

sequently the dishonest and jealous couldn't plagerise it, nor snap and quarrel at our success in bringing it forward.

"The combined experience of my foreman, students and myself during the past season, brings us unanimously to a conclusion somewhat at variance with those with which we entered the season of 1886. Our broader experience, closer observation and more careful experiments, verify the following facts regarding the new hive:

After the first inversion of the brood-combs, which secures the complete filling of the frames, we never care to invert them again. When the brood-chamber is large and deep, by virtue of its being composed of two brood-sections, the interchanging of them accomplishes all, and better, than can be accomplished by inverting. When the brood-chamber is contracted to one case, it is then so small and shallow that all the favorable conditions that could result from inverting, are always present. In regard to reversing surplus sections, we find the following serious objections to inverting them by whole cases:

If the combs are not sufficiently developed, to be properly attached to the sides of the sections, they will fall over, making a bad mess. On the other hand, if they are pretty nearly all capped over and then reversed, they will either be finished without being attached at the top at all, or else, what is oftener the case, be ridged and made to look bungling as they are attached to the bottom-piece, now at the top of the case. They are also not so white and beautiful as those not so reversed. There is, however, a short period in the development of these little surplus combs in which inverting results in all the advantages ever claimed for it; but as it is a fact that the combs of a whole case are rarely all at this stage of development at one time we are unanimously in favor of inverting them by wide-frames. We find the development in all four sections in any one wide-frame, usually to be almost universally the same, which makes this system practical and at the same time we perform this operation we are also "jumping" the outside frames to the centre (as Mr. Manum terms it) wherever we find variance in their completion; which, however, is not so often the case with the new hive as with the Langstroth and other hives. We find that variance in the completion of sections, exists from side to side, and not from end to end, of the cases, which is one fact that warrants a preference for wide-frames.

In the light of the foregoing, we unanimously advise making the New Hive with full, rather than half bee-spaces, as was adopted when considering both systems, three years ago. This will also save much complication when using the New Hive in the same apiary with other styles of hives with full bee-spaces. The grand functions of the hive, consist first, in the arrangement by which the combs can be divested of queens or workers and their condition instantly determined without the tedious labor of removing, or exposing them to robber bees. Second, a brood-chamber divided in horizontal sections. Third, the break-joint honey-board as used with the New Hive. Fourth, the set-screws for tightly compressing the frames to avoid propolis, and to support them when we may desire to invert them."

No, our patent does not cover the half bee-space and we never claimed that it did and many bee-keepers have advised me to cover it in a separate patent, but I have replied to all that I didn't believe many of our people desired to grab the results of my labor, patent or no patent. Mr. Armstrong seems to be a sort of a chronic patentee. I will give an account of some of his inventions that have come to my notice: May 4th, 1875, he patents his "Centennial Hive" April 4th, 1876, to make sure that no one should steal its virtues, he spreads another patent over it. In 1879 we find it with radical changes, whether patented or not, I cannot say. In 1885, out comes "The Crown Hive," I believed it was called; also patented. August 10th, 1886, he receives another patent. Something is getting red-hot now, and on September 14th he receives another, and this is the one in which he claims the bee-space is granted to him, and wherein I affirm it is not, except in combination with Mr. J. M. Shucks's outer-case, and some wedges, &c., of Mr. A's invention. Mr. A. says in his article that I know how long patents delay in getting through. I do know that mine took five months, that Mr. Armstrong's of May 4th was pending five months and twenty-six days. His next patent of November 17th, 1885, was pending one year and two months. His next, August 10th, 1886, five months and nine days. His last, September 14th, 1886, in which he believed, or tried to make us believe, he had patented my half bee-space, was pending three months and six days. This was obtained in the least time of any recent patent for a bee hive, with which I am acquainted. The application was filed June 8th, 1886, for the patent exhibiting my half bee-space. Mr. Armstrong takes the *American Bee Journal* besides my book describing it being sent broadcast all over the land early in January. Mr. Clarke's review of the book and hive appeared in *A. B. J.* January 20th. In that same paper for February 17th this half bee space was discussed. In the same paper under date of March 10th, on page 152 Mr. Hutchinson discussed the half bee-space. It was also discussed in *Gleanings* about the same time, and even had Mr. A. through the inadvertance of the patent office procured a patent on the half bee-space, it would have been invalid at once. Even though I am abandoning the half bee-space in my new hive, I know I am the original and believe prior inventor of it. I know nothing of Mr. A's honesty except by his works and claims. He knows nothing more of mine. I could not afford to entertain malice toward him or any other person. I will joyfully herald the coming of any hive better than we now have, but don't let it