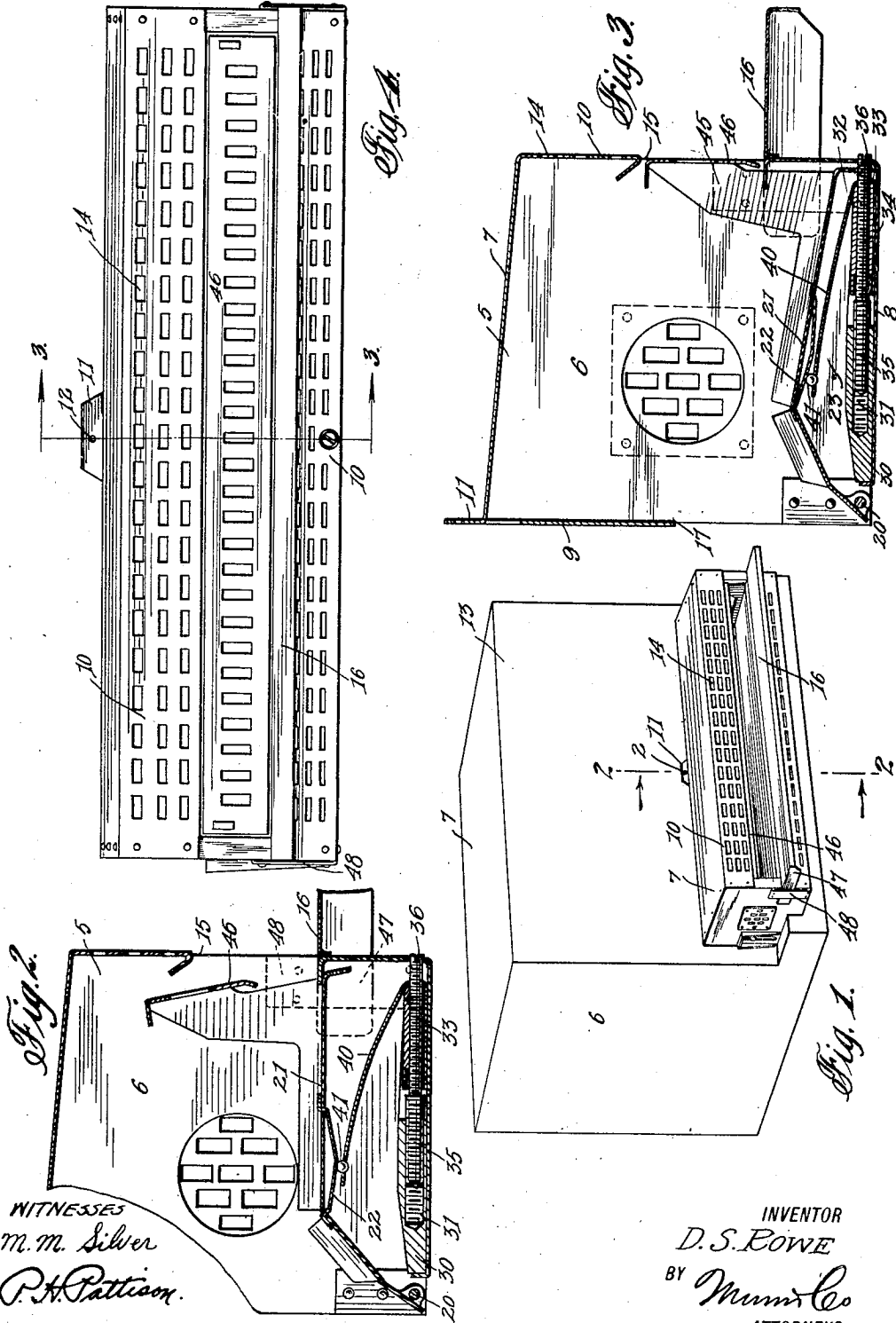


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BEEHIVE.

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To all whom it may concern:

Be it known that I, DAVID S. ROWE, a citizen of the United States, and a resident of Marseilles, in the county of La Salle and State of Illinois, have invented a new and Improved Beehive, of which the following is a full, clear, and exact description.

The present invention relates to new and useful improvements in beehives, and it pertains more particularly to means for opening and closing the opening to the beehive.

It is one of the primary objects of the present invention to provide means whereby the entrance and exit opening of a beehive may be automatically closed by the weight of the occupants of a hive to prevent the bees from leaving the hive in large numbers, which is commonly known in the art as "swarming."

It is a further object of the present invention to so construct a device of this character that it may be adjusted to operate when a predetermined number of the occupants of the hive would leave in a body.

It is a further object of the present invention to provide a device of this character in which the ordinary passage of the inhabitants of the hive in their performance of gathering honey, is unobstructed.

With the above and other objects in view, reference is had to the accompanying drawings, in which—

Figure 1 is a perspective view of a conventional form of beehive, showing a device constructed in accordance with the present invention attached thereto;

Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a transverse sectional view taken on the line 3—3, Fig. 4;

Fig. 4 is a front elevation of the device in its closed position.

Referring more particularly to the drawings, the device comprises a housing 5, said housing being formed with end walls 6, a top wall 7, a bottom wall 8, a rear wall 9, and a front wall 10. The rear wall 9 is provided with a vertically bent tab 11, perforated at 12 to provide means of attachment to the hive 13.

