

C. W. BANKS.

Improvement in Bee-Hives.

No. 131,730.

Patented Oct. 1, 1872.

Fig. 1.

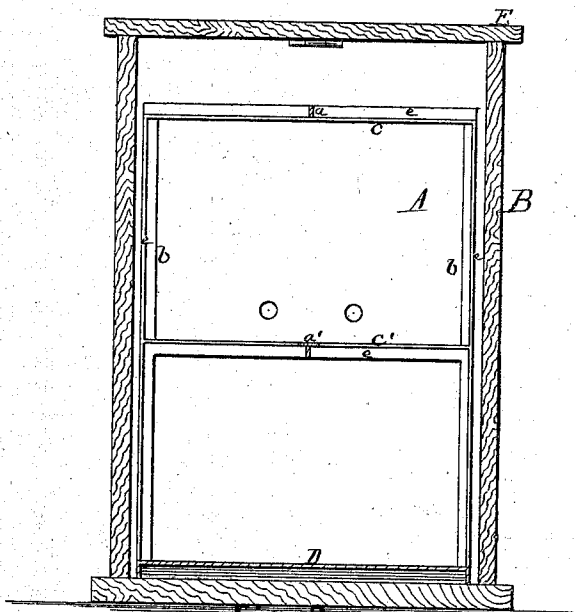
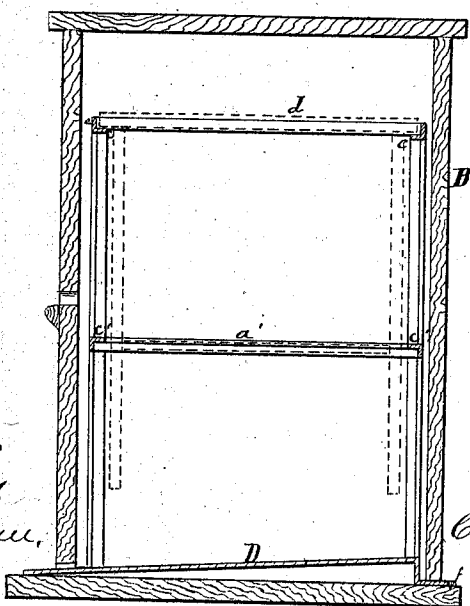


Fig. 2.



WITNESSES.

*J. A. Arnoldy*  
*Geo. E. Mopham.*

INVENTOR.

*C. W. Banks,*  
*Chipman & Smith & Co*  
*Attys*

# UNITED STATES PATENT OFFICE.

CHARLES W. BANKS, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO JOHN B. RUSSELL, OF SAME PLACE.

## IMPROVEMENT IN BEE-HIVES.

Specification forming part of Letters Patent No. 131,730, dated October 1, 1872; antedated September 28, 1872.

*To all whom it may concern:*

Be it known that I, CHARLES W. BANKS, of Baltimore, in the county of Baltimore and State of Maryland, have invented a new and valuable Improvement in Movable-Comb Bee-Hives; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

This invention has relation to bee-hives; and consists in the construction of a malleable cast-iron skeleton frame to support the movable comb-frames, as hereinafter described.

In the drawing, A represents a malleable cast-iron frame, of a rectangular form, and standing upright within a wooden hive, B. The frame is composed of two side frames, connected by horizontal bars *a a'*. Each side frame is composed of two uprights, *b*, united at their upper ends by means of a horizontal bar, *c*. About midway between the upper and lower ends of the uprights of each side frame another horizontal bar, *c'*, reaches from one upright to the other. The bars *a a'* connect the bars *c c'*, as shown in the drawing. The frame A is cast with an inclined bottom plate, D, inclosed between the corner supports or uprights *b*.

The comb-frames may be of the ordinary form. They are arranged as indicated in Fig. 2, the projecting ends of the bar *d* resting on the bars *c*, while the sides of the frame depend, as shown. The flanges *e* constitute guides in sliding the comb-frames in and out.

The object of my invention is to produce a more durable and convenient frame for bee-hives than those made of wood and in general use, and with less trouble and cost.

The frame, as I construct it, fits within a wooden case, B, which may be lifted so as to expose the interior of the hive. The skeleton form of the iron frame allows access to the comb-frames from all sides. The case B is provided with a hinged lid, E, so that the hive may be partially opened without removing the case.

I propose constructing the iron frame as light as may be consistent with strength and convenience. To produce sufficient firmness of parts without making the frame bulky or heavy I construct the uprights *b* and horizontal bars *c c' a'* with longitudinal strengthening-flanges *e*. The vertical sides of the bottom board extend down so as to close the space underneath the bottom board, and thus prevent insects from lodging therein. Flanges *f* may be used for attaching the frame to the bottom of the hive, as shown.

A frame constructed as herein described is easily and cheaply manufactured, and, inasmuch as wax will not adhere to it as readily as to wood, it possesses the additional advantage of permitting the comb-frames to be removed with little or no difficulty.

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

The cast-iron frame for bee-hives herein described, having uprights *b*, horizontal bars *c c'*, central transverse connections *a a'*, and bottom plate D, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHAS. W. BANKS.

Witnesses:

BENJN. EGGLESTON,  
OLIVER BURKE.