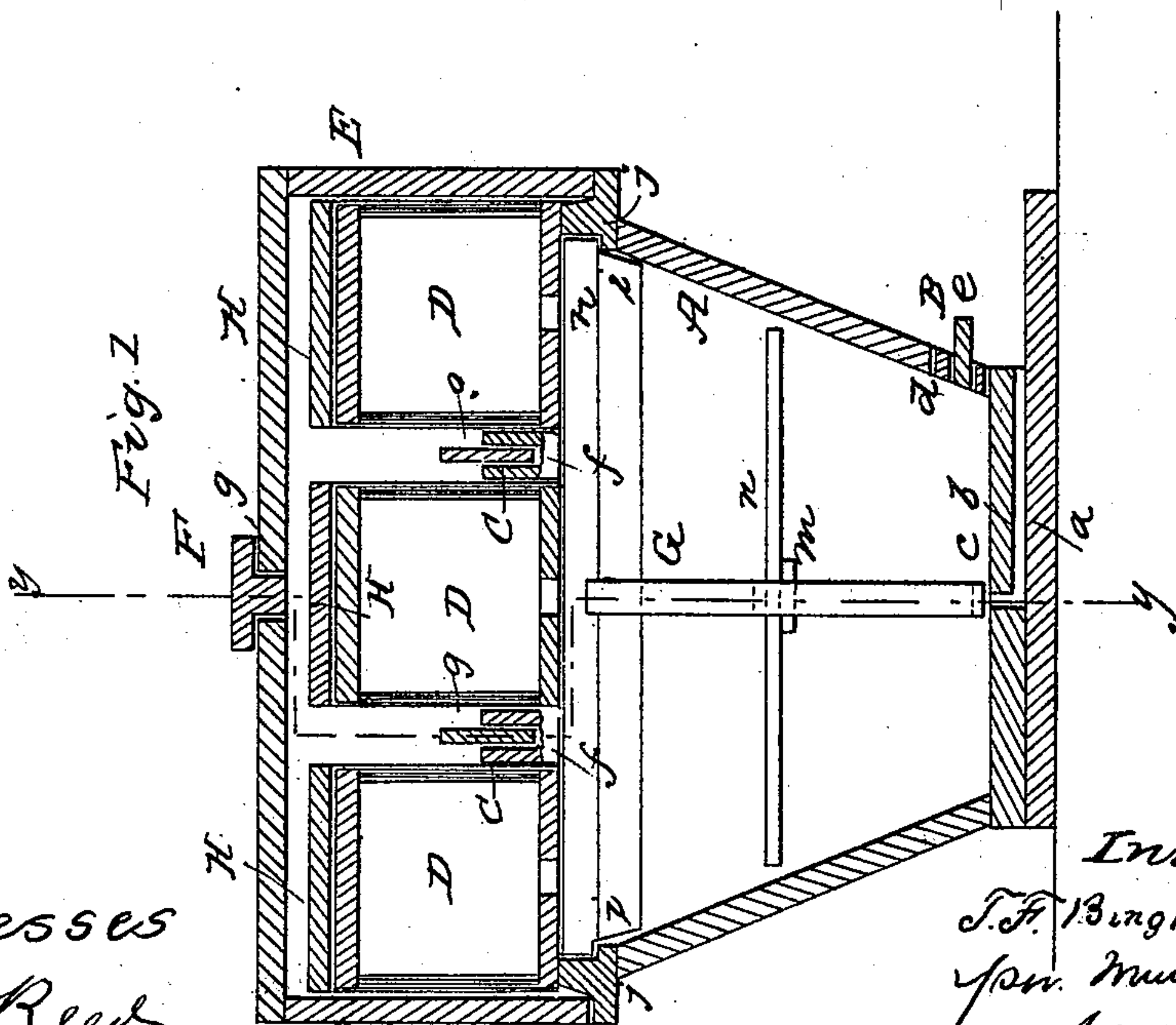
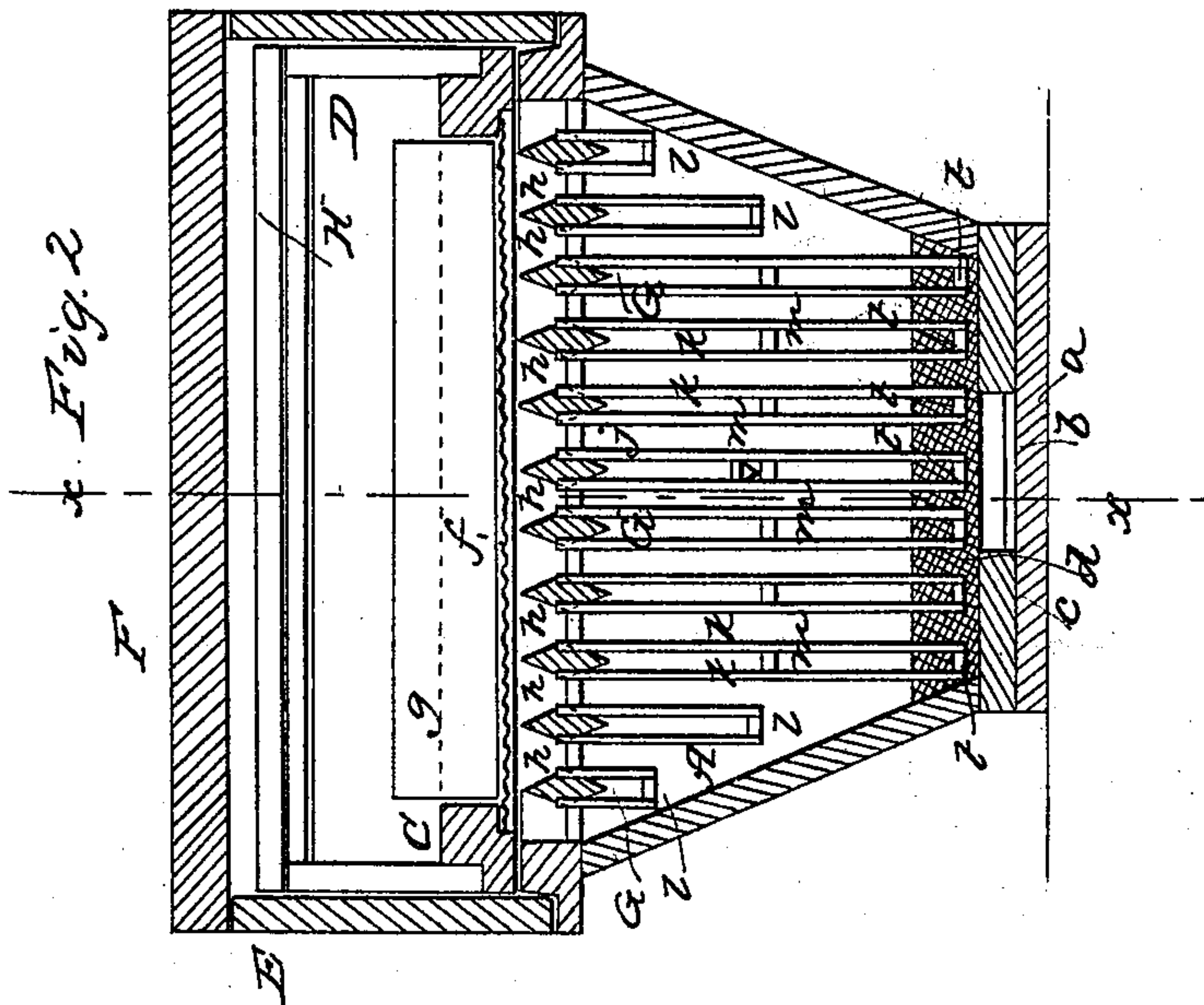


