.C., Cowra : I haven't much bee news to send you ; we have only had but a fair honey supply. I have taken about 70 lbs from each hive with no prospect of any more. Wishing you and your little *Bulletin* a success.

J. W. B. Tasmania :—The bee paralysis has been so severe in my apiary that I have now scarcely a hive left alive.

From all we can gather the only cure for paralysis is to change the queens. But are you sure it was paralysis killed them ?

H. Nancarrow, Wellington, writes :—I have sold all last year's crop and nearly all I obtained this year, which only amounted to about five tons, and I put it up in 2, 4, 8, 30, and 60lb tins labelled and sold it between Bourke, Cobar, and Sydney, and obtained 4d and 4½d on rail at Wellington, and could have sold another ten tons had I got it or had it been procurable in the district. But since the rush of coast and other honeys into the Sydney market (which is being sold for anything it will bring,) trade has slackened down, and I am now storing my crop and saving it for the winter, when I expect a revival of business. There is nothing in giving it away, nor can I see any necessity for the anxiety some beekeepers display if they have a few hundredweight on hand. I wish they would combine and keep the prices up. They have the trade entirely in their own hands, but unfortunately most beekeepers are not business men and therefore are easily scared. So far the honey flow in this district has been first class, from white and yellow box, gum, and appletree—the quality unsurpassed. We have had a very dry summer, but on January 12th it rained. Came down in sheets and by 8 o'clock next morning 370 points had fallen. This will do an immense amount of good and every prospect of more to-day. Bees all healthy and strong and turning out about 500 per week from 50 colonies.

NOTES.

BY LOYALSTONE.

RE PASTE FOR LABELS.

It is no trouble to stick labels on square tins or bottles, but when it comes to sticking them on round tins the trouble commences. In cold weather they will stick fairly well, but in hot weather if you do not rub the tin with whiting, or wash the outside with whiting and water, a short time after you paste them on the heat commences to dry the gum, and you hear clickety clack and off they roll, much to the beekeepers disgust. I have tried well boiled flour and water with a little resin in it and it proved useless with me, so I still stick to the gum and whiting.

FOUL BROOD.

Some prominent beekeepers still adhere to the idea that dead brood in a hive will not germinate the disease. I say it will; germs of every description are floating in the air now and again, waiting for a favourable opportunity to develop a disease. And when a hive has dead brood, or bees, some time or other the opportunity arrives, the germ enters the hive in some form or other and so develops foul brood.

SOMETHING WRONG WITH SEALED AND UNSEALED BROOD.

I had the same experience as you Mr. Editor. Noticing some brood in one of my hives with the same complaint as you mention, I at first mistook it for foul brood, but on closer inspection discovered my mistake, and on looking at the hive a few days after, found it completely disappeared. I put it down this way. It was very warm weather and I extracted a lot of honey from this hive, which was without shade, and that the glare and heat of the sun while the cover was off affected the brood, or else the hive being full of honey, and in putting back the empty frames caused a momentary chill. I did nothing towards disinfecting the hive in any way.

RE MR. BOLTONS REMARKS. LONG IDEA HIVE VERSUS HEDDON HIVE.

I can assure him the bees have less inclination to swarm in these hives than any others. This season is the heaviest honey flow we have had for some years, and I think it speaks volumes for the Long Idea Hive, when I say I only had one swarm. There are at present in some of my hives, bees sufficient to make three large swarms. When you raised the lid of these hives this summer, an onlooker declares there are more bees in the hive than anything else; the frames are literally covered with bees, and when there are 20 and more frames in these hives you may guess Mr. Editor the size of the swarms. For Mr. Bolton to have a swarm of this size would require (in some instances where I have 28 frames in a hive) three Heddon hives and a half, or in all 14 half stories. What a nice height this hive would be for a hurricane or a gale of wind to have a blow at. I guess a bit of a southerly buster would blow it over, and then what a nice "kettle of fish" for the beekeeper to put to rights. Again would it be easy to invert these hives this height? Inversion does not always stop swarming. Suppose anything happened a queen in one of the colonies, and inversion stopped queen rearing. Unless Mr. Bolton over-hauls his hive (which would take nearly treble the time to over-haul the Long Idea Hive) his colony in that hive is considerably weakened, before he finds out his loss. I say Mr. Bolton must over-haul his hives instead of merely inverting them, if he wishes to know how they are getting on. Can Mr. Bolton tell by looking at the hive if it has 12 or only 8 frames of brood? Another objection to the Heddon hive. The thumb screws tighten with wet weather, and in handling them the screws are liable to break off, in which case you have to bore a fresh hole and put another screw in. Again in extracting, I could extract four full size frames to every six half frames, so again we lose time with the Heddon hive. A lot of labour

