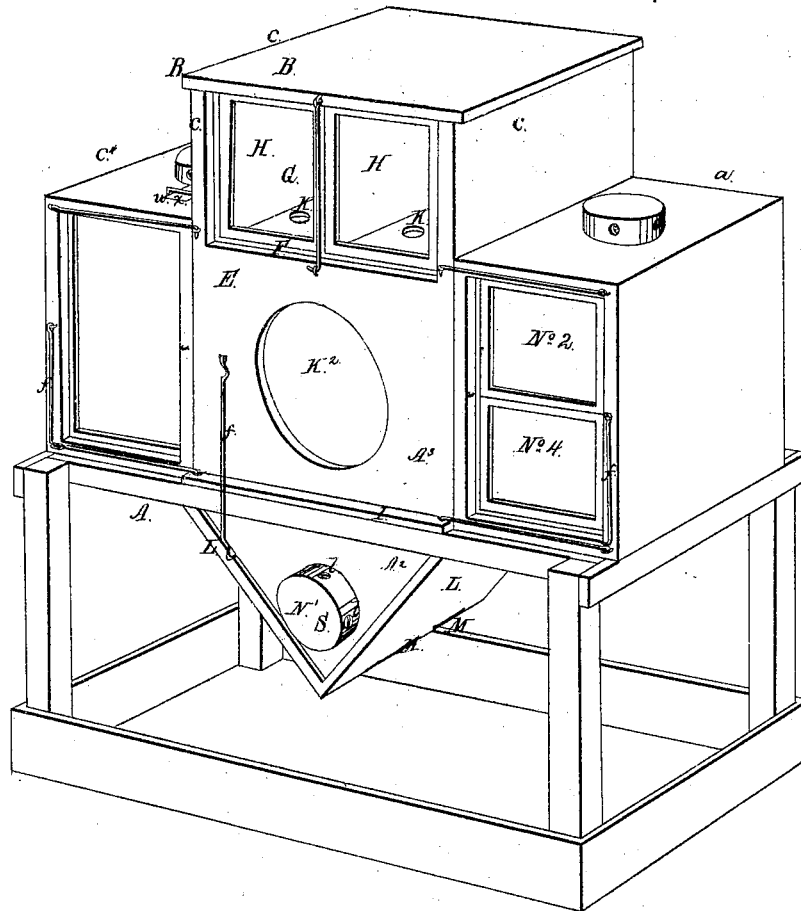


J. M. WEEKS.  
BEEHIVE.

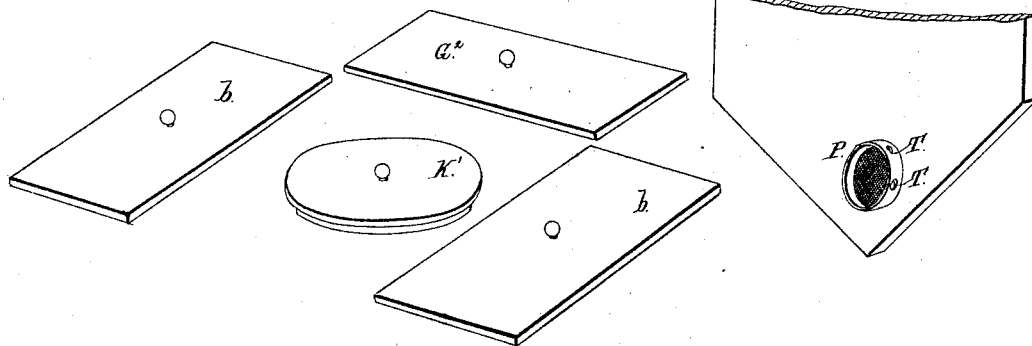
No. 2,151.

Patented July 1, 1841.