T. F. BINGHAM.

Bee Hive.

No. 41,052.

Patented Jan. 5, 1864.



Witnesses
Geo. B. Reed

Inventor
T. F. Bingham
per Munn & Co
Attorneys.

UNITED STATES PATENT OFFICE.

T. F. BINGHAM, OF GOWANDA, NEW YORK.

IMPROVEMENT IN BEE-HIVES.

Specification forming part of Letters Patent No. 41,052, dated January 5, 1864.

To all whom it may concern:

Be it known that I, T. F. BINGHAM, of Gowanda, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements in Bee-Hives; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a vertical section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to an improvement in the construction of the comb-frames and ventilators, and the arrangement of the same with spare honey-boxes, as hereinafter fully shown and described, whereby it is believed that many advantages are obtained over bee-hives hitherto constructed, which will be hereinafter set forth.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the body or main portion of the hive, which is of inverted pyramidal form and fitted on a base, *a*, the front part of which projects a short distance in front of the hive to serve as an alighting-board, as shown clearly in Fig. 1. The bee-entrance *b* extends from the center of the front side of the hive back underneath the bottom *c*, between it and the base *a*, and extends up through the center of the bottom *c*.

In the front side of the hive, just above the entrance *b*, there is fitted a frame, B, the inner surface of which is covered with wire-gauze *d*. In the front side of this frame B there is inserted, when necessary, a strip, *e*, which serves to close the frame B and prevent the passage of air into the hive. (See Fig. 1.) In case of the wire-gauze *d* becoming choked up by propolis, the frame B may be readily removed, the wire-gauze cleansed, and the frame B replaced in the opening prepared for it. By this means the screen or wire-gauze *d* may always be kept in a clean state; so as to admit of a free ingress of the air.

