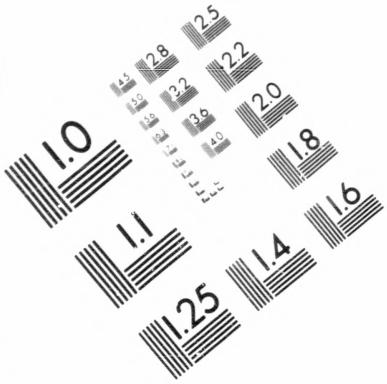

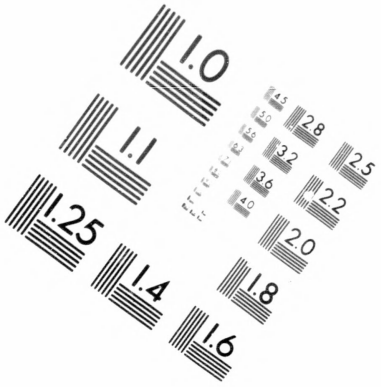

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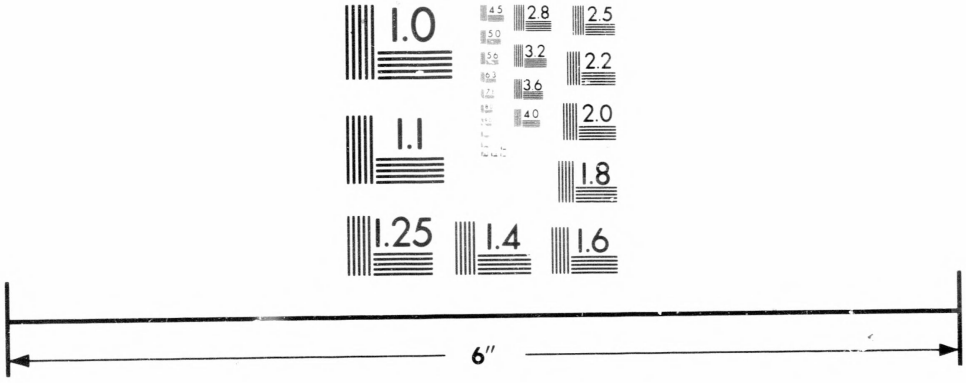


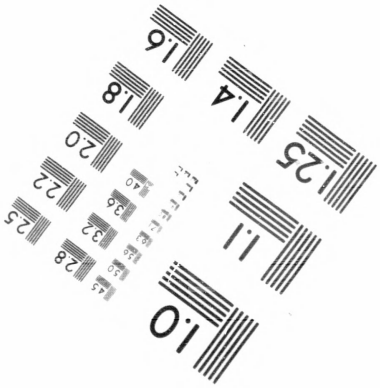

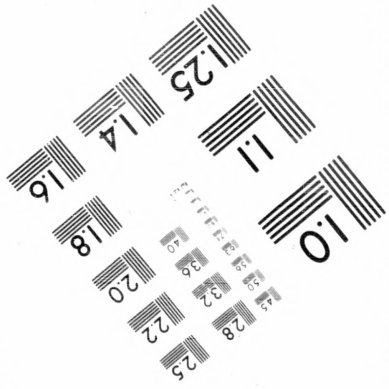

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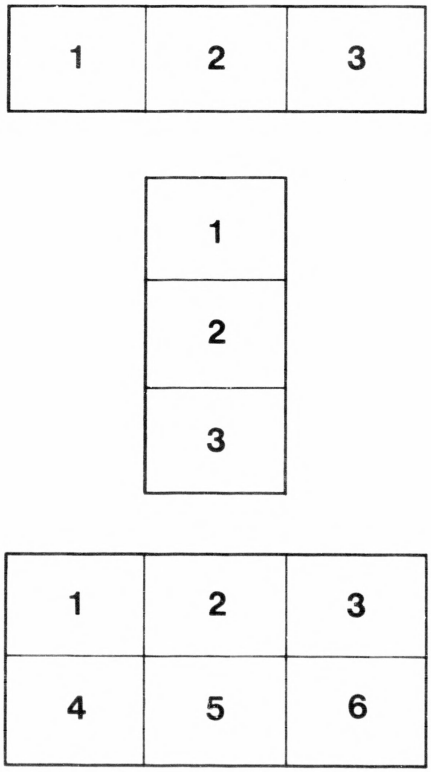


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# ESSAY ON

# BEE KEEPING:

OR AN

EASY METHOD OF

MANAGING BEES

IN THE MOST PROFITABLE MANNER TO THEIR OWNER, WITH INFALLIBLE RULES TO PREVENT THEIR DESTRUCTION BY THE MOTH, OR OTHERWISE.