*Fig. 1.*



*Fig. 3.*

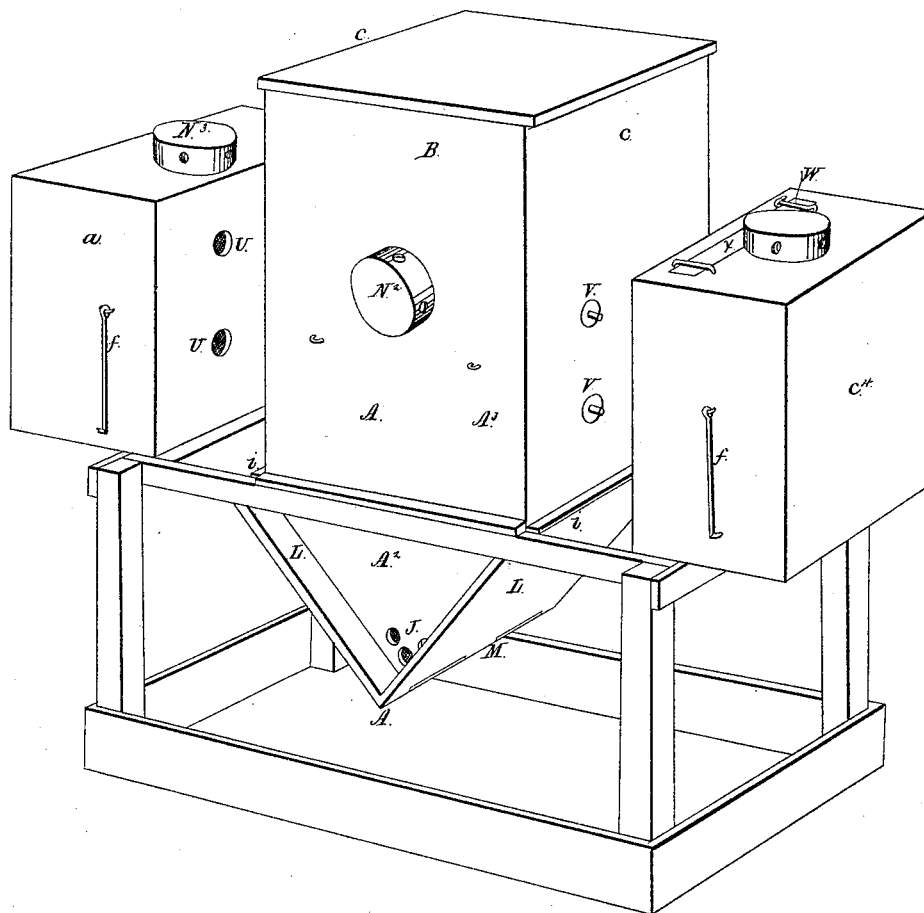


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*Fig. 2.*



# UNITED STATES PATENT OFFICE.

JOHN M. WEEKS, OF SALISBURY, VERMONT.

## BEEHIVE.

Specification of Letters Patent No. 2,151, dated July 1, 1841.

*To all whom it may concern:*

Be it known that I, JOHN M. WEEKS, of Salisbury, in the county of Addison and State of Vermont, have invented a new and useful Improvement in Beehives and of Managing the Same and will hereafter be known by the name of the "Perfect Beehive," and that the following is an exact description and specification of the same, to wit.

