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**T H E**  
**NEW ENGLAND**

**APRILIAN**

DEVOTED EXCLUSIVELY TO

**BEER CULTURE**

**Published on the 15th of each Month.**

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**APRIL, 1883.**

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**PUBLISHED BY**

**W. W. MERRILL,**

**MECHANIC FALLS, MAINE.**

ENTERED AT MC. FALLS POST OFFICE AS SECOND-CLASS MATTER.



# THE New England Apiarian.

Devoted Exclusively to Bee Culture.

VOL. I.

MECHANIC FALLS, ME., APRIL, 1883.

No. 4.

## THE New England Apiarian,

PUBLISHED BY

**W. W. MERRILL,**

P. O. Box, 100, Mechanic Falls, Maine.

Published on the 15th of each month.

**TERMS, 75 CENTS PER YEAR IN ADVANCE.**

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W. W. MERRILL.

MECHANIC FALLS, ME.

### Correspondence.

For the New England Apiarian.

#### The Half Pound Section Craze.

J. B. MASON.

Bee-keepers are constitutionally a progressive people, and how to push ahead seems to be their uppermost idea ; It strikes me though, that in some matters they are trying to progress to fast, and that ere long they will find they are retrograding. It may be for the interest of a few of the leading honey producers to force the 1-2 lb. section on

the market, but I am fully satisfied it will be a great disadvantage to the masses. A continual change of impliments and supplies for the apiary looks to me like progress backwards. Bee-keepers have an idea that they must keep up or if not lead, and this idea is so strongly fixed in their minds, that when a new thing comes up, they will at once throw away all those fixings that they have accumulated at heavy expense and which have served them well in the past, in order that no one may beat them in the race with something new, and they take up with the new things simply because they are new, without testing it at all, or even at times stopping to consider whether it will prove of any real value or not. Especially is this the case with small producers who are really the ones who can least afford it. Beginners in bee-keeping start well, and procure a stock of standard goods and if they would be content with them, all would be well, but ere long something new turns up and they think of course they must have that, and get it without waiting to see whether those of experience recommend it or not, and when they find they have been sold they condemn the business as a non-paying one and all supply dealers as humbugs and frauds. The constant and continual attempt on the part of some supply

dealers to get a little more trade by endeavoring to introduce a new but untried thing, discourages beginners, for it causes them to imagine that supplies are constantly changing form, and that they will have to alter over their crates and frames at large expense every season, which changes eat up the profits at least, and sometimes causes a positive loss. Some few years ago the 1 lb section was introduced and proved to be a good thing, and bid fair to hold the first position in the field, both in form and size. It was and is good enough, it is small enough to fit the pocket book of the most economical and large enough so that the bees could deposit their honey to advantage. Just as the country was ready to adopt it as a staple article that had asserted its rights, proved its merits and had come to stay as the boss, some one concluded it was best to try and make the consuming public think they needed a 1-2 lb package (the next will be a teaspoonful) and put a few on the market. If they had put a price on them that would have left a margin of profit, all would have been well, but the price at the start was made so ridiculously low that no one could produce honey in them except at a loss. As the matter now stands no one can be found who will father them, and as yet very few have been offered for sale, and no one so far as I can learn advises their adoption, even the dealers do not like to handle them, and Frank L. Ripley, a large commission merchant, says "we have noted with anxiety the discussion over 1-2 lb sections, we find the demand is credited to come from Boston, and we wish to set ourselves right with pro-

ducers, in the matter. In the first place we want it distinctly understood (he says) that we do not advise any one to produce 1-2 lb sections exclusively; no producer can afford to do so. One lb. sections are small enough to please 95 out of every 100 people, and producers must respond in that proportion"

The above ought to be read by every honey producer in the country, coming as it does from one of our commission houses and it must show the pulse of the consuming trade. I think we as honey producers should not advocate a continually decreasing size of package for our wares. In the first place there was no demand for the 1-2 lb. section; both dealer and consumer were perfectly satisfied with the pound package, and would have so continued had not some foolish experimenter started the 1-2 lb. racket. All producers of experience well knows that honey cannot be gathered anywhere near as cheaply in 1-2 lb. as in 1 lb. sections and for that reason it looks to me as though they were standing in their own light in attempting to force them on the market, at the slight advance in price at which they are offered. If the object is for the large producers to try and drive out the small ones it may work but if that is the case a combination of small producers should be made at once, to take common cause both against the diminutive section, and the aggressive monopoly. Honey producing may in time be driven into the hands of specialists, but it will be a long day before the many who own small apiaries and derive much comfort and pleasure from working therein, can be driven out of

the business (no matter whether it pays them or not) and the bee-keepers on a large scale will find it to their own advantage to make no combinations except those which will insure to the profit and benefit of those who are not so largely engaged in the business. We the small bee-keepers can sell our honey at a profit, in 1 lb. sections anyhow; let us then stick to them ourselves no matter what others may do, and discourage the use of anything smaller with all our might and strength. United we are a power by reason of numbers. Let us then be united on this point and we can rest assured that if we are so united we shall surely carry the day, and drive the 1-2 lb. section into the kindling wood box where it really belongs.

Mechanic Falls, Me., Mar. 30, '83.

For the New England Apiarian.

## New England Apiculture.

BY E. A. THOMAS.

### Chapter III. April Management.

A short time since, I received a letter from a bee-keeping friend, who wished me to tell him the proper time to place his bees on their summer stands. This would be almost as difficult to do, as to tell him when the bees would gather the first honey, as circumstances, season, location and condition of the bees may vary the time. It is not my intention at the present time, to give any definite time without modifications, which would only serve to lead the beginner astray, but to give such instruction as will enable any bee-keepers, after considering all the coll-

aterals of the situation, to judge for himself.

