

A. GANNIFF.  
Bee-Hives.

No. 147,222.

Patented Feb. 3, 1874.

Fig. 1.

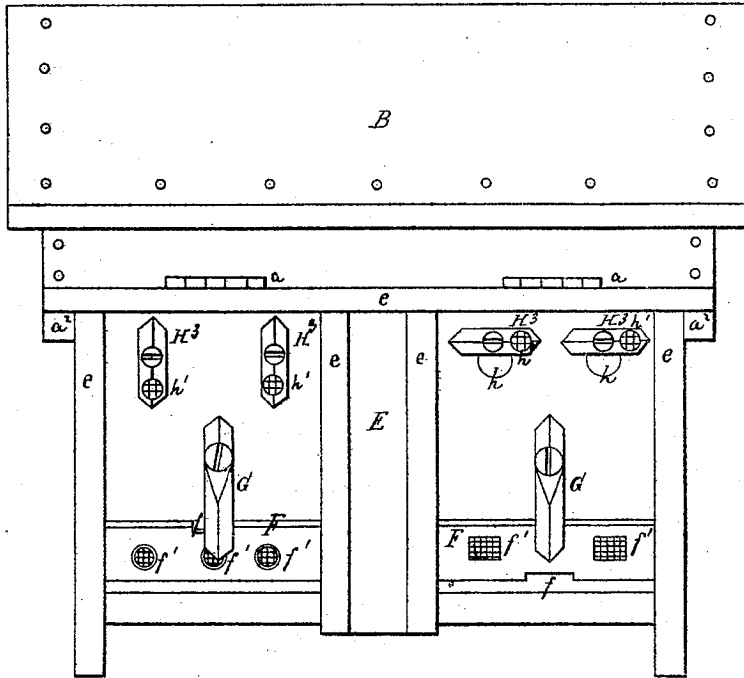
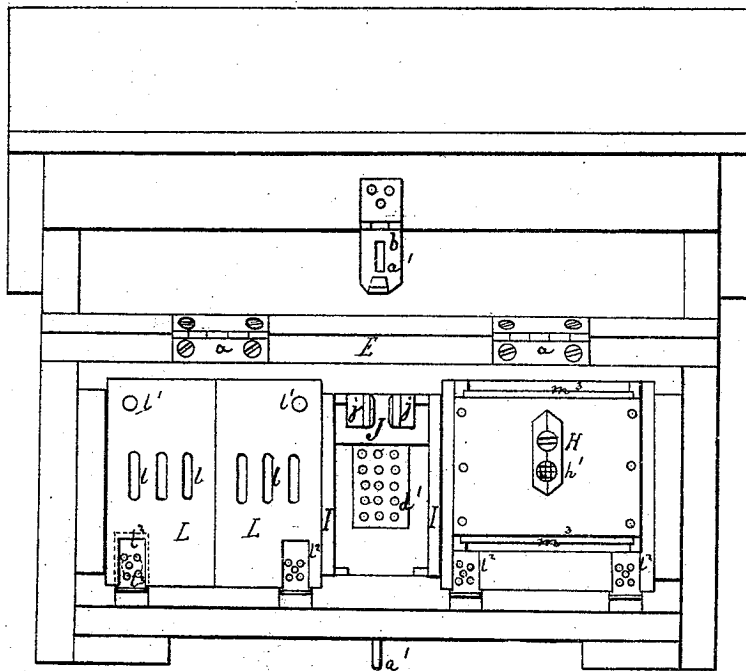


Fig. 2.



Witnesses.  
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Inventor.  
Albert Ganniff,  
Chipman and Fossum, Attys

