

## BEES.

HOW TO MAKE \$350 A YEAR BY  
THE CULTIVATION OF BEES.THE PRACTICAL EXPERIENCE OF  
AN ENGLISH AGRICULTURIST—  
THE ENTIRE PROCESS IN A  
NUTSHELL—SMALL OUT-  
LAY—LARGE PROFITS.

In a brochure of some forty-five pages, Mr. J. W. Pagden, of England, very generously gives the public the benefit of his experience in the cultivation of bees, and shows how, by following his directions, they may make \$350 a year—a very neat little addition to the income of the farmer, or the working gardener. Mr. Pagden commenced keeping bees some four years ago on an outlay of \$3. He has now 100 stocks, all strong and vigorous—the best evidence in the world as to the success and excellence of his system.

## HIVES.

Mr. Pagden starts out by setting his face entirely against ranging hives against a southern wall. He has tried every point of the compass and finds east, or a point north or south of this, to be the best. A straw hive will last twice as long in this position as in the others. It is not necessary to range hives under a wall or hedge; they should simply be placed two or three feet apart, with the back of the hives to the garden wall. Bee houses are worse than useless, and every hive should rest upon its own stand apart from others. Mr. Pagden, after many trials, has found the straw one to be the best for all practical purposes. It must be made with a flat top, and a hole in the center, three inches in diameter. When the bees show symptoms of swarming, place on the crown an adapting board, with slits cut in the center corresponding with the hole in the stock hive. The slits through the adapting board must be exactly three-sixteenths of an inch in width. Drones will never pass through an aperture this size, and the queen will rarely, if ever, do so. For stands he recommends an empty American cheese-box. First, place your bricks flat upon the ground, place the box securely upside down upon the bricks, leaning from back to front. Cover your hive well over with a sack or artificial manure bag, so that the drip may be carried to the ground. With a milk pan for a roof, your hive is secure.

## SWARMS.

A swarm is said to contain from 12,000 to 20,000 bees. When the bees require more room the queen, with a great number of her subjects, leaves the hive. When the bees have quietly settled do not disturb them too soon. It is a good plan to syringe or sprinkle them with cold water; this cools them, and makes them more ready to crawl into their new habitation. You may half drown outsiders with water. When you have ascertained that the queen is quietly settled in her new abode do not allow the new swarm to remain in the same position until evening. Having removed the old hive place the new swarm on the old stand. Full grown bees and stragglers will then find their way back. One fully populated hive will produce more honey than three or four weakly ones. When the new swarm has been working fifteen days or so open the hole at the top, place on your adapting board, and put on a super hive, box or glass, and the bees will store for you fifteen or twenty pounds of honey comb, as well as a plentiful provision for themselves. After the great depopulation the bees generally give up all desire for more swarming, and destroy all embryo queens. The queen will have left thousands of eggs in the old hive to be hatched out, and as they will be rather short of bees to be sent on foraging excursions, assistance must be given them in the way of sugar syrup. The inhabitants will then multiply in a wonderful manner. Place a cup on the top of the hive and leave them to work.

Having secured a swarm at a small outlay, the following summer you will have one swarm independent of the old stock, and will have taken sufficient honey to cover expenses, and also to purchase another swarm. Should you continue this system for six years, without losses, you would have 729 hives. In one garden of a quarter of an acre Mr. Pagden finds that forty

hives can work without inconvenience; but if you are disposed to make a business of bees, gardens may be hired for any number. He thinks that bees roam further for honey than is generally supposed; they have the power of flying at a speed of 100 miles an hour.

When your stock has reached a certain size, you may commence the humane system of taking honey without swarming or destroying your bees.

## SIDE HIVING.

The cottage hive can be easily adapted to this plan: you have but to make a passage on the floor board with a small frame—a flat trough four inches square and a quarter of an inch in height. When the bees show symptoms of swarming, cut a notch in the stock hive next to the floor board, and fit in the frame, leave one end projecting. Allow the bees to have free passage for a few days; then cut a corresponding notch to fit the frame in an empty hive to place at the side close up to the old stock; the bees will then begin to fill the collateral straw hive as readily as one of a more extensive nature. In removing the side hive when filled a small cup or bell glass may be placed on the top of the old hive.