In the first place, I advise keeping bees in the cellar as long as possible, that is, as long as they will keep quiet and do not scatter out too much. The reason for this must be apparent to all upon considering the very changeable weather of New England in early spring; warm pleasant days with the thermometer running up to 60, being often succeeded by cold, rough, windy weather, which rapidly depopulates the strongest colonies. Not until everything indicates permanent warm weather is it safe to take bees from their winter quarters, PROVIDED they can be kept quiet, and by following the instructions given last month, I think no one will have any difficulty in keeping them so. I think it is a very safe plan to wait until the willows blossom, as previous to that time the bees can find but little or nothing to do, and it is better to keep down their ambition until such time as it is needed. In cases of improperly constructed cellars, it may be advisable to take them out at an earlier date; of this, however, each bee-keeper must be his own judge, and of the two evils, choose the least.

Assuming the bees to be all on their summer stands, what is the next indication to be met? If we have been successful in carrying our bees through to the present time, and they are all strong and bright, can we sit down and fold our hands and shout, as some have done "Hallelujah, 'tis done?" Wait! there are many rough windy days coming yet, when men go round with their overcoats on, although the sun shines

out warm enough to heat up any object which can retain its heat. The sun shining on the hives warm them up, until the too devoted bees are induced to venture out, only to be swept down by the cold northern winds. Thus scores and scores are lost, until the scores become hundreds, and the ill fated colony slowly, but surely, grows weaker and weaker until, as is only too frequently the case, but a mere handful is left in the home of the once prosperous family. This is what is called spring dwindling. Too often have I received letters describing just this state of things, with one modification that the little handful was not always left. But, you may ask, is there no remedy for this state of things? To be sure there is, else my labor in writing this article would have been in vain; and I will endeavor to give such instructions, that, if carried out, will effectually prevent this wasting of colonies in spring.

On all days when it is deemed unsafe for bees to venture out—and there is opportunity for exercising good judgment here—stop up the entrance with wool, which will permit air to enter the hive, while at the same time confining the bees. Place a good large shade board in front of the hive, large enough to shade the whole of it. During the middle of the day go round to all the hives, placing the ear against the sides; if you discover a rapid, loud hum, you may know they will not stand confinement much longer, and should liberate them at once. Now and then a colony will not stand confinement in this manner, and such should be watched with a great deal of care. The majority, how-

ever, will seldom get uneasy, if plenty of water is given them in the manner described last month, and the hives are kept shaded from the sun; I have kept them so confined for a week at a time, then tiding them over a severe spell of weather. This method, while effective requires the exercising of great care and watchfulness, or more injury than good may result. To those who have not the necessary time to watch their bees and liberate them when necessary, I would recommend the placing of large shade boards in front of the hives, which will keep the bees in until it is sufficiently warm outside for them to fly without getting chilled, and on many cool days prevent them from leaving the hive at all. When they begin to fly, the boards can be quickly turned down in front, where they can remain until needed again.

Those who wish to shut their bees in, should do so at night, or early in the morning after they have had a fly, for, no matter how clear the sky may be at night, or how pleasant it may be in the morning, before eleven o'clock clouds may come up thick and fast, and the rising wind blow cold and chill from the northwest, so sudden is the change of weather here in New England. So it is best to be on the safe side and keep them in every day until about eleven o'clock during the first part of the month. By that time of day we can judge pretty correctly as to what the weather will be for the remainder of the day.

See that the bees have plenty of honey, don't try to economize too close in this direction, for I assure you it will be a penny wise and pound foolish policy.

Bees at this season consume much more honey than during their winter's sleep, and as it is desirable that they rear as much brood as possible to take the place of the rapidly dying off old bees, thus preventing the depopulation and weakening of the stock, they should not be stinted in quantity or quality of food. Be liberal to them now, and later on in the season they will in their turn be liberal to you.

(TO BE CONTINUED)

Coleraine, Mass.

### Hints in Bee Culture, Part IV.

J. E. POND, JR.

It's funny isn't it how great a diversity of opinion there is in the matter of frames? The advocates of the standard L frame, and let me say to friend Martin, that there is but one STANDARD L. frame, and its dimensions are 17 5-8 by 9 1-8, —are coolly informed that it is too shallow to be safe to winter in. I wonder if these parties who assail that frame, have ever tested it? I have and in speaking in its praise, I give results of my observation, made during a period of 16 years use of them, side by side with other and deeper frames; they winter well with me, and even during the last winter, which I think may be said to be as hard on bees as any for years. I have not lost a single colony. In order to test them thoroughly, I last fall put my bees in single walled hives, none on over 7 frames, and one on only 4, to-day, March 26th. they are all alive, flying briskly, with no signs of dysentery, and all with much as brood as I care to have thus early in the season.

They have had but one day they could fly,—that on Feb. 17th—since they were fixed up for winter, they have been kept on their summer stands, with no outside protection, save a hedge of osage on the north and west sides. These frames are a success with me, and I desire to say to those who fancy they are not give us facts; we can theorize for ourselves. If you here any experience prejudicial to the L. frame, let us have it, but till we get such experience, we will take cognizance of the fact, that those who have fairly, and with an unprejudiced spirit, tried this frame, speak in its favor, and we will also take cognizance of the further fact, that this same frame, notwithstanding the tremendous opposition it has met with, has so far won its way in the estimation of practical and successful apiarists, that to-day more of them are in use, than of all others combined, and whenever changes are made, (and they are being constantly made) such change is too and not from this same shallow inferior standard L. frame. Why then have we not a fair assurance that it will ere long be the standard of the world? If any inference can be drawn from these premises, it is in favor of a standard, and that the standard L.

