

UNITED STATES PATENT OFFICE.

L. C. BRISTOL AND C. T. ALVERSON, OF VICTOR, NEW YORK.

IMPROVEMENT IN BEE-HIVES.

Specification forming part of Letters Patent No. 58,585, dated October 9, 1866.

To all whom it may concern:

Be it known that we, L. C. BRISTOL and C. T. ALVERSON, of Victor, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Bee-Hives; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a transverse vertical section of our invention. Fig. 2 is an elevation of a section of the front of the hive, showing the variable plate R and a face view of one of the ventilators C.

This invention consists mainly in such a construction and relative arrangement of the ventilators in the inner and outer cases of the hive as to constitute a thorough ventilation of the intervening space, and also of the inner hive.

To enable others to make and use our invention, we will describe its construction and operation.

We construct the outer case, A, of any desired form or size, with several ventilators C in the sides, of ordinary construction. Within this case we place the case B, to which the comb frames D are attached. This case B should be made so as to afford a space, F, of one-fourth of an inch or more between the two cases. This space is equalized on all sides by means of centering-guides G, fixed in the angle of the inner case, and the supporting bars E at each corner, which are also rigidly attached to the inner case, B.

It has been found that when this inner case is ventilated only by means of the ordinary ventilators C, which are guarded within by wire gauze *b*, which prevents the passage of the bees, they immediately seal them up with wax, and of course thereby cut off all ventilation to the upper portion of the case B. To prevent this, we provide this case with a long slot, *a*, Fig. 1, sufficiently large to permit the bees to pass through freely; and when they

can do that they will leave it open, because they will then be able to allow no millers or the like to lodge within the openings. This plan really effects the most thorough ventilation to all parts of the inner case, B, during the hot season.

As the guide bars J of the comb frames D have been made heretofore, the loaded combs were very liable to become detached and broken in removing the frames from the case. We avoid this by shaping the bars transversely, as shown in Fig. 1, which affords more surface for the bees to attach to. It also constitutes a sort of dovetail connection for the comb.

It is sometimes desirable to entirely close the entrance, as indicated by the dotted lines *d*, to the hive, as shown in Fig. 2. At other times it may be necessary to close it sufficiently to enable one or two bees to guard the hive, which is done by turning the disk R so as to cause the opening *e* to register with the entrance *d*. To permit the passage of the workers and prevent the escape of the queen the disk should be turned with the opening *e* down.

The slot *f* affords a full opening, and the slot *g* two thirds or less.

The ventilators C at the top of the outer case do not register with those, *a*, in the inner case; therefore no light is admitted into the case B when the outer ventilators are open.

The hive may be provided with an extra case on the top, in which may be placed the ordinary glass boxes.

What we claim as our invention, and desire to secure by Letters Patent, is—

The relative arrangement of the ventilators C with the ventilators *a* and double hives A B, as shown and described, and for the purposes set forth.

L. C. BRISTOL.
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Witnesses:

WM. S. LOUGHBROUGH,
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