---

PUBLISHED BY

JOSEPH BRADT,

*Of La Porte, Indiana, from Forty Years Experience in the Management of Bees, with the favor of two Patents from the United States Government, and also one in Canada, on Bee-Hives.*

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FIRST EDITION.

ST. CATHARINES:

E. S. LEAVENWORTH'S POWER PRESS, ST. PAUL STREET.

1860

# ESSAY ON

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1869.

# ESSAY ON

# BEE KEEPING.

It must be evident to all that a work of this kind is greatly needed, as I have found in travelling over the country there are but very few who know how to manage bees to profit much by them; and this is one great reason why there are so few kept in the land, or by the inhabitants of the land. My first object is, to show the people their base neglect of managing bees right. Bees require as much care as your stock. You must not think when you get a stand of bees, that you can set them back in some hiding place, under some bushes, or an old building, and let them go at that. Remember the poorer your hive is, the greater care they require. The best luck that I ever had in keeping bees in the old hive, was, to set them out in an open space on good benches with large hives, where there are no bushes nor grass to grow around them, or anything to obstruct their way in coming to their hive. You must look after their wants at least once a week, both summer and winter, and see if they are all right, and have got plenty of honey for their winter's supply; and if it is a very cold winter put them in a dry celler till spring opens, then set them back in their place. It has not been my intention in writing on the art of bee-keeping to encourage the use of the common board hive, as I too well know the great

disadvantage, as well as loss there is in the management of bees in the box hive. For one, in my practice in bee-keeping, I have lost nearly 100 stands of bees; some by moth, some by freezing, some by starving, and some by losing their queen, &c.

## RULE 1.--CONSTRUCTION OF A BEE-HIVE.

A bee-hive should be made of sound boards, free from shakes or cracks; it should be planed smooth inside and out, made in a workmanlike manner, and painted white on the outside, as white has the least attraction of the sun.

The size of the hive should be in accordance with the strictest rules of economy, and adapted to the peculiar nature and wants of honey-bees, to make them profitable to their owner. The way I make my hive, patented July 3, 1866, is as follows:—I first take good poplar, or pine boards, 16 inches wide, saw them 2 feet 10 inches long, for the outside box or hive, and before nailing it together, measure 6 inches on the outside, and 5¾ inches on the inside; then saw the two side pieces, or boards half way through on both sides, then burst it apart and it will form a cap that can be turned over by placing hinges on the back; but first, saw the back board square with the sides. Have the door its full length, so as to come down to the bottom of the hive; this bottom is placed five inches from the ground. Have a moulding at the bottom of the door with a drawer to cover the bottom, to catch all the dirt and dead bees that fall from the hive. I then nail the two sides fast to the bottom, then nail on the back piece or board, then nail the top together, and nail on the the top piece made of two inch plank, bevelled from the top to ¾ of an inch on the edge, then nail on cleats or bearers fast to the sides of the outside box or hive, 20 inches from the top, for the inside hive to

rest on; this inside hive must be made of boards one foot wide, made to fit snug in its place, coming out even in front, and fitting snug to the back. The front of this inside hive must be hung on hinges, so as to take out the frame in front.

