

(No Model.)

G. W. WILLIAMS.  
QUEEN AND DRONE TRAP.

No. 593,712.

Patented Nov. 16, 1897.

Fig. 1.

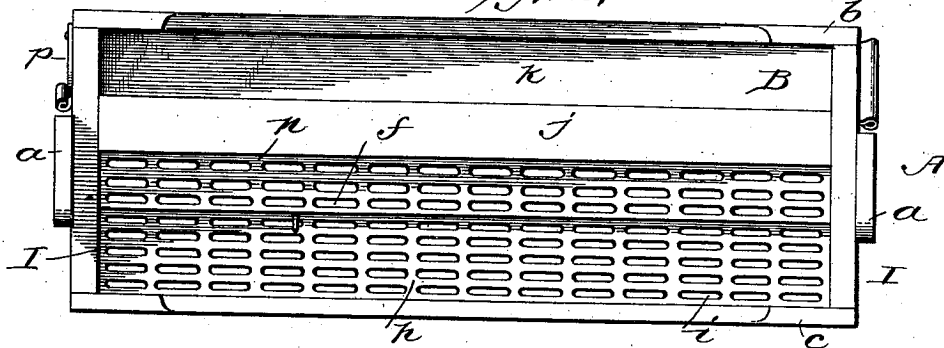


Fig. 2.

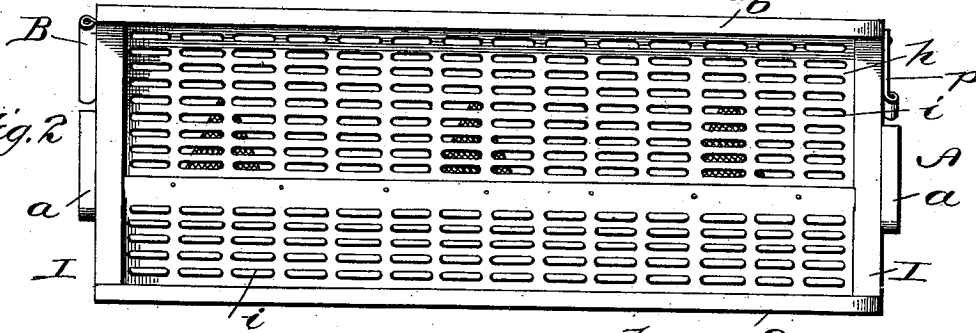


Fig. 3.

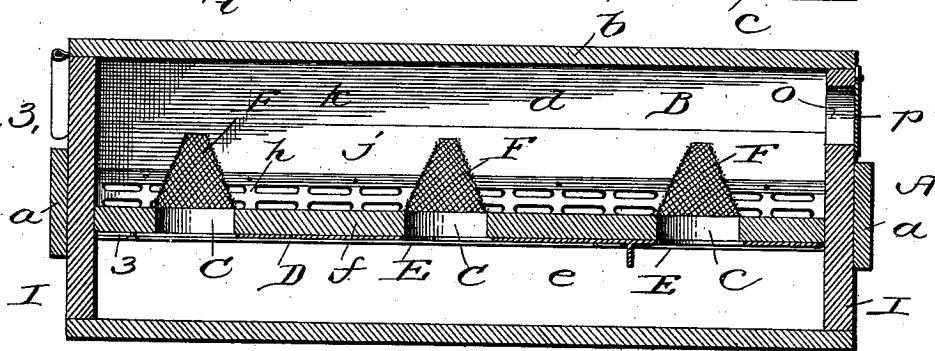


Fig. 4.

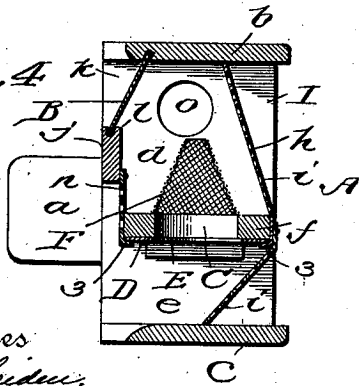
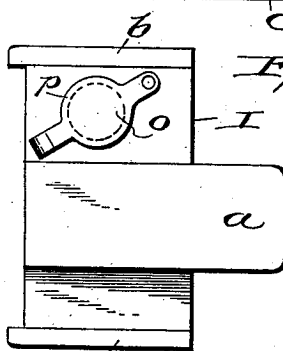


Fig. 5.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## QUEEN AND DRONE TRAP.

SPECIFICATION forming part of Letters Patent No. 593,712, dated November 16, 1897.

Application filed April 15, 1897. Serial No. 632,312. (No model.)

### *To all whom it may concern:*

Be it known that I, GEORGE W. WILLIAMS, a citizen of the United States, residing at Humansville, in the county of Polk and State of Missouri, have invented certain new and useful Improvements in Queen and Drone Traps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in beehive appliances; and it consists, substantially, in such features of construction, arrangements, and combination of parts as will hereinafter be more particularly described.