## NADIR OR UNDERHIVING.

Mr. Pagden, on one occasion, observed that the bees had clustered over the block, and apparently disappeared. On raising the hive he noticed a small hole in the centre of the floor-board, and through which bees were passing. In an old chimney pot he found forty pounds of pure, white honey. He then adopted the idea by cutting three slits in the bottom of a cheese box three sixteenths of an inch wide and three or four in length. He put on the lid and turned the box upside down on four bricks. He has also invented a nadir hive of wood and straw which answers the purpose quite as well. The temperature of the warehouse below is kept at a much lower temperature than the top hive, and the queen will not condescend to visit the lower regions. Of all plans for taking honey without destroying the bees this may be considered the best.

## FEEDING BEES.

To feeding Mr. P. attributes principally his great success as an apiculturist. To every pound of loaf or best moist sugar add half a pint of water, boil for a few minutes, and when put out to cool stir into each gallon two tablespoonfuls of rum and one teaspoonful of salt. Administer the food with a bottle at the top of the hive. When properly adjusted the syrup will escape only so fast as the bees can stow it away. The bottle must be covered by an empty hive, and thrown over this some sacking and matting. Do not shed any portion of the liquid on the outside of the hive.

In the spring all light hives must be fed with from four to six pounds of prepared food. The strongest hives may be fed to advantage, as the queen will not begin to lay eggs until she finds some new stores accumulating. All stock hives that do not weigh sixteen pounds in the autumn, independent of the hive, must be fed up to that weight before you consider them safe to pass the coming winter. All new swarms should be fed until the stock hive is filled with comb.

Mr. P. has also tried summer feeding to great advantage. He fed the bees at night, or on wet days, and fourteen days from the time the new swarm began to work he had taken \$9.50 worth of honey-comb. The sirup cost \$1.75.

## DEPRIVING STOCK HIVES.

After the honey gathering season was past, he deprived several of the stock hives of from three to five pounds of honeycomb each, then fed to make up the weight. The bees treated in this way passed the winter, and came out as strong and vigorous as the others. Bee feeding, says Mr. P., is only partly understood, and, indeed, we can only conjecture the extent to which it may be practised.

## TO RENDER BEES HARMLESS.

The olfactory nerves of the honey bee are so delicate that any fumigation immediately produces a sort of paralysis of the system, which for a time renders them quite harmless. Mr. P. uses a tin tube, one end being turned for two inches and flattened, leaving a

passage through. He inserts the flat end of the tube in the entrance and gives them three or four good puffs of tobacco smoke. The bees remain for several minutes perfectly under control.

## REMOVING BEES.

The most favorable time to remove bees is in the autumn or the early spring. Mr. P. recommends pieces of packing wrapper three feet square, spread on the ground near the hive, then administering a few puffs of tobacco smoke, and take the hive without the floor board, and place it on the cloth. Pull the corners close up to the side of the hive, and bind them with strong strings. Then turn the hive crown downward, which saves the combs from being displaced. He packed sixteen hives in this way last autumn, loaded them in a spring van, and drove them a distance of ten miles without damage. When he reached the ground he placed the hives, canvass and all, on the block, unfastened the string, allowed the canvass to remain a few days, and then drew it away. Young swarms should be removed the same day on which they swarmed, or left for removal till the autumn. Should the hive be taken when only partly filled with comb, the excitement will be so great that the combs will give way, and all fall in one confused mass.

## TO WEIGH HIVES.

Have a tripod, the three legs of which may be six feet in length, with a bolt passing through the whole. A hook must also be fixed on the bolt at the top, on which to hang the ring of a Salter's spring balance. A scale of half inch board, thirty inches square, with cord through each corner, and confined by a ring at the top, will complete a very convenient weighing machine.

It is necessary in a large apiary to number or name all hives, and to enter them in a book, keeping a record of such facts as you may find necessary. Two or three swarms united in the autumn in one hive will consume no more honey through the winter than the samest one left to itself.