The frames are made thus: Take lathing quarter of an inch thick, size them down to one inch wide for the top and side pieces, and half an inch wide for the bottom pieces; nail on a triangular piece fast to the top piece for the bees to build their combs to. These frames have tacks with big heads driven in the top and bottom, to keep them stationary, three-eighths of an inch apart, to let the bees pass between them. The top board of the inside hive must be half an inch thick, and lay loose on the frames, with a space of three-eighths of an inch for the bees to pass over them to their work. There are four drawers six inches deep, seven inches wide, and seven inches long, with glass ends, to see when they are full, put in like window-glass, without putty. These drawers must have a hole half an inch big through the centre, down through the honey board, to let the bees pass up in the drawers at pleasure. The cleats or bearers of the inside hive are nailed on the sides 20 inches from the top, for the inside hive to rest on. There are two tins or sheet-irons nailed fast to the cleats, eight inches wide, projecting within an inch of each other, to carry off worms and dead bees to the bottom drawer, which can be emptied out at pleasure. There must be a tin flap hung in front of the sheet-irons, to correspond with them, that can be lifted up to see in the hive without opening the inside door. This inside door must be hung fast by hinges to the outside hive. This inside door is of great use in taking out the frames in front, when you want to divide your swarm or feed young weak swarms, by taking out a frame full of honey from a strong hive and insert-

ing it in the hive that is starving. With the use of the frames you never need be afraid of losing your bees by starvation or moths. With my patent hive you have the full control of your bees, and all their benefits, above any other hive now in use. You have an entrance on both sides of the hive, with little bearers for the bees to light on, one-third the way up the inside hive, and also two ventilating holes at the top and two at the bottom, on the back side, below the sheet-irons, with little buttons to shut them up at pleasure. There must be a shutter at the entrance of the hive.

## HOW TO TRANSFER BEES FROM ONE HIVE TO ANOTHER.

To tsansfer a swarm of bees from the old box into my patent hive, first raise up the hive gently, put under your smudge or smoke for a few minutes, and it will destroy all their hostility; then take the hive and turn it upside down; set an old box or any old hive on the hive of bees, then take an old cloth of some kind and wrap or tie it round the two hives where they come together, to keep the bees from coming out while you drive the bees from the full hive that is to be transferred out of the old box. Now take two little sticks like drum-sticks, and commence drumming on the lower hive, to drive the bees up; drum away lightly for 20 minutes, and the bees, queen and all, will leave the hive with all its store; now take off the box with bees, and set them aside, and throw your old cloth over the bees. Now take your hive with comb and honey, away one side; now take your axe or chisel and burst your hive apart to get at the combs rightly. Now have your new hive handy by; take out the frames and commence operating. Lay down your frame on a wide board, have some tape half an inch wide, lay down two strips under the frame, now take a comb as big as the frame, lay it on the frame, cut it the size of the frame,

but if it has any honey, cut it off for use, leave on the corners to come up square in the frame. Be sure and leave all the brood comb, containing young bees. Now, tie up the combs tight to the upper piece, and the bees will soon fasten them to the frame, you must operate as quick as possible, so as not to let the young larvæ or grub bee get too cold. Now, when done, bring the box of bees, set them down near by, take a board one foot wide, and four or five feet long, lay one end on the entrance of the hive, the other on the ground; spread a white cloth on the board, now, if you want to be sure that your queen is there, take a big ladle and dip out the bees carefully, lay them on a white cloth, near the entrance of the hive, they will scatter and run up in the new hive like a streak, and you can easy see if the queen is among them. Keep on driving them out till you see the queen, then lay your box of bees down, and they will soon all run in the hive. Now place your hive where you want it to stand, and all is right.

## ESSAY ON BEE-KEEPING, WITH INSTRUCTIONS HOW TO MANAGE BEES TO SOME PROFIT.

In the first place, get the best and easiest managed hive you can find. There has been much speculation on bee-keeping, as well as on bee-hives. In travelling over the country, I have found a large variety of hives, and for one I cannot say that I found one hive that I could recommend to the public, they all having their entrance on the bottom of the hive; and the combs or frames and arrangements coming down in connection with the bottom, the bees are sure to become a prey to the moths. The fact is, the hives are got up by men of no experience in bee-keeping, but simply got up for speculation; the proof of this is, they have all proved a failure. It is the hardest thing now, to sell a patent bee-hive of anything I