I am sorry to see that friend McLaughlin likens myself and others who thought he erred in the matter of feeding, to a lot of disaffected bees. I certainly had no desire to sting him, my simple object being to urge him and all others to "avoid even the appearance of evil. I feed whenever the occasion requires, but I am careful never to feed sugar, at a time when it can be any



possible means contaminate or adulterate my surplus honey. If bees made honey, as friend Mc Laughlin seems to think, feeding would make no difference, but it is fully proved, that the sweets they gather are unchanged by them, and are deposited in the cells in precisely the same chemical condition in which they obtain them. I grant, that a large quantity of pure granulated sugar syrup, may be mixed with clover honey, without detection, and to the taste of many the addition would make the substance preferable to the clear honey, but when one buys honey, he is apt to prefer it as the purchaser did his milk, when he asked his milkman to bring his milk and water in separate cans as he could tell better the quantity of water he wanted, than the milkman could. Show me the apiarian, who acknowledges that sugar syrup is preferable to buckwheat honey; I never heard of such, still they may exist, but even if they do so prefer the fact is still patent that honey is honey and sugar is sugar. Feeding nights or days can make no possible difference in that respect. We have a reputation for honesty and integrity to keep up, and we can only do this, with our honey, by avoiding any adulteration. In the month of April much brood will be found in our hives, and as a consequence vast quantities of stores will be used; we must ever bear in mind that the instant there is a lack of food in the hive, the production of brood at once ceases, consequently we must see to it that a constant supply of stores is kept with the bees. This can best be done when we have the means, by uncapping a few cells each day, by this means the supply is

continually kept up and that in not to large a quantity. If there is no capped honey in the hive, we should feed a solution (not very thick) of granulated sugar. If we depend on capped honey for food, we should keep a daily supply of water where the bees can get it without flying out, but where we feed sugar syrup, water enough can be obtained from that source for all the needs of the brood. I desire to call this matter of feeding to the attention of all, for if at this time the queen should discontinue laying eggs for a day or two only, we shall find our colonies, when foragers are wanted, so far short of them, as to make a great difference in the season's profits. All upward ventilation should be shut off now, that the heat generated in the hive may be retained; it will be needed to keep the hatched and just hatching brood alive, and we need have no further fear in regard to frost; which the ventilation was intended to guard against. The Moth Worm will soon begin to make its appearance, and we should carefully watch for it, and destroy as soon as seen; each worm now killed will stop the production of thousands of eggs, later in the season, and by killing all we may prevent some colony from being destroyed. Keep the yard around the apiary, clean and nice, and where a hive sets up several inches from the ground, place a slanting board from the entrance board to the ground, so that the laden bees may enter into the hive easily, and in case they fall to the ground when heavily loaded, they can crawl up, and in, without being obliged to take flight in order so to do. By this means much labor will be saved

to them, and a very appreciable gain made in the amount of stores they deposit. Make everything for the fast approaching honey season, so that when it does come you will be able to take full advantage of it, and not be found napping once. "Procrastination is the thief of time," and as much so to a bee-keeper as to any one, so it behoves us all to be ready at all times, for a flow of honey, for the seasons are capricious, and we can hardly foretell when to expect a good or poor yield, but if we are ready and waiting we shall have the pleasure of being able to take care of whatever nature sees fit to give us.

Foxboro, Mass., April, 1883.

For the New England Apiarian.

### Reply to "Mechanic," on Bee Hives.

DR. WM. MC LAUGHLIN.

Mr. Editor:

In the last APIARIAN there is a long article purporting to be a reply to me, on "tall hives" from someone who did not dare, or was ashamed to sign his real name. Instead of giving the readers of your valuable journal any basis for his ambushed attack, he goes off in a whirl of of misstatements, and constructions. Now I am always willing and glad to have my statements or opinions put into the crucible of candid criticism and weighed in the balances of truth and justice, but is it hardly courteous or honorable in any one who finds fault or makes charges without first quoting my language or knowing that the reader may be familiar with the article he seeks to criticise, so that the reader may decide impartially, and do me

justice. And now, Mr Editor, I cannot better show my defence, and enlighten the readers of the APIARIAN, than by quoting my article entire, as it appeared in the Home Farm, of recent date, and then all can draw their own inferences without "Mechanics" intervention.

I notice that Bro. Torrey, in his article on wintering bees, recommends the use of tall hives, so that the bees may store sufficient honey directly above the cluster to support them through the long winter and spring. Bro. Torrey is a veteran bee-keeper, a man whom I honor, whose judgement I revere. Bro. Hoyt of Ripley, a live and successful bee-keeper and queen breeder, also makes a clear and conclusive argument in his article on wintering bees, to the same effect, and gives it as the first principle of safe wintering. He says, "we must make our hives tall enough to allow a winter's stores above the bees. If our bees are allowed to work according to their natural instincts, they will store their honey in the top of the hive, clustering, on the approach of cold weather immediately below the honey, then as they use the honey the heat from the cluster will enable them to move up until the top of the hive is reached." My own experience and observation tally exactly with those I have cited. Ever since the days of Langstroth, many bee-keepers have adopted shoal hives, with long shallow frames, for what earthly reason I do not know. No wonder that wintering in such hives is so hazardous in our State. Such a form is neither natural nor handsome, and I firmly believe the day will come when the shoal, low hive will be

a thing of the past, and an upright, natural hive will be used instead.

I am using hives eighteen inches high and twelve inches wide and twelve inches square, horizontally, with frames to correspond. I have no difficulty in manipulating or removing them. There are two places for entrance and exit, at the bottom and midway. The hives are double walled, with a dead air space of one-half inch. The comb extends from top to bottom, and the bees cluster beneath their winter's food in the late fall, and by a law of their being, will crawl upwards as fast as their needs of sustenance require. They will not, therefore be obliged to crawl sidewise and perish with cold or starve, with honey enough in other parts of the hive.

If I were to adopt any other form of hive, instead of making it shorter, I should make it three feet high and eight inches broad, and take frames out at the side. I think a hive of that proportion, with honey filled down half way, and comb the remainder, would winter our bees successfully on the summer stands without any protection whatever. I hope my brother bee-keepers will study this subject and see if a feasible, natural and comodious hive may not be devised which shall supersede anything yet discovered."

There! Mr. Editor, what is there in that which should call forth such a shower on my head?

Harmony, Me.

For the New England Apiarian.