A box made of inch boards forming two apartments A, B Figures 1, 2 and 4 one in the lower apartment of the hive in which the bees perform their ordinary labors, and a chamber B for purposes hereinafter specified. It is composed of the following parts to wit, one board A<sup>2</sup> A<sup>3</sup> twenty six inches and a half long where a line is drawn through the center from top to bottom so that when set in an angle of 45° each way from the bottom upward toward its edges leaves the same 13 inches wide at the termination of the angles 20 inches below the top which leaves the bottom A<sup>2</sup> a perfect right angled triangle, which forms the rear or back side of the perfect single hive or swarmer A Fig. 2. Two boards c c Figs. 1, 2 and 4 20 inches long and 15 inches wide which form the sides of the hive. One board E 13 inches wide 19 and a half inches long when a line is drawn through its center from the top to the bottom of the same so that when set in an angle of 45° upward toward its edges leaves the board 13 inches square above the termination of the angles exactly corresponding with the shape and size with the rear board A<sup>2</sup> under the partition board F which separates the hive into two apartments marked A, B. Figs. 1 2 and 4 in the drawings, and forms the front of the lower apartment of the hive. One board F Fig. 1, 13 inches and  $\frac{3}{4}$  wide and 14 inches and  $\frac{3}{4}$  long with a rabbet formed on the front of its upper edge so that when the same is inserted horizontally into grooves  $\frac{3}{4}$  of an inch deep made in the sides and rear boards seven inches from the top which divides the hive into two apartments A, B, so that the top board 15 inches square is laid over the whole with a rabbet formed on its underside corresponding with those in the side and chamber floor a door G<sup>2</sup> Fig. 1, is let in against their several jambs a tight and perfect chamber is formed in the upper part of the hive. Through the floor marked F in all

the drawings are four or more apertures to admit a passage for the bees to enter the chamber or upper apartment of the hive, into vessels H H of wood or glass made to suit the fancy or convenience of its owner. In this hive I have inserted two boxes or drawers H H six inches square and 13 inches long on their out sides when finished, made of wood, and glass. To wit two pieces of their boards 6 inches wide and 13 inches long which form the top and bottom of the box with apertures K through the bottom corresponding with those through the chamber floor to let in the bees. Four corner studs or posts grooved in, or near their edges corresponding with grooves in the top and bottom boards so as to let in common window glass cut to fit, as marked H in the drawings Fig. 1. One board G<sup>2</sup> 13 inches and  $\frac{3}{4}$  long and 6 inches wide forms the door to the chamber which is made fast by a hook and staples, or hung by butts and locked. The boxes in this hive are inserted and removed by the use of slides made of sheet iron or other substance of a metallic nature. There are two cleats i i one inch square confined to the front and rear of the hive on its out side two inches above the bottom board to support the same in a frame or apiary. Two sticks three inches wide made of common board extending from each most extreme corner of the interior of the hive crossing each other to support the combs. Three or more holes J  $\frac{3}{4}$  of an inch in diameter near the bottom of the angle in the rear or back side of the hive to form a mouth or entrance for the bees to go in and out at. A door K', in front in the lower apartment with a glass window K<sup>2</sup> to observe the state of the bees. All of which as specified and described in the foregoing I disclaim as being the original invention also the angle projection of the front and rear boards. One board 11 inches wide and 18 inches long nailed upon the square edge of another board of the same length 10 inches wide when finished forms the bottom board L. This bottom board being confined together by three strong nails or screws one at each end and one in the middle two apertures M  $\frac{3}{4}$  of an inch wide extending nearly the length of the same is made to discharge all filth from the hive and its projection on the back side secures the bees from wind when they alight to enter the hive, these parts are also disclaimed.

There are two ventilators  $N^1$   $N^2$  made of tin or some metallic substance which are three inches in diameter inserted into apertures made in the front and rear of the hive described as follows to wit. An aperture is made through the center of the front board near the bottom of its angle projection which is covered on the inside with wire screen O Fig. 3, the meshes of which are so fine as to prevent the entrance of any insect that is inimical to the bees. Into this aperture is inserted a metallic tube P to fit, two inches long projecting out of the hive one inch with four or more holes T through the side half an inch in diameter covered on the inside with fine wire screen to prevent the entrance of any insect from outside. This tube is covered with a cap S Fig. 1 like the cover to a box with holes  $t$  in the edge or rim corresponding with those in the tube marked T so that when turned a little gives ventilation; or the whole is closed at pleasure. Thus forming as it does an imperfect vacuum in the tube between the bees, or interior, and the exterior of the hive. There are two cleats  $i$   $i$   $\frac{1}{2}$  inch square confined to the hive one on each side one inch from the bottom for collateral box and collateral chamber to rest on as seen at  $i$   $i$  in Fig. 2.