## BEES' ENEMIES.

Never put a new swarm of bees in an old hive, as there will almost certainly be the eggs of the honey moth deposited in the crevices of the hive, which will hatch out and probably destroy the swarm. When the moth once gains an entrance to the hive the bees appear powerless to expel them. When the maggots begin to eat their way into the combs the sooner the bees are fumigated the better.

Do not have a large round entrance to the hive, convenient to mice, slugs and other enemies; have an entrance of only about a quarter of an inch in height, and from an inch in winter to four inches in length in summer. Should wasps or other bees attack a hive, the only plan is to narrow the entrance so that only one or two bees can pass at a time.

To destroy wasps, saturate a piece of woolen rag with spirits of turpentine, put into the entrance to the nests, and leave it there one night. The next morning every wasp will be dead.

## JOINING SWARMS.

Should you wish to join two swarms, lay down two short sticks nine inches apart; take one of the hives and knock it on the ground two or three times until the bees are all shaken out of the hive; then sprinkle them quickly with their syrup, place the hive with the other swarms on the stick over those shaken on the ground for the night, and they will be found peaceably united with one dead queen in the morning.

## PROFITS OF BEE-KEEPING.

Mr. Pettigrew, a laborer, made \$450 in one year by bees; and a Scotchman in Lancashire made \$200 from nine or ten stock hives. An average of twenty-five pounds from each stock hive is regarded as a fair return for time and trouble.

The figures named by Mr. Pagden are of course only applicable to England; very much larger profits may be expected in the United States. We close this brief epitome with the following remarks by the writer:

Bees have neither pride nor vanity in the exterior decorations of their dwellings; and when more room is required for their operations they will as readily store honey in a straw hive, an old box, a tub, a

bucket, or flowerpot, as in the most costly, highly-finished and ornamental pavilion that can be placed at their disposal. But it must be remembered that all entrances from the stock hive into any of these super appliances must be guarded by three-sixteenths of an inch passage.

I commenced my present plan of bee-keeping with only one hive, purposely to prove the self-supporting nature of a properly managed apiary, and also to convince the cottager how, by starting in the same manner, he may soon, as a bee-keeper, attain the same position I have myself arrived at. He will then have the satisfaction of knowing that his bees will supply him with double the income he could gain by expending all his strength and labor in the fields; in fact, "he may then lay down his shovel and his hoe."

I would say to the cottager the same as "a French bishop," wishing to better the condition of his poor clergy, once said to them, "KEEP BEES! KEEP BEES!"—*Ed.*

The British Mission.—From the *Millennial Star*, Feb. 9—

"Elder Henry Hughes writes from Merthyr—'It grieves me to tell you that the state of this part of the country is deplorable; there are over one hundred thousand men out of employment in South Wales, so you can have some idea of the state of affairs here. Nevertheless it affords me pleasure to tell you that we are baptizing a few all the time, and to all appearance there are yet some few honest in heart about here, that will come forth.'"

From the *Millennial Star* of Feb. 16—

"Bristol, Feb. 6th.—I arrived at this place after a visit in South Wales of eight days. I passed my time very pleasantly while there in visiting the Saints at their houses in company with Brother Henry Hughes, who is doing a very good work in that country in connection with Brothers Thomas and Williams, and have the full confidence of the Saints wherever we visited. While at Merthyr I had the privilege of preaching twice in the Saints' Hall, several strangers being present each time, and I felt that the Lord blessed me with much of his Spirit on each occasion.

"I also preached at Aberaman and enjoyed myself well in so doing. I feel to rejoice exceedingly that I have been called on this mission.

"I have visited several of the people in Aberdare, Merthyr and Newport, who have been cut off the Church years ago, and some that have fallen away through the misdeeds of others, which 'others' have apostatized and gone to the dogs long ago; one of them died in the Poor-house at Newport, Mon., a short time ago, 'a perfect wreck.' I talked with them long and serious, and encouraged them to come along and be re-baptized, and strive to make lively good Saints, as I once knew them; most of them promised me they would do so; they all felt pleased to see me, and treated me very kindly, and also Brother Hughes who accompanied me to their houses.