is expended to make Heddon hives yourself. Better to buy them; but then look at the cost of them compared to a Long Idea hive. Mr. Bolton says he will not be hard on the Long Idea hive. The boot is on the other foot, a man cannot be too hard on the Heddon hive to the struggling beekeeper, who has to buy them. I maintain that my hive will give as good satisfaction as any other hive tried alongside of it, and is the cheapest for the struggling beekeeper. I do not make these hives for sale, though I sell a few now and again. I recommend anyone going in for them to buy off some manufacturer advertising in the *A. B. B.* I am not a believer in having my out-apiaries too far apart. In my locality $2\frac{1}{2}$ miles apart suits me, and every $2\frac{1}{2}$ miles will support close on 100 hives, so you see Mr. Bolton, I have not a great distance to go. I have three out-apiaries along the same route, the furthest $7\frac{1}{2}$ miles away, and I pay them fortnightly visits, and in the beginning of the season with the help of an assistant, I can work the three out-apiaries in one day. I equalise my hives if, not for the sole reason of having them of equal strength. It is for the reason that on visiting an out apiary, I look into one or two hives, and if they are O K, I reckon the rest are all right, and if I fancy anything wrong with a hive it is the work of a moment to open the hive and see what is up. With the help of an assistant I will pretty well equalise 100 colonies in one day. The way Mr. Bolton does would take much longer. Mr. Bolton to look at his brood chambers has literally to pull his hive to pieces. I simply raise the lid and pull apart two frames in centre of brood nest. No Sir! there would be too much time and trouble lost with me looking after Heddon hives. In out apiaries I use Italians and Hybrids, and as a rule I have to divide the hives for increase. They won't swarm for me in the long hives, unless I choose to shut them up on ten frames. I should have said that when Mr. Bolton is equalising his hives, he

has to take his hives to pieces and look at the frames to see that he does not carry the queen to the hive he is strengthening. Oh no! I guess I could give Mr. Bolton a start, him to equalise 100 Heddon hives, me to equalise 100 Long Ideal hives. Very seldom I raise a frame to find the queen. I have some one with me. I take the cover off the hive lift out two back frames and as I slide the frames towards me while in the box, I look on my side while my help-mate looks on the other. It does not disturb the bees or queen so much as taking out a frame, and it is quite easy to see her as a rule quietly walking over the combs as if the hive was never opened at all. I like your notes in the *A. B. B.*, Mr. Bolton, and only wish you would make them a little longer, and send them in oftener, but when you put the Heddon hive before mine I can't stand it. I'll argue it out with you while I have a leg to stand on. One thing I did not mention, I fill up my hives the beginning of every season with frames with starters of foundation. I do not use wire; in place of wire I have a narrow stick nailed length ways across the middle of the frame. It makes the comb firmer in hot weather; the wires sag too much. Then again, as I melt my surplus combs down at the end of every season, they are easy to cut out and leave a starter to do for next season. Did you ever try the frames with the stick across, Mr. Editor, if not try a few and see how much firmer it makes the frame. When the frame is filled with comb, the middle stick is covered up completely.

HONEY FLOW.

This is without exception one of the heaviest honey flows ever been round this way. As a rule at this time every year the flow slackens off, but at the present time it is as brisk as ever. But I must conclude or you will think I want too much space this month.

We again call attention to the Muswellbrook Convention, which will take place on March 2 and 3.