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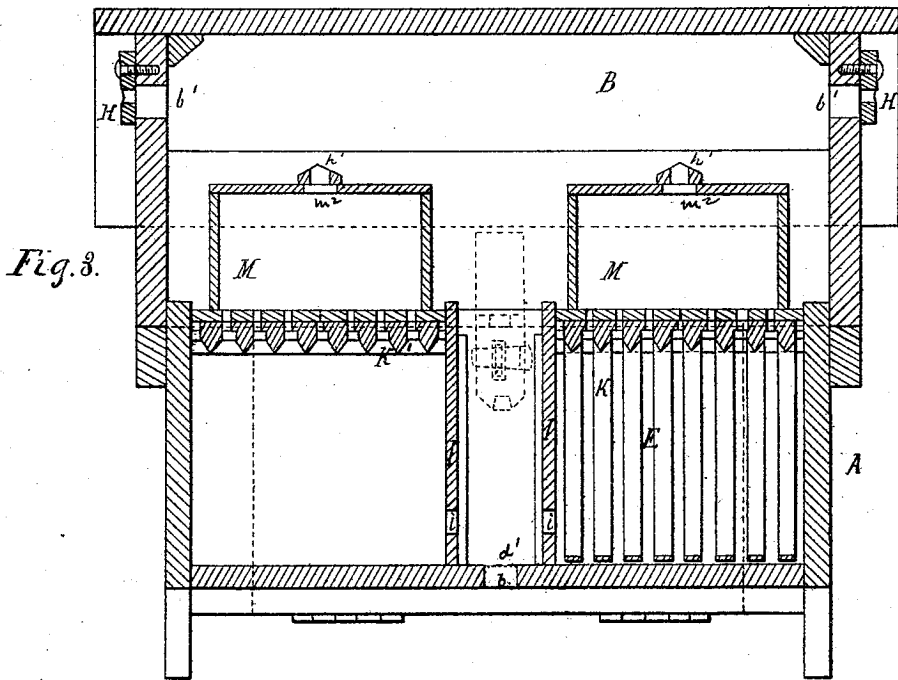


Fig. 3.

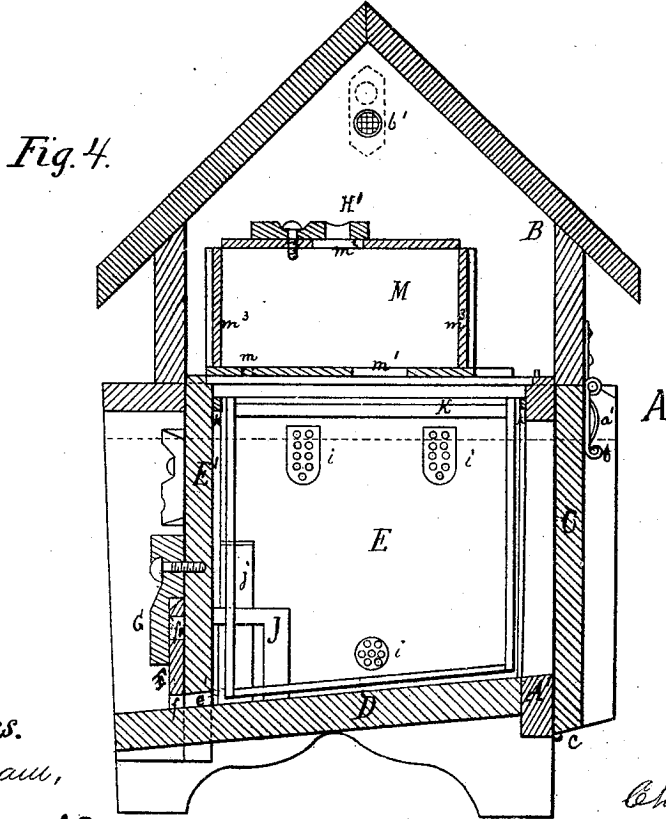


Fig. 4.

Witnesses.  
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Inventor.  
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Chipman & Son, Attys.

# UNITED STATES PATENT OFFICE.

ALBERT CANNIFF, OF THREE RIVERS, MICHIGAN, ASSIGNOR OF ONE-HALF HIS RIGHT TO JAMES M. KING, OF SAME PLACE.

## IMPROVEMENT IN BEE-HIVES.

Specification forming part of Letters Patent No. 147,222, dated February 3, 1874; application filed June 14, 1873.

To all whom it may concern:

Be it known that I, ALBERT CANNIFF, of Three Rivers, in the county of St. Joseph and State of Michigan, have invented a new and valuable Improvement in 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 drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of my improved bee-house by a front elevation. Fig. 2 is a top view of the same. Fig. 3 is a longitudinal section of the same. Fig. 4 is a transverse section of the same.