know. It is not to be wondered at, that the bee-keepers have got disheartened and fell back to the old box-hive. I have constructed a hive called the Standard Hive, that has its arrangements differing materially from all other hives, having their entrance in the midst of their work, where any weak swarm can guard the entrance of their hive. The hive is so constructed that the bees are under your perfect control. It is a double hive, that keeps them warm in winter, and is so ventilated it keeps them healthy through summer. I have constructed my hive so as to make it convenient for the bees and their owner. There is not much profit that can be derived from the common bee-hive. You need no comments on this. All the profits derived from the common bee-hive is what little they store in the caps set on the hive. Sometimes in a swarm of bees the main bulk of the honey is in their hive below, and if that is taken out in the spring, it is so mixed up with worms, and young bees it is not fit for use; and if it is left in the hive to summer over, it will sour, and the bees die with disease by eating this soured honey. In the year 1866 it was so extremely hot that there were hundreds of swarms that died the following winter in the southern part of Ohio and Indiana. The bees got so alarmed, that in their desperation numbers left their hives with all their store, and lit on trees. In January, 1867, through that pleasant weather, it was published in the papers that the bees were dying off with the cholera. The fact is, the bees in eating that soured honey, were physicked to death.

Bees are creatures of habit, therefore it requires some care and caution to manage them right. You must be sure and place your bees where you want them to stand through summer, as soon as cold weather is over in the spring, unless you move them three or four miles, or you will lose them. I will here relate one circumstance: in

the spring of 1861 I moved in the city of LaPorte, Ind., a man by the name of Drumm, who occupies the place where I moved the year before. He had four stands of bees. I had a good many bees. I told the old man to move his bees before the flowers came out, or he would lose them; but he let them stand till the apple trees were in full bloom. So early one morning he came over and took away his bees; but as soon as the bees commenced working, back they came and piled on the nearest hive of mine, where his stood. The result was, he did not have any increase, but the hives were so weakened that he lost all his hives of bees by the moth, so he said; but some of mine threw out some very large and extra swarms, but I could not help it—he had fair warning. Don't let your bees fly out when there is snow on the ground, or you will surely lose them. I lost six swarms in one afternoon by letting them have their liberty when the sun shone bright in spring, while the snow was on the ground.

## ON DOUBLING SWARMS.

All second swarms should be doubled. I have doubled swarms at two weeks intervals with the best success. The time to do it is just before dark, and they will not rise in the air. Hive your bees in some old hive or box, and if you want to double them in the common box hive, turn the box upside down; then take the other swarm and give it a sudden jar on the other hive; then turn it up quick in its place, and they will be all right in the morning. To hive bees in my patent hive, lay the hive down on its back, open both doors and shake the swarm right in the midst of the frames, then shut the doors. Set up the hive and set it where you want it to stand. Young swarms should be scattered apart as much as convenient, during the summer season, at least six feet apart. As a general thing bees flourish better in vallies than on

hills. It is not surprising that this branch of rural economy, in consequence of the depredations of the moth, is so much neglected of late. In some parts of our country the business of managing bees has been entirely abandoned for years; but I am confident they may be cultivated in such a manner as to render them more profitable to their owners than any branch of agriculture, in proportion to the capital necessary to be invested in their stock. They are not a taxable property, neither does it require a large land investment, nor does it require the owner to work through summer to support them in winter. The greatest thing required is a good hive, that which will protect them from the depredations of the moth, and also freezing in winter; and you may depend on it that Bradt's patent hive will do both, as well as managing your bees with comfort and ease. Many complain of the dearness of my hive, but I consider it the cheapest hive in use, for the great advantages it contains over any other hive. In the first place it is an independant hive, that requires no bee house; it is a double hive, that will keep them from freezing, and also from melting down in summer. They are the best ventilated hive in use; their entrance being in the midst of their work gives them a better chance to unload their treasure, as well as guard their hive. When we take into consideration the great loss sustained in managing bees in poor and bad hives, it is no wonder there are so few bees kept; and I can truly say that it is not for speculation that I have commenced this work. I am an old man and have had great experience in the management of bees. I would like to see ten times as many bees, yea, a hundred times as many as are now kept through the land. I would like to give every encouragement as well as instruction on the management of bees. It is a delightful employment, and can be pursued with the best

of success in cities and villages, as well as in the country. My hive, when rightly made, is an ornament to any gentleman's premises. And no dish that can be set on a table is more luxurious and healthy, as well as tasteful as honey.