THE HONEY FLOW IN THE HUNTER DISTRICT.

While agriculturists and graziers are congratulating themselves upon a season which has not been surpassed in productiveness for many years, and comparing its favourableness with the dry and barren summer experienced last year, beekeepers are making quite opposite comparisons. Last summer was perhaps the best season ever known in the district for honey. One beekeeper says the production of honey averaged 2 cwt. all round from his hives, and from one box he took no less than 450lbs. of honey—a truly marvellous yield. This season he estimates the probable total yield from his apiary at not more than 60lbs per hive. Last winter proved a very favourable one for bees, and very few losses were recorded. However, the honey flow did not commence in the spring as it should have done, and many hives were affected with paralysis—the greatest enemy at the present time of the beekeeper. However, with the advent of rain in December, the honey flow came on, although very scant, and the disease was checked. Very little is known of this disease, and the fact of it ceasing to affect bees when there is a good flow of honey, suggests the possibility that it is promoted by the bees feeding on some indigestible food—perhaps a certain kind of pollen, which may cause the intestines of the insect to become the breeding ground for the bacillus of the disease. Prior to the December rain, lucerne flowered in a very faint-hearted way and blossoms subjected to the closest scrutiny under the microscope failed to show the least sign of nectar, although plucked for observation in the early mornings, and before the bees had visited the flowers.—*Maitland Mercury*.

A German writer asserts a virgin queen may be fertilised, even after beginning to lay drone eggs.

PAUPONG.

W. REID, JUN.

December, January, and part of February have been splendid for honey, the best flow I ever saw last week, but Friday last brought about a change. Rain came on and up to date we have had seven inches of rain. No doubt the honey flow will come on with fine weather. I see your correspondents complain of poor prices of honey, dull sale, &c. I wish some of such beekeepers would trust me to sell a ton or two of really good honey well got up. I can sell more than my own. Do such push the sale of their honey? I accidentally fell in with a stranger; he had charge of a store for a week or so (the boss was absent.) He had some timber suitable for hive making. I enquired the price, we agreed, I was about to hand him the price, when he suddenly enquired what I wanted the timber for I said, to make hives. Well he said, turning on his heel, I won't let you have the timber, and if I did you could not sell the honey. I replied how do you know. Well, he said, I am a beekeeper residing some 40 miles from here. I can't sell my honey. I said how much honey have you got. He said four 60lb. tins. I said, did you ever offer it in small parcels. He said no. Did you ever offer it at all; he replied no, my neighbours know I have the honey for sale. I want £1 cash for each kerosene tin, which contains 60lbs of honey. I wanted honey, I reckoned the honey £1 cash, 40 miles to travel 40 back, 80 miles, I could then sell it at 5½d clear in pickle bottles at 1/- per bottle. Can't do it, perhaps the honey when I get it will not be any better refined than its owner. I gave it up. If we want to succeed in the sale of our honey we must pack it up in neat parcels to suit our customers and push the sale; be truthful as regards its quality. I have sold honey in the Burrowa, Harden, Murrumburrah, in the Cootamundra towns as well as our Monaro district. I found honey a very easy article to sell. If my honey was thin I said so, if dark the same. I sell my

honey here at 3^d per lb. (60lb tins) ; in pickle bottles, 2lb tins, and larger tins at advanced prices. I never sell at low rates any where. I am about the dearest seller in our district. My idea is get your honey up in suitable parcels, and neatly.

For leaky hive covers, take equal parts of paint oil and bees wax, melt, thoroughly mix, apply whilst hot to cracky hive covers with paint brush. Hive lids should be dry and hot from sun rays, rub this mixture well into cracks, then give a coat of white paint. I am afraid of Sparrow, enough.

CORRESPONDENCE.

R. K. H., Murrurundi, Feb. 10, 1898 : I trust the honey season has so far been a favourable one with you. I have not done so badly, about 150 lbs. per hive. The apple tree spoilt the last extracting, making it dark and strong, now the stringy-bark is coming in and I hope for another good extracting unless dry weather regularly sets in.