### Enemies of Bees.

W. W. DUNHAM.

For the past few weeks I have noticed the entrance blocks to my hives, have been disturbed or removed entirely and it has been a source of no little wonderment to me as I knew the bees could not have done it of themselves. One day last week as I going out to my bee stand I discovered a black and white gentleman, bearing the euphonious name of skunk, busily engaged in picking up the bees in front of a hive. He did not pay any attention to the proprietor of the apiary but I think I used a little ceremony as he did, for picking up a stick I dispatched him on the spot. Grape View Farm has one skunk less but if my honey don't smell of Eau de Cologne or some other essence I shall be glad.

I have looked over part of my bees and find I lost 5 colonies out of 23, I had hoped to do better but when I hear of so many losses by others, am thankful that my loss is no heavier. It has been a hard winter for bees and within the small circle of my acquaintance I can number no less than twelve, owning from one to a half dozen colonies, that have lost all but they are mostly black bees, left out without protection. I am getting ready for another season and believe we shall soon be able to make up all our losses and reap a rich return for all our labor. Grape View Farm, North Paris, Me.

For the New England Apiarian.

## My Experience in Bee Keeping.

G. W. WILLIAMSON.

I began bee-keeping in the spring of 1879: I started out with the intention of making it my only business. I had previously satisfied myself by reading books and journals published in the interest of modern bee-culture that the business was practical and profitable when rightly managed. I can say now after these years of practical experience that I was not deceived, that I have been better paid than I possibly could have been in any other business. I have found that I can secure about 60 lbs. of surplus per colony that is from every colony that I can have booming full of bees by the 1st of June. To do this I stimulate early breeding by feeding candy made of a good article of sugar and about one fifth part flour; most bee-keepers know how to make this candy, it is less trouble to feed them syrup, to feed this candy, pour it into pans while warm, any small shallow pan, pie pans do very well, turn a pan of candy on the frames over the cluster and the bees will soon be at work on it, the moisture rising from the bees keeps the candy moist, if fed in cakes without the pan it soon dries so the bees can't manage it so well. Another reason why I like candy it causes less excitement than syrup; I have fed syrup when the weather was too cold and wet for the bees to be out yet they would rush out in great numbers. I suppose that as soon as the first bee came from the feeder with a load of syrup, many of the bees not yet used to the feeder started out to see

where it come from and the weather being bad many were lost. Here feeding done much more harm than good, hence the unfavorable reports and objections to spring feeding with candy, there is none of this, the bees work on it, carry it down and store it in the combs without any apparent excitement, and they soon have all the brood they can care for. I usually put my bees down on four or five frames in the fall then in the spring I take out one or two more and close down to three frames. I use the L frame and give each colony about two lbs. of candy, this will last a long time and perhaps be all the feeding necessary. All I want is full colonies by the 1st of June, say 8 frames of brood and a hive full of bees. I will add empty combs as fast as the bees need them and no faster, if we give combs too fast, there may be more brood started than the bees can properly care for; a cool night causes the bees to cluster, exposing more or less brood to be chilled, aside from the loss of the brood, the bees are likely to become discouraged, therefore we must be careful in stimulative feeding and spreading the brood, if managed right, good results will follow if not much injury will surely done. I have had no trouble in getting my bees up in good condition on 8 frames ready for the beginning of the honey season which usually begins here about the 1st of June. When I put on the sections I raise one frame from the brood chamber right up alongside the sections, this induces the bees to begin work at once. I used to have much trouble in getting my bees, especially Italians to start work in the boxes but

this plan does it. Last season every colony that I worked for comb honey on this plan filled from 48 to 72 1 lb. sections and they did it so much quicker than I expected as to really surprise me. I had no idea of the boxes being so full when they begin to swarm. when on examination I found all full and my bees swarming for want of room. Try it, all you who have had trouble in getting the bees to begin work early in the sections, and report.

Willow Island, West Va.

For the New England Apiarian.

### Ornamenting Lawns WITH HONEY PLANTS.

W. T. STEWART.

Having promised the APIARIAN an article on the above named topic, for April, I shall at once, give a pen picture of a most beautiful lawn, or dooryard; not a theoretical one, but a practical one as may be seen in and around my Apiary. Almost every foot of ground may be made useful as well as ornamental to a bee-keeper. Plant at your front gate one on each side, of Basswood, Maple or Elm, when of the proper height, bend them over the gate in the form of arch and tie the tops together with leather or rope strings, they will in two years be grown to that shape and make a pretty ornament that will last a lifetime; now plant a clump of willows to one side and as the long grow each year, bend and tie them in shape of hoops, ladders, chairs, swings etc., making all manner of novelties which will be much admired by passers by, now at some suitable place make a

ring twelve feet across and plant all around in a ring one foot apart such trees Cherries, Basswood, Maple, Willow, Summach, Sourwood, Poplar etc., all kinds mixed and keep trimmed properly, and in a few years this will be the prettiest summer house you ever saw; in another place in a remote corner, plant a group of plain trees and keep cut back so they will branch close to the ground and make a dense thicket, contrasting strikingly with the fore ground; all the trees named will be forage for bees. Besides them all kinds of fruit trees may be grown where there is room. Now comes the beds of flowers which requires genius and taste to arrange them so as to make the whole thing a novelty, something uncommon. Very common wild flowers will be much admired when arranged so as to be a novelty, for instance make a circle twelve feet across, one ring for the border, another one foot smaller and so on to the center. Now in the center, plant a sunflower; smallest circle next the center, plant six or eight old roots of Figwort; next ring, Goldenrod; next one, Spider plant; next, wild White Aster; next, Catnip or Motherwort; next, Princess Feather; next, Peppermint etc. The idea is to have the highest plant nearest the center and to get a gradual slope from the center to the outside ring making it appear a mound and to have every adjoining ring of a different foliage and different color of bloom. You must see this mound to appreciate its grandeur; everything too is common and a honey producer, beside it needs no green house care, and costs nothing. By reversing the order

