



P. Nicolle,

2. Sheets, Sheet 2.

Bee Hive.

No. 113084.

Patented Mar. 28. 1871.

Fig. 3.

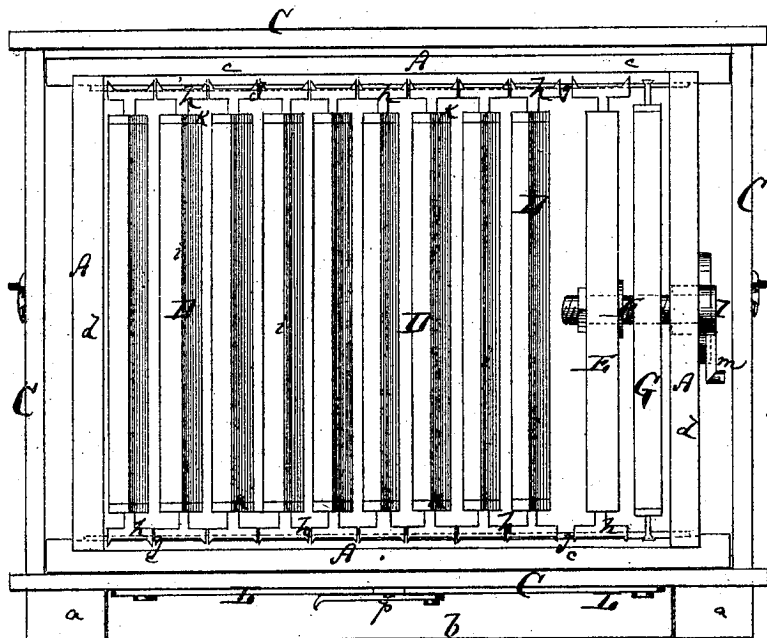


Fig. 4.

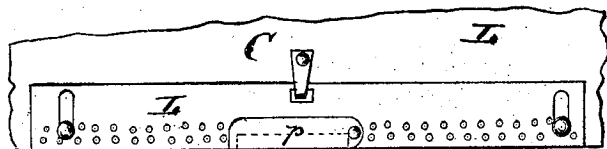
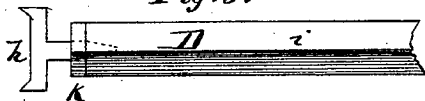


Fig. 5.



Witnesses:

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# United States Patent Office.

PHILIP NICOLLE, OF LINDSAY, CANADA.

Letters Patent No. 113,084, dated March 28, 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, PHILIP NICOLLE, of Lindsay, in the county of Victoria and Dominion of Canada, have invented a new and improved Bee-Hive; and I do hereby declare that the following is a full, clear, and exact description thereof which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a vertical longitudinal section of my improved bee-hive.

Figure 2 is a vertical transverse section of the same, *x-x*, fig. 1, being the section line.

Figure 3 is a plan or top view, partly in section, of the same.

Figure 4 is a detail face view of the metallic ventilator.

Figure 5 is a detail top view of a portion of a frame used within the hive.

Similar letters of reference indicate corresponding parts.

This invention relates to a new bee-hive, which is so constructed as to be useful during the hot and cold season, and to be readily inspected whenever desired.

The body of the hive is composed of an outer case, A, which contains the brood-compartments, being composed of the bottom frame *a*, hinged bottom *b*, and of the sides *c* and ends *d*.

The end boards *d* are set into grooves provided in the inner faces of the side boards *c*, as shown in fig. 3, the side boards projecting beyond the ends to form supports for the cover B.

The bottom frame *a* is, by cleats or standards *c*, elevated above the ground, and projects beyond the sides and ends of the case A, to form a support for the outer or protecting case C.

The bottom *b* is hinged in rear to the frame *a*, and has its front end sustained by a bar, *f*, which is fitted under it to close the bottom, the ends of said bar being fitted into grooves or notches in the frame *a*.

Near the top edges of the side boards *c* are secured, along said sides, within the case A, longitudinal metal strips *g*, from which the honey-frames D D are suspended.

These frames are provided with projecting cross-shaped metal ears *h h*, which rest upon the metal springs *g*, preventing thereby the bees from fastening the frames D by wax to the outer case.

Each frame D consists of a diamond-shaped top bar, *i*, similar bottom bar *j*, and straight vertical end pieces *k k*.

The bottom and top bars are so set that both the bottom and top edges of each frame are beveled. For the lower edges this is most important, as the hinged bottom will not be apt to crush the bees against the lower ends of the frames when being shut.

E is an adjustable end board, arranged within the

case A, and suspended from the metal strips *g* in a manner similar to the frames D.

It is provided with a projecting screw, F, which passes through one end of the case, and receives a nut, *l*, with a crank, *m*.

By turning said nut the plate E will be adjusted to set the frames D nearer together, or to loosen them.

Between the plates E and the end of the case is interposed a board, G, which straddles the screw F, and is suspended from the metal strips *g* by metal ears or pins. It prevents the bees from filling the said space between E and *d* with honey or wax.

When the board E is drawn off the frames D, that one of the latter nearest to E can be easily moved toward E and lifted out, without in the least disturbing the other frames.

The cross-shaped ears *h* of the frames are wider than said frames, and serve, therefore, to hold the same the requisite distances apart.

Upon the case A is placed an open frame, H, which is held down by hooks and eyes *n n*, as shown.

The same serves to support the honey-boxes I I, between which and the case A glass plates J may readily be interposed whenever it is desired to observe the contents of the case A or to remove the boxes I.

Each box I consists of top and bottom boards and of glass sides and ends, metal strips *n n* serving to rigidly connect the top and bottom.

The cap B of the hive rests on the protecting ends of the side boards *c*, unless the protecting case C is put on, in which case it rests on top of said case.

The outer case C is only used during winter and summer, to ward off extreme cold and heat. It is removed during moderate weather, when it is desired to let the sun's rays strike direct against the case A.

The entrance to the case A is through a small opening, *o*, in the front, close above the bottom.

The outer case has a similar corresponding opening, which is in line with *o*.

A perforated vertically-adjustable ventilating-plate, L, is arranged in front of the case C, and provided with a pivoted latch, *p*, for closing the entrance.

Having thus described my invention,

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

1. The cross-shaped metal ears *h*, arranged on the frames D, for supporting the same and holding them properly apart, substantially as herein shown and described.

2. The board G, interposed between the end of the case A and the adjustable board E, for the purpose and in the manner specified.

PHILIP NICOLLE.

Witnesses:

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