J. L., Grassdale, Warri, Feb. 2nd, :—Honey season broke off in a week or two after starting, everything is so dry ; buds began to drop off, all owners of sheep and cattle are leaving with their stock and travelling from 30 to 100 miles for grass and water. It is a very severe time for all. Hoping you are well.

A.W., New Plymouth, N.Z. :—I like your paper, but my bees for years have been very cronk. Bad seasons, foul brood, etc., etc. ad lib, down to eight hives. Present season much improved, by I think rising hives off ground ; damp breeds cold and cold low vitality, and Foul Brood.

Mr. J. Gale, Queanbeyan:—The worst season hereabouts I ever knew in my 45 year's local experience for honey. A good flow in the spring, but the heat waves which followed cut off all blooms, and trees of the honey-bearing kinds, have not blossomed since. They may yet after the present rains ; but if not, I shall have to feed my 40 stocks, from

none of which have I yet taken a pound of honey this season. In ordinary years I should have extracted about three tons.

J. S. Benalla:—I have very little bee news as very few keep bees in this district. Owing to the very dry season we have had, this has been a very bad year for honey. There was very little surplus honey though the bees seem to be healthy and fairly strong. I have only extracted 130 lbs from eight hives, and do not think there will be much more this season. We had a good fall of rain the other day, which should cause a fair autumn flow.

J. A. B., Cumnock:—I see by the *Bee Bulletin* that I am not the only one troubled with Dragon Flies. But there are not many here this year. The best way I know of to kill them is with a bush about 3 yds long. When the leaves wear off the twigs you can hardly miss the flies. Beekeepers should shoot the Australian bee-eater bird, as they destroy a great lot of bees. I have seen them catching them around my own apiary. Here is a good receipt for making blutcher boots waterproof and also to make them wear well. It will make them smooth and shiney. Take one part mutton tallow and two parts beeswax, melt together and rub on the boots, then hold them before the fire and rub until they absorb the mixture. Mr. Rien, I have not seen wag-tails catch bees, but I have seen that bird Australian Bee-eater catch them and also catch dragon flies.

Carniolan, Burrowa :—I notice several of your correspondents are opposed to a Foul Brood Act or to have it at least confined to those districts infected. Well I am one on their side, as there is enough expense already attached to bee-keeping without a hive tax. Foul brood is unknown in this district, and I think the only person the Act would benefit would be the inspectors, who would not care whether the disease increased or not so long as they drew their salaries. Adulteration seems to be the next question. Well, if beekeepers cannot score a conviction against some of the city

adulterators, the best thing they can do is to get the benefit of adulteration themselves. How? Perhaps you will say. Why get glucose and fix up their honey before it leaves the apiary and see how that will act. We are having a good honey season in this district, chiefly from yellow box, or at least from what the ringbarkers have left of it.

J. B. Wodonga, Victoria :—I received the labels alright and was very well pleased with them. I tried your paste for sticking labels on tins ; they kept on well. I also tried to rub the tin with whiting. I saw it in the A. B. B. It answered well, and then I tried sand paper, number 0, and they all answered first class. I think I will keep to the sand paper, it is the cleanest and quickest. Thanking you, sir. I am just back from a trip to Bethungra and back about 14 miles. It was a very hilly country. I took tins and pickle bottles. For 2lb. tins I got 9d at the stores and 1/- for one ; 2/6 for three. I took about £3 sterling, and I sold two 60lb tins for 3½d. I am going to take another trip next week. I am extracting at present from apple tree, it is very nice honey but very thick. I think it is over now (the flow I mean,) the bees are very cross and robbing. I clip all my queens. I have found several young queens and laying well lately in hives that had queens three seasons old. I don't think they swarmed, for they had too many bees. I am troubled with the little black ants. I have tried to poison them, but can't ; boiling hot water is the best I can find. Let me know in your next. There is not much doing with the bees at present. It has been a very trying season, no rain for months. The red box came out well in November and kept up a good supply for over a month. The yellow box and red gum was very bad ; the latter is showing well for next year, in fact if I am daddy enough to keep my bees until next year we will have a good season, with a moderate amount of rain. I have over a hundred swarms now in good order. I never lost a swarm through the