It is well known that in the swarming of bees the worker bees will always follow the queen bee wherever she may lead them, and in order to relieve the worker bees it is usual in many instances to catch the queen bee and place her in the new hive ready for the purpose, to which new hive the worker bees will also go in their endeavor or search to find the queen bee. In some cases it is usual to catch the queen bee in the hand and then place her in the hive, while in other cases special devices or appliances are employed for the purpose. Whatever the means employed, however, it has not infrequently happened heretofore that the queen bee has been injured, and also it has not infrequently happened that she has escaped altogether, thus occasioning loss of the entire swarm and the attendant bad results which follow therefrom.

A number of devices have heretofore been devised for the purpose of catching the queen bee and returning her to or placing her in the hive; but in many instances such devices are cumbersome, besides being ineffective and unreliable.

It is therefore the object of the present invention to provide effective and reliable means for preventing the flight of the queen bee with the swarm and to insure her entrance into the new hive, as well also as the sure return of the swarm to such hive.

A further object of said invention is to accomplish the detention of said queen bee without harm or injury thereto, and also to pro-

vide means for readily catching her for transportation to any place desired.

These and other objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 is an inner side elevation of a beehive appliance constructed and arranged in accordance with my invention, and Fig. 2 is an outer side elevation thereof. Fig. 3 is a longitudinal sectional view taken about centrally. Fig. 4 is a transverse sectional view taken through one of the cones, and Fig. 5 is an end view to show the slide-covered opening through which the queen bee is caught for the purpose of being taken away or for any other purpose.

My invention is capable of a great many different embodiments in use, and while I have herein shown a certain preferred embodiment it is to be understood that I am not limited thereto in detail, but am at liberty to make such immaterial changes in the general construction and arrangement of parts as may be demanded by the exigencies of any particular case.

Thus in the drawings, A represents as a whole what may be termed a "trap" or "cage," and which in its general shape is approximately rectangular and is of length or dimensions corresponding to the size of the beehive in connection with which it is to be used. This trap or cage is in the main preferably, though not essentially, constructed of wood, and while it may be attached to the hive in different ways I preferably provide a projection or bracket *a* at each end thereof for the purpose. Said trap or cage is constructed with end portions *I I*, a top portion *b*, and a bottom portion *c*, and it is practically divided for its whole length into an upper compartment *d* and a lower compartment *e*, the horizontal shelf or portion *f*, which divides or separates these compartments, being provided with any desired number of openings *g*, three being shown in the present instance. The entire front of said trap or cage is closed by reticulated metal-work *h*, leaving numerous openings *i* sufficiently large for the passage therethrough of the worker bees, and connecting the end portions *l l* on the inner side of the cage is a strip *j*, said strip being ar-

ranged to leave a space *k* between the upper edge of the same and the top portion *b*, already referred to. Said space is closed at will by means of a metal slide B, which works in  
 5 a groove *l* in the upper edge of said strip *j* and a similar groove in the under side of the top *b*. Said slide also at one end passes through a slot or guide in the adjacent end piece *l*, and it is bent to constitute a grip  
 10 portion by which the slide is manipulated to be moved in and out as required in the use of the device and as will hereinafter more fully appear. Connecting the lower edge of strip *j* with the inner edge of the horizontal  
 15 shelf or portion *f* is a similar open or reticulated strip *n* of metal or other similar material, and in one of the end pieces *l* is an opening *o*, leading into the upper compartment *d* of the cage, the said opening being closed at  
 20 will by a suitable hinged or pivoted slide or plate *p*. (Shown in the end view.)

As will be observed, the horizontal shelf or partition *f* is provided with openings C, and working in longitudinal guides 3 3 on the under side of the said shelf or partition is a slide  
 25 D, also having openings E, which in one position of the slide register with the openings C in the shelf, but which when the slide is drawn to one side are carried out of registry  
 30 or alinement with said openings C, and the openings in the shelf are then closed, so as to completely cut off communication between the compartments *d e*. Located on top of the said shelf or partition *f* and surrounding  
 35 the openings C therein are wire-gauze cones F, having open ends through which the queen bee passes into the upper compartment *d* in her efforts to find an outlet or passage with the swarm.

As thus constructed, my improved cage or trap is secured to a part of the beehive in any suitable manner, with the compartment  
 40 *d* uppermost and with the slides B and *p* closed and the slide D in such position that the openings E therein register with the openings C in the shelf or partition *f*. In this position the cones F extend upward, and then as the swarming from the hive takes place all of the bees will pass into the lower compart-  
 45 ment *e* and the worker bees will gain an exit through the openings in the front of the cage, while the queen and drone bees are detained and prevented from flight or passage through the openings in the front of the cage on account of being too large to pass through said  
 50 openings. The queen bee will, however, find passage into the upper compartment *d* through the larger openings in the shelf *f* and its slide, and on passing up through any one of the cones she of course cannot readily get back, and she thus becomes caught or trapped. When thus caught in the upper  
 55 compartment *d* of the cage, the operator detaches the cage from the hive and closes the slide D. He then reverses or inverts the cage or trap and attaches it to the new hive, all ready for the purpose, the attachment being

so made that when the slide B is drawn out there is free or open communication between the compartment *d* and the hive. In this way  
 70 the queen bee finds her way into the new hive, and by this time she has been missed by the worker bees in their flight and the swarm returns to the old site to find her, the old hive being removed to one side and the new hive  
 75 set in its place and left until the bees return. On their return the worker bees also find their way into the new hive through the open front of the cage in an obvious manner.