My invention relates to bee-houses and bee-hives; and it consists of a roofed house, with ventilated compartments for bee-hives, which, by means of covered passages and adjustable valves, may be made to communicate, or may be separated from each other, and which also communicate with ventilated honey-boxes above and under the roof, the several bee-hives and honey-boxes, with the house, being separately or jointly ventilated, with or without the aid of screens. The object of my invention is to provide a bee-house with such a ventilating arrangement that the bees may be excluded from or admitted to the several parts without interference with the ventilation, and vice versa.

In the drawings, A represents the body of a bee-house; B, the roof, which swings on hinges *a*, and is fastened down by a hasp, *b*, and staple *a'*, on a vertical door; C, which is fastened to the lower part of the bee-house A with hinges *c*. The bottom D of the house is inclined, and has openings *d* between the hives E, with gauze-covering *d'* to admit air, but exclude animals. The front E' of the bee-house is provided with horizontal and vertical shelters or shields *e* to protect the openings for ventilation, and ingress or egress for the bees against the severity of the weather. The openings *e'* for the bees are between the vertical shields *e*, and between the board E and the bottom D, and they may be partly or wholly closed by boards F, with notches *f* and gauze-covered vent-holes *f'*. The boards F are held

in place by levers G, fastened to the board E, and, when the notches *f* are turned down, a limited entrance, as common, is allowed to the bees. If the boards F are reversed, with the notches *f* up, the entrances are closed, and the vent-holes *f'* keep up an air-communication within and without the bee-house. If it is preferred to admit the bees nearer the roof B, the levers H are turned into a horizontal position, thereby exposing the holes *h*, which may be turned into vent-holes by moving the ends of the lever H, with the gauze-covered holes *h'* over them. The spaces between the hives E are partitioned off by vertical sliding boards I, with gauze-covered vent-holes *i*, and they are provided with covered passages J, which connect the hives, and which may be closed by vertical slide-valves *j* to prevent bees from going into the neighbor hives. The hives are provided either with loose frames K or slats K' to accommodate the bees in attaching their honeycombs. The covering of the hives consists of boards L, with longitudinal slots *l*, of sufficient size to allow free passage for the bees, and with air-holes *l'* for ventilation. On these boards L the honey-boxes M are placed, so that the air-holes *m*, with which they are provided at the bottom, meet the holes *l'* in the boards L. The honey-boxes are otherwise provided with transverse slots *m'*, which, being placed across the slots *l* in the boards L, afford free passage to the bees from the hives to the honey-boxes. The honey-boxes are provided, at their tops, with holes *m''*, which may be opened or closed, or turned into gauze-covered vent-holes with the aid of the levers H', which are of the same construction, and operate in the same manner, as those on the front board E. The front and rear walls of the honey-boxes are made of glass panes *m'''*, and may be slid up and down in vertical grooves in the sides of the honey-boxes, which are made of wood. The boards L have, at their rear ends, where the honey-boards do not rest on them, openings *l''*, which may be partly or wholly closed by perforated slides *l'''*. This insures circulation between the hives and the room under the roof B. The gable ends of the bee-house near the roof are provided with vent-holes *b'*, which may be partly or wholly

closed by means of levers H, of the construction already described. The roof of my bee-house projects considerably beyond the gable, and thereby forms a valuable protection against the inclemency of the weather. The lower part of the roof B incloses the upper end of the bee-house A, and projects over it on all sides, so that rain cannot follow the joints and get near the bee-hives. The roof B is supported at the gable ends by the rails  $a^2$ , fastened to the bee-house. By disengaging the staple  $a^1$  from the hasp  $b$ , and by swinging the door C down, the back of the bee-house is exposed, which consists of a strong sash-frame, A', and glass panes  $a^3$ . The bottom D projects over the front of the bee-house, and thereby affords a convenient place for the bees to alight on. In the hives I use top slats K' or frames K, supported by rails  $k$  on the sides of the bee-

house, and the shape of the tops of the said slats or frames is such that a longitudinal slot,  $k'$ , is formed between each two of them, so that the bees may pass in and out, and the ventilation may go on undisturbed between the hive and the honey-box.

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

A bee-hive having the reversible boards F, gauze-covered openings  $f' f'$ , and openings  $f f$ , said boards being held in place by levers G, substantially as described.

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

ALBERT CANNIFF.

Witnesses:

E. H. LOTHROP,  
E. L. BROWNE.