winter, but had a very trying time. Right in the middle of apple blossom, we had a week or two very cold ; the bees and brood would have perished if I had not fed them. They came through all right and I got sixty 60lb tins up to Christmas night, but no more since. There is a lot of honey in the boxes now, but I am afraid to take it. I think a lot of spring dwindling is starvation, but not at all times. I had a swarm two seasons ago that was very bad with it, I gave them fresh honey from a healthy swarm, and it stopped at once, I never saw it with them since. I have introduced a young queen and that stopped it. I took a pure queen from a foul brood hive and introduced her to a healthy hive ; there is no sign of the disease and they are very strong. It will take a long time to be daddy enough to solve all the knotty problems in beekeeping. I could write all day, but it would be tiresome for you to know all my grievances. I know that the learners are the most troublesome. I have taken the advice given by some of our bee brothers to sell your honey locally if possible. I have sold 20 tins near home, and intend to sell it all near home before next honey season. But, Mr. Editor, what have those beekeepers got to do with their honey that are pushed for cash and no chance to sell at home. I only sent three tins to Melbourne once (180lbs). I never got anything for it—man of straw. I have received the journals very regular of late. Wishing you a prosperous year.

We have found honey mixed with a little tar-tar emetic a capital thing to destroy ants. Straw scattered over the ant hills will drive them away.

G. S., Ngapara, Otago, N. Z. :—Season very dry. Surplus honey almost nil.

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E. J. M., Marrar Siding, Feb. 2nd :—
Just a line to let you know that I am still living, although the drought is enough to kill anyone. We have had a very fair honey crop so far, but there is a pollen famine just now. The queens have almost stopped laying, only a few eggs to be seen in one or two frames, and the hives are getting very weak. Is there anything that I can give them as a substitute for pollen. Please let me know.

Try Pea Meal.

W. Pridgen, in *Southland Queen*, says :
The first cross of a pure Italian queen to a black drone does not always show in the markings of her progeny; and that the black blood almost invariably crops out in the next generation, if the young queens reared from such a mother, mate Italian drones. When the progeny of a queen is not uniformly marked, about the same per cent of her royal daughters are usually darker and are more liable to produce dark bees.

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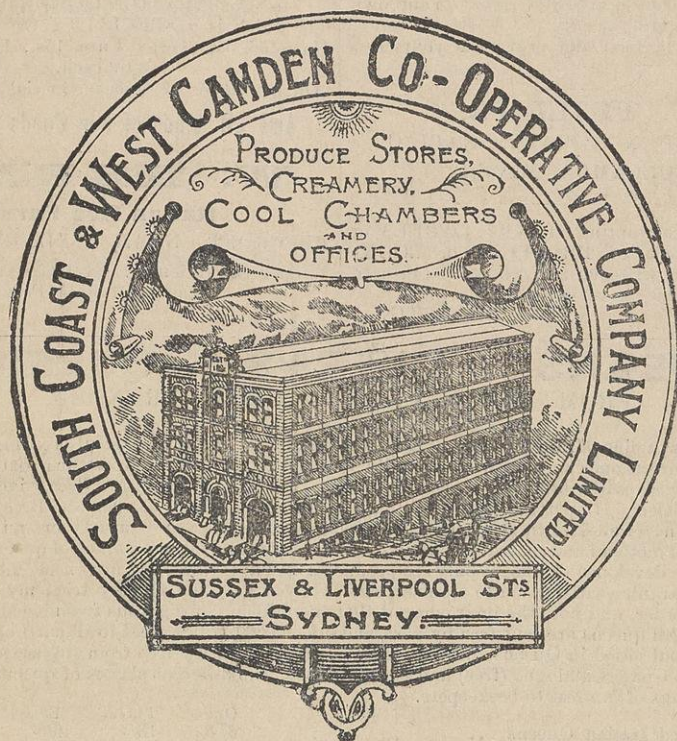
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