The front wall 10 is perforated to provide ventilating openings 14, and said front wall is provided with an entrance and exhaust passage 15. The front wall is further provided with a removable shelf or platform 16, the upper face of which is adapted to lie in

a plane substantially level with the bottom edge of the entrance and exit opening 15 in order that bees alighting upon the shelf 16 may pass inwardly of the housing 5 to the hive 13. The rear wall 9 of the housing 5 is cut out as indicated by the reference character 17, and said cut-out portion 17 is adapted to be positioned opposite to the entrance and exhaust opening of the hive 13, not shown in the present instance.

Pivotaly secured to the rear of the housing 5 near its bottom wall as indicated by the reference character 20, is a platform 21, and said platform 21 is adapted to normally lie in the same plane with the shelf 16, as shown in Fig. 2. Secured to the under face of this platform 21, is a substantially V-shaped metallic bearing member 22, and said V-shaped metallic bearing member 22 has its apex 23 projected downwardly for a purpose to be hereinafter described.

A stationary block 30 is provided with an internally screw-threaded recess 31. The reference character 32 designates a sliding block interiorly threaded for the reception of a screw member 33. This screw member 33 is provided with a screw thread 34 and a second screw thread 35, said screw threads 34 and 35 being of different pitch. The screw thread 34 is adapted to interengage with the internal thread of the sliding block 32, while the screw thread 35 is adapted for interengagement with the internal thread 31 of the member 30. The outer end of the screw-threaded member 33 is provided with an eye or the like 36 to permit of its interengagement with a tool by means of which it may be rotated.

Carried by the sliding block 32 is a resilient sheet metal member 40, and mounted in an opening near the free end of said member, is a ball or roller 41 adapted to engage with the inclined surface of the V-shaped metallic member 22 in order to provide a free sliding contact therewith.

Projecting upwardly from the forward portion of the platform 21 at each end thereof, is an arm 45, and secured to these arms is a door 46, which door is adapted to close the entrance and exit opening 15 of the housing 5 when the platform is depressed as shown in Fig. 3.

The shelf 16 is provided with end members 47, and said members 47 are adapted for engagement behind straps or the like 48 carried by the end walls of the housing 5,

said end members 47 and straps 48 serving the means for supporting the shelf 16 in operative position.

Assuming now that the device is in the open position as shown in Fig. 2, and the occupants of the hive should start to "swarm." It is a well-known fact that bees in swarming carry with them a maximum amount of honey for food and this greatly increases the weight of each individual bee to such an extent that if the resilient sheet metal member 40 be properly adjusted by means of the screw-threaded member 35, the increased weight of a large number of bees as they pass over the platform 21, would cause the same to depress and move the door 46 to the position shown in Figs. 3 and 4, in which position the exit opening 15 of the housing 5 would be closed and the bees could not escape. After the bees have found that it is impossible for them to escape, they will eventually return to the hive and as their weight is removed from the platform 21, the door 46 will move to the open position shown in Figs. 1 and 2, and permit of ready passage of the bees into and out of the hive.

From the foregoing it will be seen that by this construction the platform 21 is of a very sensitive nature since, as the ball 41 rolls down the inclined surface of the bearing plate 22, the further the platform is depressed, the less resistance is offered thereto, and when near the extent of its movement it drops with practically no resistance.

By providing a device constructed and arranged in accordance with the present invention it is apparent that the bees are prevented from leaving the hive in large numbers at the same time, and, therefore, "swarming" is eliminated.

I claim:

1. A device for closing the entrance and exit opening of beehives, comprising a housing having an escape opening, a platform pivotally mounted in said housing, a door carried by said platform and adapted to be moved thereby to close the escape opening of the housing, resilient means for normally maintaining said door in open position, and means for regulating the tension of said resilient means.

2. A device for closing the entrance and

exit opening of beehives, comprising a housing having an escape opening, a platform pivotally mounted in said housing, a door carried by said platform and adapted to be moved thereby to close the escape opening of the housing, resilient means mounted beneath the platform and adapted to support the same to maintain the door normally in open position, and means for regulating the tension of said resilient means.

3. A device for closing the entrance and exit opening of beehives, comprising a housing having an escape opening, a platform pivotally mounted at the rear of said housing, and extending to the front wall thereof, a door carried by said platform and adapted to be moved by the swinging movement of said platform to a position within the escape opening of the housing to close the same, and means for supporting said pivotal platform in horizontal position to maintain the said door out of closing position with respect to the escape opening of the housing.

4. A device for closing the entrance and exit opening of beehives, comprising a housing having an escape opening, a platform pivotally mounted in the rear of said housing, and extending to the front wall thereof, a door carried by said platform, and adapted to occupy a position removed from the escape opening of the housing when the platform maintains a position in a horizontal plane, and means for normally maintaining said platform in a horizontal plane.

5. A device for closing the entrance and exit opening of beehives, comprising a housing having an escape opening, a platform pivotally mounted in the rear of said housing, and extending to the front wall thereof, a door carried by said platform, and adapted to occupy a position removed from the escape opening of the housing when the platform maintains a position in a horizontal plane, and means for normally maintaining said platform in a horizontal plane, said means comprising a resilient member so constructed, as to permit of a tilting of said platform about its pivotal point to move the door to a position within the escape opening, to close the same.

DAVID STEVENS ROWE.