

## Anited States Patent Office.

## HENRY L. HECKMAN, OF BROOKLYN, IOWA.

Letters Patent No. 111,204, dated January 24, 1871.

## IMPROVEMENT IN BEE-HIVES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY L. HECKMAN, of Brooklyn, in the county of Poweshiek and State of Iowa, have invented certain new and useful Improvements in "Bee-Hives;" and do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in the construction and arrangement of a bee-hive with moth-

trap, as will be hereinafter fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and in which—

Figure 1 is a longitudinal vertical section, and

Figure 2 is a front elevation of my hive.

Figure 3 is a plan view of a slide used in the hive. A represents the outside box, resting upon legs of suitable height.

In the center of the bottom of the box A is a circular opening, around which, from the under side, is suspended a metallic box, B, provided with a movable bottom, C.

Inside of this metallic box is placed a glass bottle, D, the neck and mouth of which extend a suitable

height above the bottom of the box A.

In the sides of the box A are made grooves for the reception of the slide E, the upper and lower sides of which are both covered with metal sheets a a'.

The top sheet a is perforated with a large number of small holes, from which grooves lead to a central opening, b, in the slide E.

The sides and also the ends (from underneath) of the slide E are provided with holes, which lead into

the central opening b.

From the under side of the slide around this opening projects a funnel, d, which leads downward into the mouth of the bottle D, completing the mothtrap.

It will be seen the chamber is formed between the bottom of the box A and the slide E, which chamber is, at the rear side; provided with a door, G, said door forming the entire rear side of the chamber.

When the moth-trap is not in use, the slide E is replaced by the perforated slide E', shown in fig. 3.

Above the slide E, the box A is, by a horizontal partition, H, divided into two compartments—the lower one for the comb-frames, and the upper for the surplus honey-boxes.

Both of these compartments are provided with doors I I', which form the entire fronts of their re-

spective compartments.

The rear side of the comb-frame or lower compartment is set in farther than the rest of the box, and leaves a space at its lower edge its entire width for an entrance for the bees.

In the same manner the door I does not close up the entire space down to the slide E, but also leaves a

space for a bee-entrance.

J J are the comb-frames, constructed in any suitable manner, and placed within a box composed of the bottom frame ff, corner-posts ee, and top h, held together near the upper end by a wire, i, wound around it and let into the corner-posts.

All four sides of this box are provided with glass, and the bottom is formed of a metallic perforated

slide, k, as shown.

In the top h is an opening, m, corresponding with a similar opening,  $m^1$ , in the partition H, and opening,  $m^2$ , in a box, K, placed in the upper compartment of the main box A.

The ends of the box K are provided with glass, and within said box are placed smaller honey-boxes L L, having the outer ends provided with glass, and also having openings  $m^3$ , as shown, for the bees to pass from one to the other.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the main box A, of the metallic box B, having movable bottom C, glass bottle D, and perforated slide E, provided with the metallic sheets a a' and funnel d, all constructed substantially as herein described and shown.

2. In a bee-hive, the moth-trap B D, when constructed substantially as specified.

HENRY L. HECKMAN..

Witnesses:

DAVID STERLING, B. M. TALBOTT.