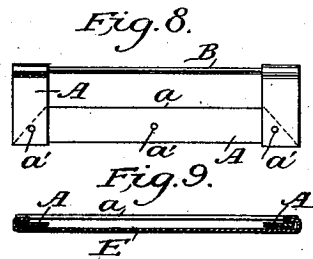
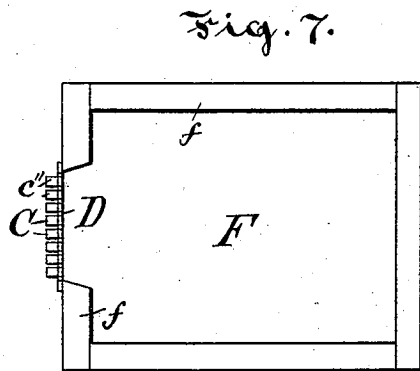
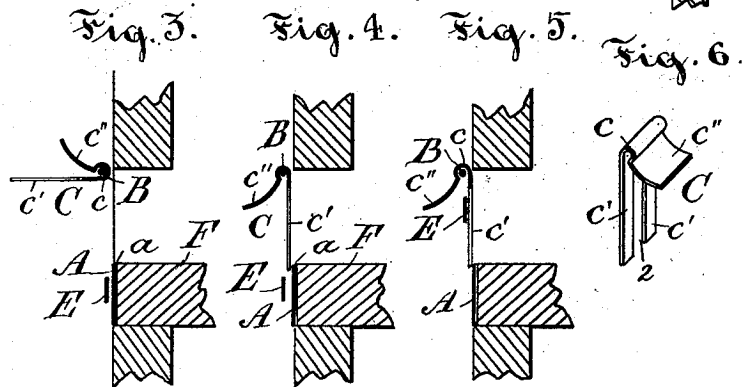
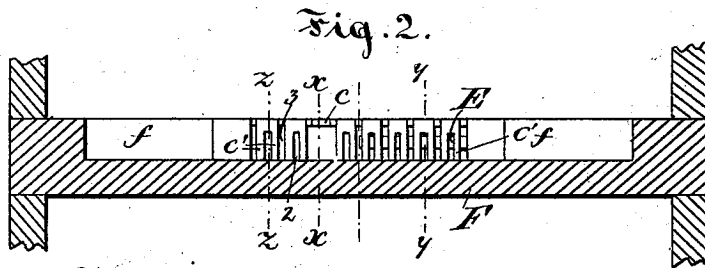
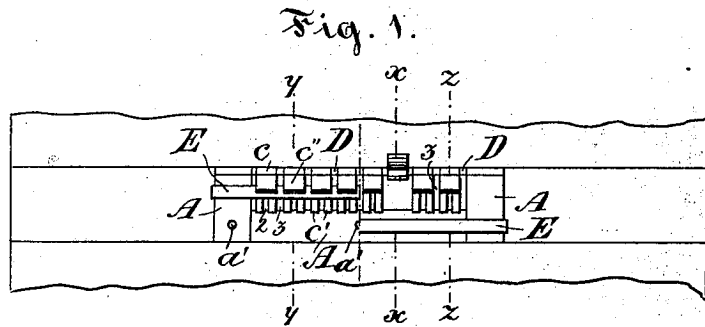


(No Model.)

R. J. STEAD.
BEE ESCAPE.

No. 507,506.

Patented Oct. 24, 1893.



Witnesses:
Shas. Raley.
W. Noffke.

Robert J. Stead
Inventor
by A. Harney
attorney

UNITED STATES PATENT OFFICE.

ROBERT JAMES STEAD, OF LANARK, CANADA, ASSIGNOR OF ONE-HALF TO
JOHN HERBERTSON WILSON, OF SAME PLACE.

BEE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 507,506, dated October 24, 1893.

Application filed June 16, 1893. Serial No. 477,787. (No model.)