"I arrived in this place on last Tuesday evening at 6.20 o'clock, and was met by a lady who heard myself and Brother White preach on Sunday, Jan. 24th, the first time she ever heard the Gospel. She said she was very much pleased, and greatly surprised to learn that we preached good sound doctrine instead of carrying on all sorts of games, as she had heard reported, and told me that if I would wait until Friday evening, instead of starting for Nottingham, as I intended, on Wednesday morning, she would like me to baptize her. I therefore waited and baptized her last evening, and she felt very well, and has strong faith and a good, noble spirit.

"President Watts requests me to stay here over Sunday, which I intend doing; will leave for Nottingham on Monday morning, visiting three of my relatives between here and that place, and shall make as short visits as I possibly can, as I feel more and more anxious to be at work in the place assigned me.

"GEO. L. FARRELL."

"London, Feb. 8th.—I am very thankful that I can report to you that the Cause of Truth is moving steadily onward in this Conference, and that at no period since

the commencement of my labors here have the prospects been so cheering as at present. The Saints exhibit more life and faith, meetings better attended, and a more earnest spirit of inquiry is evinced by strangers who attend our meetings, from some of whom we receive pressing invitations to visit them and converse upon the faith and doctrines of the Savior as taught and practised by him and his apostles, and restored to the children of men by the Angel through the Prophet Joseph.

"Quite a number have been added by baptism since you were here in November last. Yesterday four were baptized at Spring Baths (London), and notwithstanding the inclemency of the weather yesterday, some of our meeting houses were well filled, and other names were handed in for baptism.

"On Sunday next we have an appointment at Woolwich for a special prayer meeting, which Elder Hardy and myself expect to attend.

"Elder Fowler will leave on a day or two for another visit to Hampshire and Sussex, where we have prospects of doing quite a work, especially in Bosham and Southampton; in the latter place we find great difficulty in obtaining a suitable meeting room, this, however, as you understand, is one of the greatest difficulties we experience in almost every instance, in consequence of the great prejudice in the minds of the people, and their almost entire ignorance of the faith and belief of the Latter-day Saints. Those whose crafts are in danger are still earnestly seeking by misrepresentation to keep this prejudice alive; but we rejoice in the Lord God of Israel, that however much his enemies plan and propose, he still disposes and overrules all things for the good of his people and the ultimate redemption of Zion.

"Elder Carrington starts on Wednesday to make another visit to the branches of the Church in Berks, Bucks and Wilts. Elder W. L. Binder has fairly entered upon his missionary labors, having just returned from a visit to the Saints in Hants, etc.

"All are in the enjoyment of excellent health and spirits, laboring earnestly and hopefully for the promotion of the Kingdom of God upon the earth.

"R. T. BURTON."

From the *Millennial Star*, Feb. 16:

"Galashiels, Feb. 7.—Dear Brother—When I left Liverpool I proceeded to Glasgow, where I remained one day. I then went to Edinburgh, where I stayed about fourteen days, busy all the time going from house to house preaching the Gospel. I got the few Saints that were there together, and had a meeting, and instructed them to meet every Sabbath. A few that I have conversed with are friendly; I think I removed a good deal of prejudice. I then left for Tintin, and found two families of Saints there; they were very kind to me; from there I came to Galashiels—have found two families of Saints here of old standing. I am going to meet with them to-day. There is another family in Selkirk.

"I have enjoyed myself first rate; wherever I have gone I have been received with the greatest of kindness and respect, far beyond what I expected. The blessing that was pronounced upon my head has been fulfilled to the very letter. I am well in body and mind—never felt better. I know I am engaged in the work of God.

"ROBERT HOGG."

"Gremsey, Orkney, Feb. 8th.—I am trudging along as best I can, in my simple and humble way, watching the dictates of the Spirit and trying to govern my movements accordingly. In hopes that it will not weary your patience, I will venture to give a description of these northern islands. The Orkneys—the 'Orcaides' of the Romans—lie off the north coast of Scotland, between the 58° and 60° (degrees) of north latitude and between the 2° and 4° (degrees) of west longitude. So you see that I am about 1,200 miles north of Salt Lake City and 300 north of Liverpool, consequently there is some difference between the climate here in mid-winter and that of St. George; our days are very short. At high water the islands number seventy-three, at low water only fifty-six, the rise and fall of the tide being about twelve feet. Twenty-nine are inhabited, nineteen