On the top of the hive A there are placed two or more bars or oblong frames, C C, the

lower surfaces of which are covered with wire-gauze *f*, and in the upper parts of these frames C there are inserted, when necessary, strips *g*, which close the frames C and prevent a circulation of air through the gauze *f* when none is required. The frames C, if the wire-gauze *f* becomes choked or clogged, may be readily removed and the wire-gauze cleansed with the greatest facility.

D D D represent spare honey-boxes, which are of rectangular form and rest upon the top of the hive A, the frames C C being between the spare honey-boxes. These spare honey-boxes are inclosed by a quadrilateral case, E, which is fitted on the top of the hive A, and has a groove or slot, *g'*, made in its top, extending entirely across it and serving as a ventilating-opening, said slot *g'* being closed or stopped, when not required to be open, by a strip, F.

G represents the comb-frames, which are composed each of a top bar, *h*, of lozenge form in its transverse section, as shown clearly in Fig. 2. The bars *h* are notched at each end, as shown at *i* in Fig. 1, so as to form bearing-surfaces to rest on shoulders *j* at the upper parts of the front and back of the hive. The bars *h* have each a pendant attached centrally to them, said pendants being composed of two parallel strips, *k k*, connected at their lower ends by cross-bars *l*. These pendants vary in length, the two outermost ones at two opposite sides of the hive being shorter than the others, so that they will not come in contact with the inclined sides of the hive, as will be fully understood by referring to Fig. 2. The long central pendants have each a small block, *m*, fitted horizontally in them at their centers. Each pendant of the comb-frames has a triangular bar, *n*, fitted between its bars *k k*. These bars *n* have a horizontal position, rest on the central blocks, *m*, and are removable. I term them "transferring-bars." One only is shown in the drawings, that being sufficient, as they are all constructed precisely alike.

The advantages of the comb-frames constructed as described are as follows:

First. They secure a free passage for the air and bees to and beneath the spare honey-boxes D, and ventilators between the latter.

Second. The thin upper edges of the bars *h* furnish a suitable support for the boxes D without any other support between them and the

hive A, thus securing ready access, close proximity to and the warmth of the boxes, all of which are of the greatest importance in inducing their early occupation and facilitating the building of the comb.

Third. When the heavy boxes D are not in use, a floor, H, is employed, composed of three separate pieces equal in dimensions to the bottoms of the boxes D, said floor, when not in use, being placed on the top of the boxes D. The bars *h*, when in contact with this floor H, admit of the vitiated air passing directly to the ventilators, which are between the pieces of the floor. This moist vitiated air, therefore, is not allowed to pass to the unoccupied combs and walls and there condense, forming vapor and frost. The hive is consequently kept dry and in a wholesome condition for the bees in winter.

Fourth. The floor H being dispensed with during the honey-making season, the spare honey-boxes D are kept at a proper degree of warmth, which would not be the case were a partition-floor used between them and the comb-frames.

Fifth. The upper surfaces of the bars *h* being inclined greatly facilitates the passage of the heavily-laden "workers" to the boxes.

Sixth. The pendants of the comb-frames cause the combs to be supported their entire height, forming a complete vertical support for the same.

Seventh. The blocks *m* secure an opening in each comb for the passage of the bees, so that they need not pass entirely around the combs. They afford a net-work in the center, which will secure the clustering of the new swarm there and insure the building of straight combs.

Eighth. The pendants passing from the bee-

entrance upward afford the most direct route for the passage of the bees to the center and upper portion of the hive and boxes D, without passing over the brood and bees.

Ninth. They strengthen the comb and secure them to the bars *h*, so that the latter, with the comb attached, may be removed at will. They guide and support the transferring-bars *n*, by which the combs of any hive may be adjusted to mine and the bees transferred at pleasure, the bars *n* supporting the newly-located comb in the frames.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The comb-frames G, constructed with top bars, *h*, having beveled or inclined upper surfaces and with or without beveled under surfaces, and having pendants attached centrally to them, formed of two vertical parallel bars, *k k*, substantially as and for the purposes herein set forth.

2. The blocks *m*, fitted between the bars *k k* of the pendants of the comb frames, as and for the purpose specified.

3. The transferring-bars *n*, in combination with the comb-frames G, for the purpose set forth.

4. The removable ventilating-frames B C C, provided with wire-gauze and strips or stoppers, substantially as and for the purpose specified.

5. The combination of the sectional floor H, comb-frames G, spare honey-boxes D, and removable ventilating-frames B C C, all arranged substantially as and for the purpose set forth.

T. F. BINGHAM.

Witnesses:

SILAS W. WHITE,
ALEX. R. MUHLFEIT.