## ON HIVING, AND THE GENERAL MANAGEMENT OF BEES.

Bees are creatures of habit, and experience has taught us that it is best to place a new swarm of bees where it it is to remain. As soon as they are hived they begin to look at the objects around them, and if they are left standing where you hived them till night, and then move them, there will be a great many lost the next day by coming back where the hive stood. No confusion or noise, such as the blowing of horns, ringing of cow-bells, or hammering of pans or kettles should be resorted to. All that is necessary is to have some fruit trees growing near their apartment to light on. I have sometimes thrown water among them when I feared they would fly to the woods. I once brought a very large swarm down that was flying over me. It came from a distance. I was in the garden, and commenced throwing ground and dirt among them; they came right down and lit on some elder bushes in two large clusters. I hived them in two hives, but they soon all went into one hive. One of my boys found a swarm hanging on a limb of an apple-tree; he did not know how long it had hung there. I hived it in one of my patent hives, and let it stand where it was found till about three o'clock, when out they came with a rush, nothing would stop them; and away they went to the woods. The fact is, as soon as their embassadors or searchers for trees came back that were sent off, and as soon as they lit in a cluster, and conveyed their ideas that they had found a tree, they were ready to be off. Now if I had moved the swarm a distance off from where

they lit, I would have saved them; but as I have said before, they will leave the best hive that ever was made, and fly to the woods if they can find a good tree to go to. The woods seem to be their natural element. When bees go from the old stock, direct from the woods, without alighting, it is when they lie out of the hive before swarming. It is evident they had organized and sent off their embassador to search for a tree, and then nothing would stop them. Bees will never lay out as long as they have plenty of room and air in the hive, but when the weather is very warm, and the hive crammed full of bees, they are compelled to lay out or melt down. I had an old box hive which melted down and I lost a gallon of honey. When bees swarm in their natural way, they first fill their sacks with honey to last them till they get settled in their new home. Care should be taken in shaking the bees from the limb, and not have them to fall heavy to hurt them while they are filled with honey, or it will kill a good many of them. Place the hive in the shade till the bees get settled, then carry them where you want them to stand. My patent hive will endure more heat than any hive in use, because the top is two inch plank. It is the best ventilated hive, having a large open space below the sheet-iron conductors, two ventilating holes at the top, and two at the bottom; and having an entrance on both sides through the centre of the hive. It is, in fact, the best arranged hive, the most convenient and easy managed, and most profitable too, of any hive I ever used. If I could only once get the people to try it, I am sure it would soon take the lead of the market, and be brought into general use. But most people think it too expensive. They don't look at the profits, that will far exceed the expense, the great advantage of feeding young weak swarms, and also of getting honey whenever they want it. The more tenderly you treat bees the less

disposition they will have to sting you. Don't strike at them if they buzz around you, just walk away from them. They don't like bad breath, nor a tobacco chewer; and I don't blame them, for I don't like it myself. Some bee-keepers take this method of managing bees easy:—If they want to transfer a hive, or do anything with it, they first go up, hit the hive a rap with their fist, walk away, then give it another rap, and so on four or five times; the bees will think they are going to get robbed, will fill themselves with honey, and then they will not sting, but I prefer smoking them a few minutes to destroy their hostility, and you can do anything you like with them.

## ON HIVING BEES.

When bees swarm in their natural way, if they seem reluctant about lighting, first walk around under them and whistle a sharp fine whistle, as near like the queen as you can, and they will soon light; then hive them as soon as possible, and carry them where you want them to stand, or they will fly to the woods. As soon as bees light on a limb they will send off embassadors to hunt a tree or a new home, and if these embassadors should return and find their swarm already hived under the limb they lit on, they will leave the best hive that ever was made and fly to the woods. I have had a proof of this. One time I had a swarm come out of a hive after it had been in two weeks. They would not light, but took their course across a field of wheat that was out in head. I ran after them, and came under them and whistled; they came near lighting but took another flight; I overtook them again and whistled, and down they came right by my feet in the wheat. I ran home, got a different hive and set it over them, and soon had my little family home and all right again. It is natural for bees to be in the woods, they do not like to be disturbed in their labors, but one thing I know, the more you work among your bees the

better, as they will soon become familiar with one that works among them; but they don't like to be robbed, and still they have a peculiar propensity to rob each other. I have lost a great many good hives with robbers when not at home. My patent hive is the best to shut out robbers of anything I know of. There are several reasons for their robbing each other, especially in the spring before the flowers come out, they having their combs broke with the frost, smell the honey. Great care should be taken to watch their movements, both in the fall and spring, and if you see an unusual bustle about the hive, step forward and shut it up so that they cannot enter, and they will soon leave; but do not open the hive until evening, to let your own bees in that are out.