of planting and putting the tallest on the outside and so on, it makes a pretty basin. A border of Wild Turkey peas or of Dandelion, thickly set is very pretty. For trellises the Balloon vine or Clematis is pretty, and both good for honey. Many oddities may be had that are very attractive without costing a cent. All the time we are getting up these novelties we must keep still about its being for bee forage but just let our neighbors think the novelty lawn is the point and soon they will begin to imitate it on their own lawns, and our bees will reap the benefit all the same. My door yard is greatly admired by passers by and many a remark from them have I overhead that was not intended for my ears, such as "here is the prettiest yard I ever saw," "Oh! how lovely," "Its just charming," "What a genius Stewart is, he can make a patch of weeds prettier than a green house etc., all this pleases me and if you were to vist this Lawn, you would see that bees enjoyed it too, to their hearts content, then too it is money in my pocket; you know I might go on and illustrate many particulars in planting a novelty lawn but space forbids and I have said enough for you to catch the idea, try it once. Now then besides all this I am making every available spot of ground bring something as bee forage. I have all the fence corners on a thousand acres of land sowed in Motherwort, Catnip, Figwort, Mellicot etc., then I have four acres in Raspberries, and four in Strawberries, with all kinds of fruit trees; although these things pay in fruit alone, yet it was with an eye to the production of honey

that prompted me to go into the business. Besides this I get just as much of the natural forage as any one else does. I shall keep planting more and more until my bees will be in a perfect Eden. We have just finished sowing sixty dollars worth of Alsike clover and will sow ten acres of Buckwheat this season. I have written a great deal on the subject of planting for honey, so you will see that I practice what I preach.

Eminence, Ky., April 1st, 1883.

For the New England Apiarian.

### Ventilation.

J. E. POND, JR.

Perhaps it is not exactly seasonable as the word is commonly used, to write at this time of this somewhat hackneyed subject; but I am inclined to think that more attention is given to a subject, when its needs are the most apparant, and as the close of winter develops the condition of our colonies and "sets us to thinking" of the cause of good or ill luck, and to ascertain the proper remedy if unfortunate, it may be that an article devoted to this very important subject, will prove of interest, and possibly of advantage to the readers of the APIARIAN. The science of ventilation is one to which much study has of late been given, and still it is very little understood by the majority of our people. A current of fresh air passing into and through a room (or hive) is understood by the masses to be all that is meant by the term ventilation; and when the term "upward ventilation" is used, as applied to a bee hive, a vast

majority of bee-keepers jump to the conclusion that a draught of cold air directly through it must be meant, they supposing ventilation cannot exist under any other condition. Ventilation as applied to a room in a house, is brought about by precisely the same means as when applied to a bee hive, and is produced in two ways, viz; direct and indirect; direct by causing a current of fresh air to pass in from below, and out from above; indirect by causing the current to pass into and out of the same aperture, but by different channels. In instance a double chimney may be used as a ventilation means, with a register open into a single aperture at the lower part of the room; the cold air rushes down through one passage, and the warm air up through the other, the current of air being produced by the heat both in the room, and in the chimney itself. Now so far as our dwellings are concerned, the matter is directly under our control, for by means of the heat generated either by stove or grate, we can manage it to suit ourselves; in the hive the conditions are far different; all the warmth created therein is produced by the bees themselves, and the size of the hive whether proportioned or disproportioned to the size of the colony, will to a certain extent affect the quantity of heat generated. Now I will assume that in order to winter a colony of bees successfully, it is necessary that fresh air must be constantly supplied; that this air must not contain too great an amount of moisture and that a steady temperature of about 45 F must be constantly maintained. As it is utterly impossible in our chan-

geable climate to bring about this exact condition of things, we must perforce come as near it as possible. We can keep a hive constantly supplied with fresh air, by the lower entrance only, but if we depend upon this alone for ventilation, we shall be exceedingly liable to wake up some cold morning in midwinter, and find our bees dead, and buried in the ice formed from the moisture created in the attempt on their part, to generate sufficient heat to keep themselves alive. If on the other hand, we so prepare the hive that the fresh air that comes in at the entrance, is after it is saturated with moisture, allowed to pass imperceptibly out of the top, we then have so far solved our problem; the next thing being to keep, as nearly as we can, the interior of the hive at a steady temperature of that degree of heat, which experience has taught us to be correct; viz., about 45 F. How can this be done? Various means to this end have been proved, among which are double walled hives filled with chaff, or some other non-conductor of heat, or within which a dead air space is left; but as this article treats simply of ventilation, I will not discuss this question. To prepare the hives so that the foul air laden with moisture, may pass off imperceptibly from them, without interfering at all with the bees in their efforts to generate heat, we must place some substance on the frames over the bees, which will be sufficiently porous to allow this impure air to pass through it, and still sufficiently dense to prevent any heat from escaping with the air. My own experience has shown me, that a mat of burlap or old carpet,

so placed on the frames as to prevent any of the bees from finding their way above it, and covered with 8 or 10 inches of forest leaves, is as good as anything and perhaps as easily and cheaply attainable. In preparing my bees last fall, wintering them on their summer stands, I put them into single walled simplicity hives, on standard L frames, with no protection except a two inch chaff division board on each side. I covered them well in with burlap on the frames, then put on an upper story and filled it with forest leaves. I believe it is generally admitted that the past winter has been unusually severe, yet I have not lost a single colony, and all are now in good shape, and strong as can be expected at this season of the year. One colony was prepared on but 4 frames, in a 1-2 inch thick hive, with no protection whatever except the packing of burlap and leaves on top; that is to-day in as good condition as any. My hives face the south, and are protected on the north and west by a common osage hedge about 6 feet high. I may be told, that mine is an exceptional case, but I don't believe it, "all the same," for I have always wintered on summer stands, and for 13 years in the same place, and never yet have I lost a colony from a standard L frame; so I conclude, and I feel warranted in the conclusion, that the L frame, properly protected, and ventilated in the manner I have described, is one of the best, if not the very best frames for winter use. I presume if it is possible to so prepare a special depository for our bees, that no matter whether the winter is mild or severe, we can control the conditions of

cold and moisture, to the desired point that experience has taught us is the proper one and in the same can winter our bees without loss; but even if this were possible, the attendant expense would be so great, as to deter the majority from attempting it, consequently they must do the best they can, in a more economical way; and I fully and firmly believe if they will adopt my plan, their bees will so far as the weather is concerned, go through the coldest winters with a minimum of loss. Try it brother bee-keepers and report.

