

of brood and honey, and everything else essential to be known, having been learned by a few glances of an expert's eye, the section may be replaced before any robbing can be done.

4. The shape, size and lightness of the parts composing this hive greatly facilitate all necessary manipulations in the apiary, and must therefore make it peculiarly acceptable to all who for any reason wish to economize their physical strength. A weak person who cannot handle many hives needs it, and the strong man also needs it, that he may make all his strength tell, in the management of the largest possible number of colonies.

The simple way of holding the frames so firmly in place by thumb-screws, admirably fit this hive for safe transport. I use the word transport in its widest sense, so as to include every movement of any of the parts, from the simple lifting off a section, to the carrying of a hive with bees for any purpose, to any distance, however short or long. I have seen a frame filled with comb, tossed about the room, and thrown out of a second-storey window—also a whole section of such frames slid and even kicked about a room, and all without any injury to the combs.

6. I am strongly impressed with the great advantages, which seem to me must certainly be gained by one of the leading features of Mr. Heddon's invention and system of management, viz., the *divisible brood chamber*—but as this is a point on which the season (April 17) gives me no opportunity to speak from actual observation, I relegate it to the many able bee-keepers who can speak from their own experience, remarking only that when capacious brood chambers and surplus apartments are desired for any purpose, they can all be readily obtained in the best form by the Heddon hive and system.

7. Perhaps there was no feature in the Heddon hive which surprised me quite as much as the facility it affords for the use of the extractor. Indeed, when I first gave it my attention, I was so ignorant of its scope as to suppose that it was a conceded point that it could only be used profitably for the production of comb honey! This is one of the points where I cannot speak from my own actual observation; but those in Dowagiac, who have had the largest experience, affirm confidently that in a given time they can actually extract more honey by the Heddon system than they could with their Langstroth hives, and give these reasons for their belief:

Nearly all the bees can be easily shaken out of the combs of the extracting sections, and these quickly carried to a safe place, where the few bees not shaken out will soon leave them. The

eight frames of a section may then be turned out in a standing position upon a table by a single motion, their regular shallow combs uncapped with unusual rapidity, and all their contents extracted at the same time; and nearly all of this work can be done *under cover*. Need anything more be said on this subject, to those who have followed the tedious routine of shaking and brushing off the bees from each separate comb in the sun, and exposed to robber bees?

8. It need hardly be said to any good bee-keeper, who has carefully weighed the above points in favor of the Heddon hive and system of management, how greatly it reduces in an apiary the liability of robbing. Those who have the Heddon hives will have no use for any beentent when they can so easily find the queen or can shake out the bees from any section when necessary, so examine it at leisure under cover.

In reading this enumeration of benefits to be had from Mr. Heddon's invention, it might seem that if I have not exaggerated them, any one of a number of them must be worth to a person who handles many colonies, at least the price of an individual right to use his patent.

I can only say that I have sought to avoid all over-statements, and have, in addition to what I could see with my own eyes, questioned at much length some who have largely handled the Heddon hives, and have been from the beginning familiar with every step in the progress of his invention. I would therefore not be afraid to risk my reputation for sound judgment as to the great value of the forward step which he has taken, even if I did not know that my opinion accords so well with the experience of many who have had the opportunity to put the hive and system to the test of practical use.

It is proper that I should say before closing this article, that I have carefully examined the claims of the Heddon patent, and the reasons which have been thought by some to invalidate them. Neither my acquaintance with the literature of bee-keeping, nor my familiarity with our patent laws, nor any facts which have been alleged against the Heddon patent, lead me for a moment to question its validity.

History seems often to repeat itself. In my own day, how often it was declared to be enough to invalidate the claims of the first person who had invented a hive, which commended itself at once to those most largely engaged in the production of honey—how often, I say, it was thought enough, to show that some one before me, had used a frame in a bee-hive. It mattered nothing that I never claimed to have been the first to invent a movable frame—that my frame and way of using it were fully described, and