## ON SUPPLYING SWARMS WITH A YOUNG QUEEN.

Bees frequently lose their queen by flying out for exercise, and being caught by the birds; sometimes by swarming they drop in the grass; this accounts for them returning back to their hive. In such case the owner should look her up; you will generally find a few bees clustered around her in the grass. A swarm that has lost their queen will not work, but will lay around in idleness. Once in a while you will see a bee fly out, and if not supplied with a queen, they will soon dwindle away to nothing. Now, if you have a stock of bees in my patent hive, you can go to a strong hive, take out a frame with brood comb that has the young grub or larvæ, insert it in the midst of the destitute swarm or hive, and they will soon have a young queen. Bees being creatures of habit, great caution should be had in managing them. They do not like to be disturbed; they should be placed near your dwelling, where you can see them from your window, or you may lose them when they swarm. Do not place them near your watering place, if you don't

want trouble; they don't like the switching of horses tails; they will sting them if they should come in contact with them. Bees, when they swarm, fill their sacks with honey, to last them till they can get settled in their new home. There must be an entrance with little bearers for the bees to light upon on both sides of the hive, one-third the way up, through the inside hive, also two ventilating holes on the back side, under the sheet-irons at the bottom, and also two at the top, with little buttons to shut them up at pleasure. There must also be a shutter at the entrance of the hive, to shut out robbers, or to keep your bees from flying out when the snow is on the ground.

## A LITTLE MORE ON TRANSFERRING BEES.

First of all, remember that it is necessary for bees to be transferred when their combs become black and filthy. Bees will not profit their owner much when the combs become old, mouldy and black; they should not be left in a hive more than three years; and the only time then is, in safety, immediately after the second swarm has come out, so that the young queen is hatched, and the young swarm must be returned to its parent stock, or both will be lost; for it is very seldom that a second swarm will gather honey enough to winter them over; and that is not the worst of it, the old hive is so reduced in numbers that the millers will overpower them; and if the worms do not destroy them, they will freeze to death, for want of numbers to keep them warm the following winter. The time to transfer a swarm of bees with the least trouble, is about ten days after the first swarm has come out; then the young bees are pretty much all hatched out, and they will be sure to have a young queen, for the old queen always leaves the hive with the first swarm. Let this be distinctly understood,

that there is but one female bee in the hive at a time, and this is what is termed the queen bee, for she is the mother bee that lays all the eggs for the whole swarm. There are three classes of bees—the *queen*, or female bee, the *drone* or male bee, and the *honey-bee* or worker, as they gather all the honey and make the comb. The drone never gathers honey, but merely tends to his own domestic, as the male bee; and when the breeding season is over, the bees know they have no more use for him or them, the drones, and they will go at them and kill them all off but one or two in each hive. But the bees are very tenacious over their sovereign, the queen; if they happen to lose her by accident, and they have no young larvæ or grub to make another queen, they will not work, but pine away and soon go to nothing, or leave the hive with all its store to the owner, or else the worms will make a prey of it, and that soon, too, if it is not looked after by its owner.

