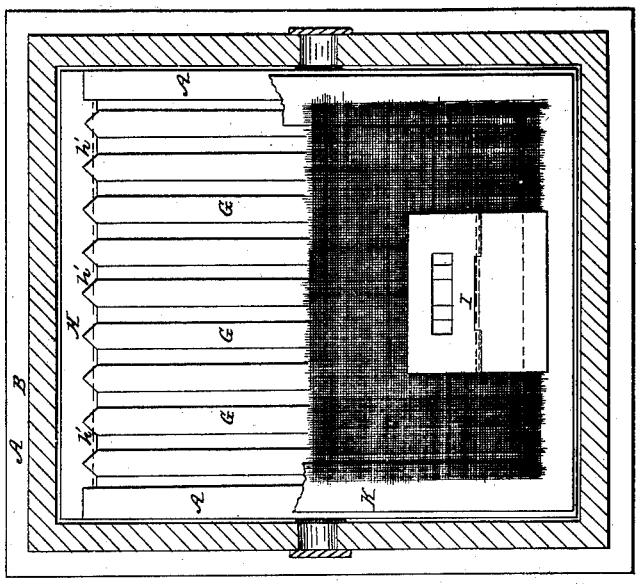
2 Sheets—Sheet 1.

A. H. FRANK.

Bee Hive.

No. 45,598. Patented Dec. 27, 1864.

Fig. 2.



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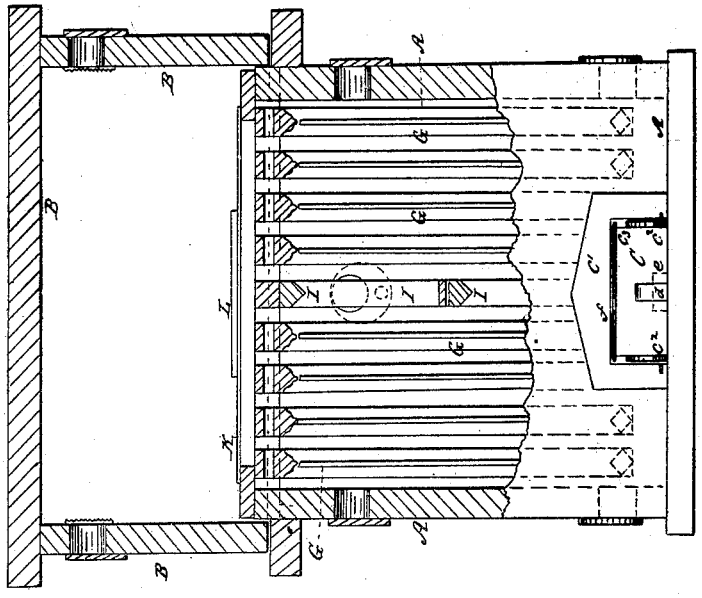

Witnesses:
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Geo Wallace

Inventor:
Andrew H Frank

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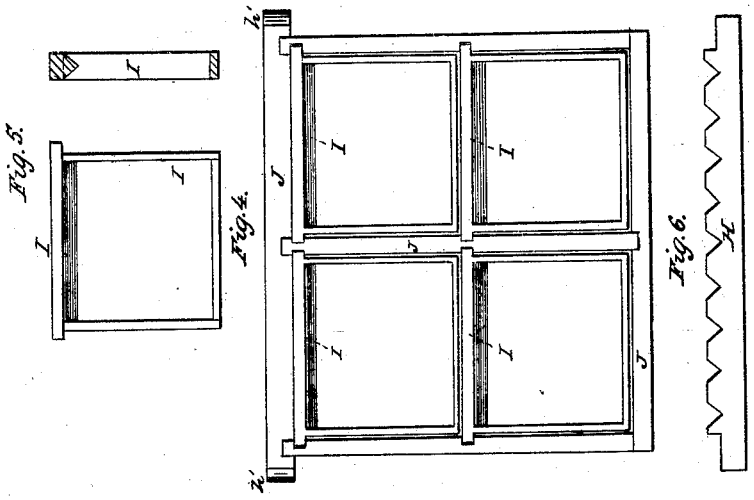

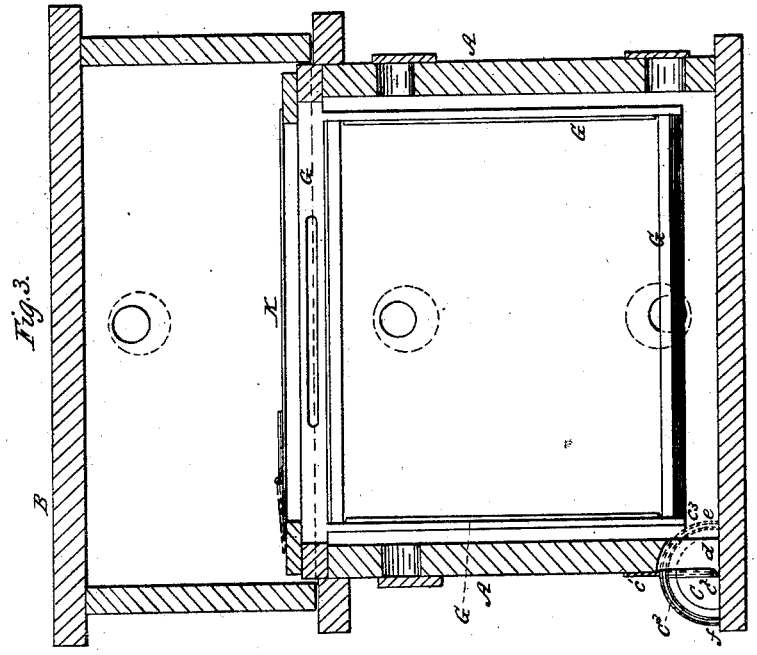

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UNITED STATES PATENT OFFICE.