If the operator is afraid the swarm might  
 80 leave, as they sometimes do after being hived, leave the inverted trap attached to the hive, with the slide B drawn out, and if the bees come out to go off the queen cannot get out, neither can she trap herself, as slide D is  
 85 closed, and on the return of the bees she will go back with them into the hive.

Should it be desired to get hold of the queen bee by which to carry her away, it is simply  
 90 necessary to cause her to pass into the upper compartment *d*, and then by throwing a cloth over the cage so as to darken the interior and opening the slide *p* she will be attracted to the opening *o* by the light entering the same  
 95 and she will attempt to pass out of the opening, when she can be caught by a small cage or any other device secured across the opening for the purpose.

It will be seen from the foregoing that the queen bee is caught without having to handle  
 100 her, and it will be understood that the drones can be caught in the same way. It will also be seen that the worker bees can pass in and out of the hive no matter in what position the cage or trap may be in. These  
 105 and other advantages will appear without further description. It will be seen that the perforated or reticulated front portion of the cage is made to turn inward somewhat at the lower edge, so as to enable a greater number  
 110 of openings to be presented for the passage of the worker bees, and it will also be understood that this part as well as the remaining parts of my improved device could be altered in immaterial respects without departing  
 115 from the spirit of my invention.

The advantage of a reversible or invertible appliance of this kind is that the worker bees  
 120 are first allowed to pass out in swarm and the queen bee is caught or held captive, and then when the trap is reversed or inverted and the slide B drawn out the queen bee is given direct access or passage to the new hive, and when the worker bees return they also gain  
 125 access to the new hive through the same passage. Thus the queen bee does not have to be caught in the hand for the purpose of being transferred to the new hive, as in many former instances. Furthermore, when the  
 130 slide B is withdrawn, so as to enable the queen bee to pass into the new hive, the entrance of the returning worker bees is not cut off, as with some former devices on this subject, and the trap does not have to be removed to per-

mit access of the worker bees, which would, perhaps, result in the loss of the queen bee.

What I claim is—

1. An attachment for beehives consisting of an open frame adapted to be suspended on the end of a hive and provided with a screen in its front side at the lower end, a horizontal partition just above said screen carrying cones with open apices, and a movable screen-guard in rear of said partition to control the passage of the bees from the frame, substantially as described.

2. An appliance for beehives, comprising a cage or trap having perforations or openings at the front for the passage of the worker bees, and constructed of an upper and lower compartment, a slide for opening and closing the upper compartment at the inner side, a partition separating the compartments and provided with openings for the passage of the queen bee, open-ended cones at said openings and a slide for controlling said openings, substantially as described.

3. An appliance for beehives, comprising a trap or cage having openings or perforations at the front for the passage of the worker bees, and constructed of an upper and lower compartment, a horizontal partition separating the compartments and provided with openings for the passage of the queen bee, open-ended cones at said openings, a slide having corresponding openings and working in guides on the partition, and a longitudinally-movable slide for opening and closing the upper compartment at the inner side of the cage, substantially as described.

4. An appliance for beehives, comprising a cage or trap having openings at the front for the passage of the bees, and constructed of an upper and lower compartment, the former of which is provided at one end with an opening closed by a slide, a partition separating the compartments and provided with openings for the passage of the queen bee, open-ended cones at said openings, a slide for opening and closing the upper compartment at the inner side of the cage, and a slide having openings corresponding to those in the partition, and working in suitable guides, substantially as described.

5. An appliance for beehives comprising a reversible or invertible trap having openings in the front for the passage of the worker bees, and constructed of an upper and lower compartment, a partition separating said compartments, and provided with openings for the passage of the queen bee, open-ended gauze cones surrounding said latter openings in the upper compartment, a slide also having corresponding openings and working on the under side of the partition, and a slide for opening and closing at will the inner side of said upper compartment, substantially as described.

6. An appliance for beehives comprising a reversible or invertible trap having openings in the front for the passage of the worker bees and constructed with an upper and lower compartment, a partition separating the compartments and having enlarged openings for the passage of the queen bee, open-ended gauze cones surrounding said openings, a slide on the partition having corresponding openings, a strip at the inner side of the cage and a perforated plate closing the space between said strip and the inner edge of the partition, and a slide for opening and closing the upper compartment at the inner side thereof, substantially as described.

7. An appliance for beehives comprising a reversible or invertible cage or trap having openings in the front for the passage of the worker bees, and constructed of an upper and lower compartment, a slide for opening and closing the upper compartment at the inner side of the trap, a partition separating the compartments and having enlarged openings for the passage of the queen bee, perforated and open-ended cones surrounding said openings located in the upper compartment, and a slide on the partition having corresponding openings, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. WILLIAMS.

Witnesses:

JAMES L. MARTIN,  
E. M. MCLANE.