## ON PROVIDING HIVES WITH SUITABLE DRAWERS.

The arrangement of my hive is such that I can have from four to eight drawers. This is done by having three different honey boards to set the drawers on. First, the board for four drawers has four holes up through the centre of the drawer. These first-class hives will hold eight pounds a-piece; the second-class drawers will hold six pounds each; the third-class drawers will hold four pounds each. This last size is the best for the big market, and will bring from five to ten cents more a pound. These different size can all be used on one honey board by having holes bored to suit every size. The first size drawer is seven inches square; the second size is four and a half inches; the third and last size is three and a half, by seven, and all six inches deep. Some bee-keep-

ers have adopted this plan to force the bees to give them plenty of honey. Leave off the honey board, and have bottomless drawers. Set the drawers on the naked slats or frames, so that the bees can come up in the drawer anywhere they like, and they will soon fill them; then have a heavy sharp tin to slide under the drawer when it is full, to cut it off or loosen from the frames; then tack on a thin board or paste-board, to keep your honey clean and free from flies or ants, ready for use or market.

## ON WINTERING BEES.

With the use of my Patent Hive, you can take out the drawers in the chamber in October, and have the chamber open all winter to let the breath of the bees escape through cold weather; at the same time, open the ventilating holes at top and bottom, but shut the hive when the bees enter through cold weather, or they will fly out and be lost. Thousands of good stands of bees are lost every winter by freezing. I lost nine out of ten swarms during the cold winter of 1853. The safest way of keeping bees is to dig a place in a hill-side that you can cover, like a dry celler, purposely to store bees in where they will be out of the wind and dense frost in winter; and your bees will come out all right in spring, unless you let them starve to death by neglect.

There are three principal causes of bees dying in winter. First, want of honey; second, want of numbers; and third, want of air. They often smother in the old box hive by the breath of the bees running down the hive and freezing at the bottom, which shuts out all the air; but my Patent Hive has a remedy for this great evil, as well as many others. The sheet iron conductors carry all the water that is formed by the breath of the bees down to the bottom drawer, where it cannot annoy the

bees, and also secures all dead bees, worms and bee dirt, as they fall from the hive.

When a swarm of bees is first put in my Patent Hive the frames should be placed about three-eights of an inch apart, so as to force the bees to build their combs true on the frames, and then in about ten days they can be shoved together.

## WHY BEES DO NOT FILL THE DRAWERS.

We frequently hear people complain that they don't get any honey, or they can't tell why the bees don't put any honey in the drawers. There are several reasons for this, and I will give my views why. One great reason is for want of honey. Some seasons are too wet and some too dry. Three years ago there came a drought right in the midst of the honey season, and dried up the white clover, and everything that contained honey, so that one-half the bees throughout the couutry starved to death. The next season it was so wet the honey that was gathered seemed to be half water. A very wet season will destroy the pure honey in the clover; and that is where they get the best white honey.

There are other reasons why bees do not fill the drawers; and it would take considerable time and space to tell all the reasons satisfactorly. If a hive is two large it will take the bees too years to fill the hive below, unless it is a very large swarm, and then they will not give their owner but very little honey. It generally takes them all the season to fill their big hive. Now, if the hive is small, it will not do much after the first season in the way of storing up honey. All the honey they gather, is before the first swarm leaves the hive; afterwards the swarm is so weak that it takes most of what is left to guard the hive; so that, as a general thing, old bee-keepers will have to acknowledge that the most

honey they ever got from the box hive was during the first year that the swarm was put in, when the hive was strong, and there were plenty of bees to gather the honey; and after that they do little else than swarm; and they may prosper in numbers, but not in honey, for several years. But the scale will finally turn, and in two or three years they will lose their entire stock.

A safe and easy method of doubling your colony of bees, if you have the frame hive, is to divide them in the following manner:—Take out two frames from two different hives, from the back part of the hive, where the young grubs or larvæ are most plentiful, and all the bees that will stick to them, and put them in the back part of the new hive. Be sure and have one of the royal cells in one of the frames which you take out, and you will soon have a young queen. Then shove the frames together in the full hives, and put the two empty frames in the front part, and in two weeks they will have them full again, and you can go to the same hives and take out two more frames, and perform the same feat over again. Now you have doubled your stock of bees with perfect safety, and they will not swarm that season, and fly away to the woods. If you have nice old combs, from hives you have lost, take good care of them; burn a match of brimstone under them, and no millers, nor any troublesome insect, will come near them while the smell of the brimstone is about them. These dry combs are good to fill the empty frames that are left in the new hives you have just filled, or transferred bees to. When you want to put combs in an empty frame, melt some rosin and bees'-wax together, and pour it, hot, on the comb where it is fitted into the frame, and it will fasten the comb immediately, and save the bees great labour. The way to keep Italian bees pure, if you can get the pure breed, is to clip the wings of the queens,

and don't let them go out of the hive to meet common drones, or they will soon run out. The only way you can keep them from mixing, as to transfer them as above directed, and keep the queen in the hive, so that she can't meet with the common drones.