ANDREW H. FRANK, OF BUFFALO, NEW YORK.

IMPROVEMENT IN BEE-HIVES.

Specification forming part of Letters Patent No. **45,598**, dated December 27, 1864.

To all whom it may concern:

Be it known that I, ANDREW H. FRANK, of the city of Buffalo, county of Erie, 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 and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure I is a vertical section of my improved hive, partly in elevation, to show the bee-entrance or regulator. Fig. II is a plan, in part showing the method of holding the comb-frames and in part showing the wire-screen with hinged door therein. Fig. III is a vertical section, also showing more fully the construction of the bee-entrance or regulator. Fig. IV represents a compound frame, and Fig. V a section of compound frame. Fig. VI represents a removable miter-piece for holding in place the comb-frames.

The nature of this invention consists, first, in an improved bee-entrance or regulator; second, in an improved method of securing the comb-frames in the hive, so that they may be held firmly in exact position when in the hive and yet so that they may be removed from the hive when desired.

Letters of like name and kind refer to like parts in each of the figures.

A represents the main body of the hive and B represents the cap.

C represents my improved bee-entrance or regulator, which is placed in the front side of the hive, as shown in the drawings. This is of peculiar construction, and is described as a quarter-segment of a cylinder, hung in its frame c' on journal-pins, as shown at c^2, so that it may perform a quarter-revolution (more or less) on these journal-pins. It has an inner corresponding circular sliding plate, as shown at c^3, by the movement of which the entrance-opening may be enlarged or diminished, as may be desired. When this plate is moved into one position it will leave the entrance-opening of the size as shown at *d*, Fig. I, which is about half by a quarter of an inch in size, and is used when the bees wish to guard the hive against the depredations of robbers. When this plate is moved into another position it makes the opening of the size shown by the dotted lines *e*, Fig. I, which is about one inch by one quarter, (more or less,) and is proper to be used at certain seasons of the year. In Fig. III this segment is shown as moved a quarter-revolution forward. In this position the opening in front, which is a long notch in the plate, is about four inches long and about three-sixteenths wide, (more or less,) as shown at *f*, which makes an opening suitable for the working bees to pass through, but not large enough for the queen or drones. The plate c^3 may be moved far enough to close this opening entirely, and when thus placed the bees can pass neither out nor in. This segment may also be placed in other positions by moving it upon its journal-pins and held in any position desired, so as to make the opening-entrance of any required size. This device makes a perfect regulator, which may be adapted to all the varied conditions of bee-culture.

Movable comb-frames are shown at G. These may be of any convenient construction, but when they are put into their proper places in the hive they are held securely in place by means of movable miter-pieces H, as shown in Fig. II, placed at each end of the frames. The upper bar of the comb-frames is made pointed or beveling at each end, so as to fit the notches in the miter-pieces H, as shown at h'. When these miter-pieces are in their proper places, as shown in Fig. II, they hold the comb-frames securely and firmly in their places, but, the miter-pieces being each movable, when they are taken out the comb-frames are released, so that they may be moved sidewise in the hive or taken out of the hive, as may be desired. The comb-frames may, however, be lifted vertically out of the hive without moving these miter-pieces whenever it may be desirable to do so.

My improved compound comb-frame consists of four (more or less) small comb-frames, I, placed within one large frame, J. The large frame J is of the same size as the other comb-frames, but is so constructed in apartments that the small frames may be put in and taken out at pleasure. The small frames are made to fit into each apartment of the large frame, so that either one may be put into its place and taken out without disturbing the other. The object of these compound small frames is to provide comb of suitable form and size to put into smaller hives for the rearing of queen bees. These small frames are of the proper size to be placed in the small hives where queen bees are

reared. The bees will fill these small frames in the same way they do the larger one, and when so filled they may be removed and placed in the small rearing-hives without waste of honey or loss of embryo bees. The advantages of this improvement will be readily seen by those accustomed to bee-culture. The object of this part of my improvement is to obtain the comb in a suitable form to be used in hives for rearing queen bees without cutting or breaking the comb, and consequently without waste of honey or loss of embryo bees, and hence, if two, three, four, or more of these smaller frames are used in any manner for that purpose, I deem such use to be within the principle of my invention.

K represents a wire screen, which is designed to be used in the winter season, when the hives are placed in a cellar. When this screen is used, the cap B is removed and the screen placed upon the top of the comb-frames, as shown in Fig. II.

My improvement consists in combining and using with this screen a hinged door, L, so that the bees may be fed without removing the screen. In cases heretofore where the screen has been used it has been necessary to remove it in order to feed the bees, and in so doing some of the bees would crawl out of the hive and get lost. The addition of this door avoids this difficulty. Whenever it is necessary to feed the bees in the use of this improvement, the feed-box is placed over the door and the door opened, so that the bees can pass up into the box and take their food and the box then removed and the door closed. All this can be done easily and without any loss.

N represents air-holes.

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

1. The bee-entrance or regulator C, constructed and operating in a manner substantially as described.

2. The removable miter-pieces H, constructed and applied in the manner and for the purposes substantially as described.

ANDREW H. FRANK.

Witnesses:

B. H. MUEHLE,

GEO. W. WALLACE.