Foxboro, Mass., April 5, 1883.

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## SELECTIONS

### From Our Letter Box.

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Deer Park Apiary,

Claremont, Va., April 13, '83.

Friend Merrill:

As I receive the APIARIAN regular each month, and like it very much, as I am interested in its welfare and hope it will have the support it merits, and in order to make it interesting each month, all bee-keepers should add their mite to its columns, or at least all that are in anyway interested in its success. As you will know we came here to Claremont last fall, and I brought no bees with me, and supposed I could find plenty here, but there are very few bees kept in this section, and all that I have seen were well managed after the style of a hundred years ago. I have been able to obtain only two stocks as yet, as what few have bees will sell none. I have the promise of another one when bees



swarm, and shall do what I can to increase my two, and expect by another fall to have fifteen or twenty stocks. I can hardly tell as yet about honey resources of this section, but think it may be fair, and hope it will be extra. My bees were bringing in natural pollen the 28th of February and have brought in more or less ever since, for the last week they have been gathering some honey from peach blossoms. Apples are now blooming, with many kinds of wild flowers, thus I hope will give them a good share. I put on my first case of sections yesterday. The weather here has been rather wet of late, but it is quite warm now and I am in hopes we shall have good weather for a while at least. Wishing the best of success to the APIARIAN, I remain,

Very truly yours,

S. H. Hutchinson.

To the Editor of the APIARIAN,

Dear Sir:

We have have had a very trying winter on bees in Ontario, and as a result there has been a great deal of mortality among them. Those in single hives left outside have nearly all perished, and a large number of those in cellars and on summer stands packed in chaff. The most of them have died from Dysentery and the strongest colonies seem to have suffered most from it. All pet theories of bee-keepers have been driven to the winds as bees have perished in almost every position. It is better for them to own at once that they do not know the art of wintering successfully. I had ten colonies in double chaff hives which I pre-

pared for winter according to the instructions of the most experienced bee-keepers. I took away all the honey and the combs that had most pollen in them and fed them syrup made of the best sugar. I gave it to them in September so that they took it in and sealed it over before the cold weather set in. In made winter passages in the combs, put stick across the top of the frames, filled the ends with chaff, put on a new quilt and a chaff cushion on top of that. About the first of January one of them, the strongest I had, and one in which I had put a valuable queen in in the fall showed signs of Dysentery. Large numbers of dead bees were carried out at the entrance and almost every day some flew out and dropped in the snow. On January 29th I took this colony into the house, made a frame 4 feet square of lathes, covered it with mosquito net, and set it over the hive taking off the top cushion and quilt, I took out two of the centre frames that were empty and put in two frames of honey. When they had had a good cleansing flight, I darkened the room and allowed it to cool down gradually when most of the bees returned to the hive. Since then they have remained quiet and seem to be doing well. No flight outside was obtained till February 14th. They were thus about three month confined, subject to the greatest variety of temperature, many of the cold dips being exceedingly sudden and severe. So far only two of my stocks have succumbed but the weather still continues cold and more may follow. I believe that for seasons like this some method of giving bees an

artificial flight about midwinter must be devised, or Dysentery will certainly ensue. If a flight could only be secured some time in January, safe wintering might with some confidence be affirmed, but without this no method will be entirely successful.

I. Carswell.

Adelaide, March 31st, 1883.

For the New England Apiarian.

While death has visited many of our pets, the bees, the past winter on account of an unusual cold one, we shall no doubt see that in the long run much good therefrom. Why? one asks; because habit has so much to do with all pursuits, or in other words, if we succeed in any one way, we are quite apt to follow the same road again. I have had calls from a number of bee-keepers for my opinion as to the cause of our death; in every case I find the same trouble; not enough heat retining substance close to the bees. I have seen strong swarms, this last March, all dead with lots of sealed honey within six inches of the cluster on each side, with a good pass for the bees along over the frames and hives, packed in large boxes with hay snugly packed all about and on top, and boxes nicely covered then over the boxes a shed. Now why did they die? simply because there was only a loose chaff cushion next the frames, 3 inches thick and a loose rim about this which allowed all the warmth of the bees to pass off. Now I say here is the cause of the great losses, I am very sure of it. I used to think as many others that if we spread much more than a good woolen cloth over the

frames and a cushion on this with a division board at each side of the cluster that was all needed and that if we spread more over the frames that the breath and warmth from the bees would condense above and melt into water and kill the bees. Now I had a number of test at covering with an unusual amount. Last fall when I packed my hives I was in a great hurry (as I am all the time,) and in some way I left the same cloths and a number of thicknesses of paper on the frames, (and here I will say I kept cushions on all summer.) When I found one swarm dead, I of course looked at the others, I found one that had the summer cloth and 3 thicknesses of paper, and the same good cushion on, and the whole as dry as need be all but a little on top of cushion; the bees were as bright and clean and also the combs as one could ask and not more than 1-2 pint dead bees, this hive had more honey than others with less covering. I also found a lot of young bees. This hive was covered for a long time with snow, which I am much in favor of if the hive is well prepared inside and well painted. Again I looked into my chaff hive and found 3 thicknesses of woolen cloth and one of burlap under the cushion, and as many bees as when I packed for winter, because they were so comfortable that they thought it was only rainy weather that they could not work outside and so kept up breeding as at least must have begun in good season; this hive had double the honey at that time of any other (the first of March.) The entrances to all my hives were only about an inch open and snow was above