Before you allow the Italian queen to enter the common hive, take the old queen and all the queen cells from the hive you want to put your Italian queen in, and also all the old and young drones, larvæ or grubs, if you have to cut all the drone comb out of the hive. This can only be managed by the frame hive.

Nature has fixed certain principles in the peculiar instinct of the honey-bee, which are unalterable by human wisdom, so that it is hard to control them. Of all the inventions and arts of man, they still prefer having their own way, and to follow their own instincts; but still I think, with my newly invented hive, I can control a swarm of bees better than with any other patent hive now in use. For instance, my hive is so well adapted to ihe wants of the bees, that they seem to prosper better in it than in any I have ever yet used. In fact, the only fault I found was that they swarmed too much, till I adopted a new plan of dividing the swarm, at the time of swarming. Take out one-half the frames, bees and all, put them in a new hive, and fill the vacancy with empty frames; but be sure and have one of the royal cells in one of the frames you take out, and they will soon have a young queen.

A hive should neither be too large nor too small, but should hold about a bushel in the tenement below, besides their drawers. My hive has four in number; these draws hold about eight pounds each. Bees generally make their comb at night, and gather their honey in the day-time. The comb is made of little flakes that grow

naturally between the scales of the body. It is a kind of wax, that oozes out through the body.

As a general thing, bees will store more honey in drawers than caps, because drawers are warmer for them to enter. Small drawers are better in every respect than large ones; say from four to eight pounds each. All hives and their fixtures should be made exactly of a size and shape, then you can't misplace a drawer, or any thing about the hive. When cold weather commences (in September or October), take out the honey-boxes, leave the chamber of the hive open, and have a careful place for your drawers; open the ventilating holes at the top, to let the breath of the bees escape through the chamber.

Too much swarming is very injurious to the prosperity of the bees, for several reasons. If they swarm too much, they are subject to destruction by the moth, for want of numbers to guard their hive against the entrance of the millers. Another difficulty is, they are very apt to freeze to death the following winter, for want of numbers to keep them warm. The only way to guard against this is to take their queen from them, and let the swarm return to their parent hive. This is easy done by setting a board up against the entrance of the hive, from which they came: lay a white cloth on the board, hive your bees in some old box, then take a ladle and commence dipping the bees carefully out, and lay them on the board or white cloth, and they will commence running into the hive. Now watch for the queen, and catch her before she enters her old home. Always bear this in mind: if you want to have your bees prosper with you, keep your hives as strong and numerous as possible. One good strong hive is worth three poor ones, and will give you more honey.

## A LITTLE MORE ON THE USE OF MY PATENT HIVE.

Some say my hive is too expensive. I will admit it is an expensive hive; but I defy any person, after giving it a fair examination, to put their finger on one manœuvre of it, and say it is not necessary. It is, in fact, *the most perfect hive now in use*, if there is any such thing as perfection about a hive. There is nothing that the bee-keeper desires, to render a hive convenient, but my hive embraces it. If you have a colony of bees in it, they are under your perfect control. You need not lose one pound of honey the bees don't want. You can go as soon as the flowers come in the spring, and take every pound of honey away from them, as it is only in the way of their raising young bees. You can go any time in the summer, and take out a frame of honey for your own use; and if you have a weak swarm, you can go in cold weather, take a frame of honey from a strong hive, and put it right into the midst of your starving swarm, and bring them right along with safety. You can't lose your bees by the moth, because you have them continually under exhibition. There is no danger of freezing, if you keep strong swarms.

There is not much use of keeping bees unless you can profit well by them; and I think I have given plenty of information in this little book to keep them to advantage and profit, if the course I have pointed out is properly pursued.

O that I could be instrumental in having our noble country flowing with honey, like the Promised Land!

There might be a hundred times as many bees kept as there is now throughout the land.

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