To all whom it may concern:

Be it known that I, ROBERT JAMES STEAD, of Lanark, in the county of Lanark, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in Bee-Escapes; 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, forming a part hereof.

My invention, which will be hereinafter fully set forth and claimed, relates to escapes for bee hives.

The object of my invention is a contrivance by which a number of bees may pass out of the super simultaneously, so as to effect a clearing quickly and prevent their re-entrance, that can be locked to prevent passage, that will admit light into the super and that will ventilate it.

Figure 1 is a front elevation of the escape, one half being shown locked. Fig. 2 is a rear elevation of the same, showing the escape board in cross section. Fig. 3 is a transverse section of the same on line *xx* Figs. 1 and 2, showing one of the gates lifted. Fig. 4 is a transverse section of the same on line *yy* Figs. 1 and 2, showing the gate down. Fig. 5 is a transverse section of the same on line *zz* Figs. 1 and 2, showing the gate locked. Fig. 6 is a perspective view of one of the gates, and Fig. 7 is a top view of the escape secured to the escape board upon which the super rests. Fig. 8 is an elevation of the frame A and Fig. 9 is a horizontal section of the same with the lock-bar E.

A strip of sheet metal is folded or cut and soldered to form three sides of a long and narrow flat frame A. A wire B, held by the short sides, completes the frame and forms the top of it. Upon this wire is strung a series of gates C, which hang and swing freely on said wire. Said gates consist of a strip of sheet metal, doubled up to form a quasi tubular eye *c*, from which one portion, *c' c'*, depends down a little below the top edge *a* of the frame A and the other portion, *c''*, is bent downward and outward, forming a kind of balance weight which tends to press the lower end of the portion *c'* against the edge *a* of the

frame A. The part *c' c'* consists of two narrow strips formed by having the central part 2 between them cut away from the lower edge to near the tubular eye *c*, thus leaving the two outside strips *c' c'*, the slit thus formed between them being sufficiently narrow to prevent a bee passing through it. A space, 3, is also left between each pair of gates, by inserting a washer D,—a glass bead is suitable—between two adjacent tubes *c*.

E is a lock bar, consisting of a strip of sheet metal extending transversely from one upright end of the frame to the other and adapted to slide on the latter by having its ends turned over around said uprights.

Holes *a'* are provided in the frame or rim A to facilitate its being secured over an opening, such as the opening in the rim *f* of the escape board F, upon which rim the super is placed.

The gates C, of which there may be eight or more in the space of four inches, which is the size I prefer to make the width of the opening, being very light, swing freely upon the wire B and are therefore pushed outward by the bees without effort, when they escape between the lower edges of the parts *c'* and over the edge *a* of the frame A. To return when once out, they would have to draw the parts *c'* toward them and then pass under the lower edge, a feat of which they are not capable. The open spaces 2 and 3 allow of better ventilation and give light which attracts the attention of the bees to the escape. When the super is taken off the hive and placed on the escape board F, the lock bar E may be raised, so as to be in front of the gates C, thus locking them and preventing the bees from opening the gates and escaping and thus exciting them in order to hurry their exit when the escape is unlocked.

I claim as my invention—

1. In a bee escape, the combination of an open flat frame A consisting of a bottom bar and two uprights or ends, a wire B completing said frame and forming the top to it, a series of perforated gates C hung on said wire a little distance apart and extending below the upper edge of the bottom bar of said frame and a lock-bar E parallel to the wire B and

extending across the upright ends of the frame and secured to them slidingly so as to be held vertically movable thereon, substantially as set forth.

5 2. In a gate for a bee escape, the combination of a strip doubled up to form two sides and a tubular eye *c* adapted for a hinge pin, one side formed in two strips *c' c'* by cutting out a strip between them and the other side

c'' bent downwardly and outwardly, substantially as set forth.

In testimony whereof I have signed in the presence of the undersigned witnesses.

ROBERT JAMES STEAD.

Witnesses:

JOHN MACLEAN,
WM. S. TRAYNOR.