all but the first one that the bees died in, for say half the winter, and the first one that died had only one thickness of woolen cloth and a cushion, this was an extra strong one both in bees and honey on 5 frames with division boards. The bees were clean and nearly all up on the combs, and every bit of honey eaten. Now such tests as these tell me to use more air tight covering right on the frames, and not only this but see that a strip of woolen cloth is tacked on the edge of upper story and then fasten to the lower one so that when we press the cushion down it will not lift the rim and let the cold creep in all around, which it is sure to do unless we fasten them together. Right here is where we get the good of a shallow frame, when we use enough close covering to confine the heat (and it will need much more than one would think,) we shall get the warmth just where it should be along the whole length of the frames up where the bees are sure to be, and too, where they are warm enough they will not need more than one-half at least, nor will they cause so much moisture in the hive as where they are obliged to hustle so very hard to keep from freezing. Only think how cold we should be with nothing about us in an open room, as the bees are, so the next best is to get them warm overhead, and all above where the least cold can get in. All the bees that I have looked at away from home were in deep frames, and often there would be honey just below the cluster and the bees starved; one man told me yesterday that one of his were dead in the American hive, and the cap was full of

honey too. Now that was deep enough for any depth of frame was it not? I say we can profit by such cases and perhaps save thousands of colonies in the future, and again we are looking for an extra good season for one reason as the snow holds on so late that we are more likely to have a warm spring, which is the great foundation for the summer. We of course must feed the bees just now, or at least I have to mine, and know that it much more than pays. As soon as I see the condition of the bees as to covering, I at once put on a number of thicknesses of paper on the cloth under the cushions, and feel that no harm will result from it, for we are sure to have some cold nights that will tend to call the bees from the brood unless we supply them with extra warmth, and so we begin to feed we shall have more breeding, and if we can keep it along we may look for very early swarms, and tons of honey instead of pounds. I would say to all that have not experience, not to feed outside the hive, nor get a drop of feed there, for it may cause you a loss instead of gain. I would feed in the comb in the house if possible, then get it into the hive as quick as I could, and make as little stir as possible, and if swarms are weak keep an eye to the entrance, that it may not get robbed. Even old bee-keepers will set hives out where the bees have died and let the others clean up the honey. I would as soon set fire to them.

E. P. Churchill.

Fruit Dale Apiary,

No Auburn April 10th, 1883.

## CRITICISM.

Barrytown, N. Y., March 30, '83.

I regret exceedingly that I feel called upon to say something more against Dr. McLaughlin's methods. I must say I am astonished that the Dr. (a bee-keeper I suppose,) should say that "it is acknowledged by many progressive apiarians, that the honey obtained from the syrup of granulated sugar is far better than that obtained from buckwheat and some other sources."

Now Mr. Editor, I regret to see such bosh in your highly progressive paper, I would ask the Dr., who these "progressive bee-keepers are? "Progressive" in the sense we call the Thurburs "progressive" I suppose. (See Bee and Poultry Magazine for March.)

Dr. McLaughlin was unfortunate in his first article, and in this one he has "tumbled out of the frying pan, into the fire."

The idea of saying, "When bees obtain honey from sugar it is not sugar water."

Does the Dr., suppose bees manufacture honey in their stomachs?

I say when bees carry sugar water to their cells and deposit it there free from any other substance such as nectar, we will have nothing but sugar syrup as the result of their labor.

I can now see that it is through ignorance of the anatomy of the bee which makes the Dr., suppose he is not adulterating when he feeds sugar syrup to be mixed with the honey gathered from flowers.

John Aspinwall.

## Question Department,

conducted by

**JAMES HEDDON,**

of DOWAGIAC, MICH.

All questions should be sent to us by the 1st day of each month so as to appear on the 15th, as we mail the questions to Mr. Heddon, and he has to answer and return them to us in time for publication.

1st. Are your cases for sections entirely of wood, if so how many pieces in the case; you say in K. B. K., they rest on the honey board, if so, what holds the sections in the case, is there any honey board used between the two or more cases.

2nd. Is there a rim that shuts down over your hive and rest on cleats as shown in cut of hive.

3rd. Do you think it is safe to winter bees on 8 L frames as on less.

4th. Which do you think best, cellar or outdoor wintering.

5th. Out of your 500 stocks how many have you lost the past winter and in what manner was they prepared for winter.

J. B. M.

1st. In my case there are 7 pieces of wood and 5 of tin. The tins support the sections. The honey board is used as needed, only between the hive and first case.

2nd. No outside covering to the cases, I tried them that way and found it an actual damage.

3rd. Upon this frame, I have not experimented. I find 8 L frames, safer than 10.

4th. I have experimented here in Michigan, with three double walled houses, one house apiary containing 96 colonies, and three different cellars, and all sorts of outdoor protection, and I prefer outdoor decidedly. We have a dry sand soil.

5th. 40 of my colonies were in cellar; 9 of them are dead; all the others were packed out, and about 10 are dead.

1st. What is the object of your sink honey board.

2nd. Please give a brief description of the same.

3rd. What State do you consider best suited to bee culture.

4th. Can a novice prevent swarming as successfully by running his bees for comb, as for extracted honey.

1st. To keep the bottom of the lower ties of sections always clean. To discourage the queen from going above. To make the upper tier of frames stand on the rabbets, instead of standing on bits of comb, when running for extracted honey.

2nd. It is impossible to describe my hive, honey board, or case, so that one can make others equally as good, unless time is spent, whose value far exceeds the cost of the fixtures.

3rd. I can hardly answer this. There is more difference in location between any State, than between most of the different States. I would not go South. I think the latitude we are in, about right. The quality of the honey is good. There is more difference in the bee-keeper and his fixtures.

4th. No.

## Conventions.

### The Western Maine BEE KEEPERS ASSOCIATION.

The next meeting of the Western Maine Bee Keepers Association, will be held at the residence of W. W. Dunham, North Paris, Me., on Wednesday, April 25th, 1883, at one and 7 o'clock, P. M.

A large attendance of bee-keepers is expected, and it is hoped that it will be an interesting meeting. Any articles sent to the Secretary, will be placed on exhibition and cared for free of charge.

The following is an imperfect outline of the programme: Secretary's report; Treasurer's report; President's address; reading of essays, and discussions. Essays are expected on the following subjects; Bee Pasturage; The Standard Frame; Artificial Swarming; Comb Honey, vs. Extracted, etc., etc.

W. W. MERRILL, Secretary.

Mechanic Falls, Me.

### MAINE BEE KEEPERS ASSOCIATION.

The next meeting of the Maine Bee Keepers Association, will be held at Grange Hall, Dexter, Me., on Thursday May 10th, 1883.

WM. HOYT, Secretary.

Ripley, Me.

The May number of the APIARIAN, will contain a brief report of the above meetings.

### The Senses of Bees.

Sir John Lubbock recently read to the members of the Linnean Society an account of his further observations on the habits of insects made during the past year. The two queen bees which have lived with him since 1874, and which are now, therefore, no less than eight years old, are still alive and laid eggs last summer as usual. His oldest workers are seven years old. Dr. Muller in a recent review, had courteously criticized his experiments on the color-sense of bees; but Sir John Lubbock pointed out that he had anticipated the objections suggested by Dr. Muller, and had guarded against the supposed source of error. The difference was, moreover, not one of principle, nor does Dr. Muller question the main conclusions arrived at or doubt the preference of bees for blue, which, indeed, is strongly indicated by his own observations on flowers. Sir John also recorded some further experiments with reference to the power of hearing. Some bees were trained to come to honey which was placed on a musical box on the lawn close to the window. The musical box was kept going for several hours a day for a fortnight. It was then brought into the house and placed out of sight, but at the open window, and only about seven yards from where it had been before. The bees however did not find the honey, though when it was once shown them they came to it readily enough. Other experiments with a microphone were without results. Everyone knows that bees when swarming are popularly, and have been

ever since the time of Aristotle, supposed to be influenced by clanging-kettles, &c. Experienced apiarists are now disposed to doubt whether the noise has really an effect; but Sir John suggests that even if it has, with reference to which he expressed no opinion, it is possible that what the bees hear are not the loud, low sounds, but the overtones at the verge of or beyond our range of hearing. As regards the industry of wasps, he timed a bee and wasp, for each of which he provided a store of honey, and he found the wasp began earlier in the morning (at four A. M.,) and worked on later in the day. He did not, however, quote this as proving greater industry on the part of the wasp, as it might be that they are less sensitive to cold. Moreover, though the bee's proboscis is admirably adapted to extract honey from tubular flowers, when the honey is exposed, as in this case, the wasp appears able to swallow it more rapidly. This particular wasp began work at four in the morning, and went on without any rest or intermission till a quarter to eight in the evening which time she paid Sir John 116 visits.—The American Naturalist for April.

### Artificial Honeycombs.

An English gentleman, W. M. Hoge, in a long letter to the Pall Mall Gazette, corrects the hypothesis of that the short honey crop in Russia last season was due to the decline in the price of beeswax. The real cause was the failure of the blossoms to secrete as much honey as usual. Mr. Hoge states

that bee-keepers prefer to keep the honeycombs for refilling, instead of selling them for wax, as it pays them better to do so. He says: "In the United States broken combs are carefully preserved and made over into "comb foundation." This is done by running thin sheets of wax through a machine constructed somewhat like a clothes wringer; the rollers instead of being made of rubber are made of engraved metal, which makes impressions on each side of the sheets, exactly like the bottom of the natural cells. These foundations are placed in the frames, and the bees accept them only when made of pure beeswax, and thankful for that much of a start go at once to work to lengthen out the cells and fill them with honey. With the utilization of broken combs for these foundations the export of beeswax from the United States has steadily decreased, while the production of honey is constantly on the increase.

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**Special Notices.**

☞ All articles for publication must reach us by the 5th of each month.

☞ Articles for publication must be written on a separate paper from items of business.

☞ Advertisements intended for the **APIARIAN** must reach this office by the 5th of each month to secure insertion.

☞ We want bee-keepers from all parts of the country, to send us articles for publication, how their bees are getting along, and anything that they think will interest our readers.

☞ Sample copies of the **APIARIAN** will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ If you have not already subscribed for the **APIARIAN**, do so now, and ask your friends to subscribe. As this is the only bee magazine published in the New England States, it ought to be well patronized by all bee-keepers.

☞ We are in receipt of a book entitled the *Bee Keepers Handy Book*, by Mr. Henry Alley, of Wenham, Mass.. It is gotten up in a nice form, and is complete in itself. Price \$1.00 per copy. Every bee-keeper ought to have one.

The *New England Apiarian*, published at Mechanic Falls, Me., is a handsome 24 page journal devoted to bee culture. It is well printed and has as good a list of correspondents as there is in America. Sample copies free. Seventy-five cents per year.—*American Bee Keeper*.

**Honey Market.**

Boston, Mass., April 5th, 1883.

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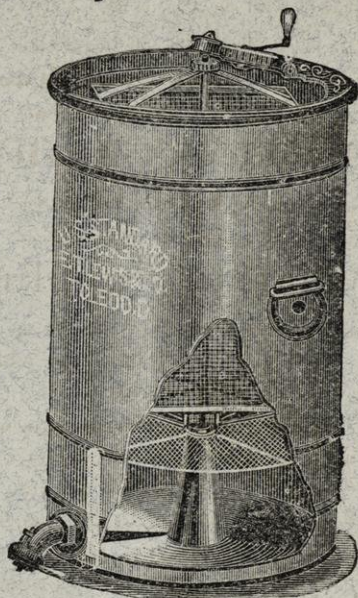
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