In the sides of the hive are 4 apertures U two inches in diameter half an inch deep on the out side and one inch and  $\frac{3}{4}$  deep from thence to the interior of the hive. These apertures are closed by stops V made of wood, or cork entering them half an inch only. See Fig. 2. There is a ventilator  $N^2$  in the center of the rear board or back side of the hive near the upper part of the lower apartment like the one already described in front as shown by  $N^2$  in Fig. 2.

This hive, when used as described in the foregoing specification is a perfect swarmer; but when the collaterals are added it is a perfect beehive and nonswarmer.

The collateral box  $a$  is made of inch boards. Two boards 14 inches long and 15 inches wide form its two sides, one of which has apertures U U through the same corresponding in number and size with those in the swarmer. Two boards six inches wide and 15 inches long form the top and bottom of the box. One board 6 inches wide and 12 inches long forms the rear or back side of the box. Four strips of wood  $\frac{1}{8}$  of an inch square confined by brads on the inside, one inch from the front of the box forms a jamb to rest a pane of glass against on the inside and a door on the outside. One board six inches wide and 12 inches long forms the door  $b$  which is confined in its place by a hook and staples or otherwise. A ventilator  $N^3$  as described in the front of the perfect swarmer is placed near the center of the top of the box and also

another like ventilator directly opposite in the bottom of the same. A thermometrical chamber W is made in the top board of the collateral box between the perfect swarmer and ventilator in said box by making an aperture through the same 2 inches wide and 11 inches long covered on the inside of the box with wire screen which forms a floor for the thermometer to rest on, and the whole covered with a door or slide X which may be opened and closed at pleasure and is shown at X, Figs. 2 and 4. The collateral chamber  $c^4$  is made like the collateral box  $a$  varying in nothing except the thermometrical chamber which is entirely omitted; also the screen wire on the inside on the bottom where the ventilator is inserted and likewise the front edges of all the boards forming the front of the chamber are rabbeted one fourth of an inch deep and one inch wide so as to form a jamb for a door which is one board 6 and a half inches wide and 12 and  $\frac{1}{2}$  inches long confined in its place by bolts and locked, or fastened by hook and staples. Boxes or drawers No. 2 No. 4. Glass globes or other vessels to suit the fancy or convenience of its owner are inserted into this chamber for the purpose of extracting or removing pure surplus honey. The boxes here represented are numbered in proportion to the like quantity it takes to fill the chamber. No. 2, is a box or drawer six inches square on its outside when finished and 12 and  $\frac{1}{2}$  inches long made of wood and glass, to wit, two thin boards six inches wide and 12 and  $\frac{1}{2}$  inches long which forms the top and bottom four half inch posts one at each corner with grooves corresponding with grooves in the top and bottom board so as to let in a pane of glass fitted for that purpose which forms the two ends and one side of the drawer. One board 11 and  $\frac{1}{2}$  inches long and 5 and  $\frac{1}{2}$  inches wide with two apertures corresponding with those in the upper tier of holes in the collateral chamber and also those in the perfect swarmer, No. 4. Drawers are made like the one just described varying in nothing except they are six inches square, which when inserted into chamber leaves a space between them of half an inch to admit a free circulation of air from the ventilators.

There are two slides,  $d$   $e$  Fig. 5 one of which  $d$ , is made of sheet iron or other metallic substance 12 inches wide and 20 inches long on one side with a projection in the center of one end which leaves the other side 17 inches long with curves formed in the same 2 inches and  $\frac{1}{2}$  in their greatest extension corresponding when in use with the apertures and stops in the side of the swarmer as shown in the drawings Fig. 4, so that the stops may be removed one at a time by its use and prevent the escape of

any of the bees from the hive when it is changed from a swarmer to a perfect bee hive and nonwarmer; and also to replace the stops when the hive is reversed from a nonwarmer to the perfect swarmer; likewise to remove honey, and divide off swarms of bees by the removal of the collaterals. The other slide *e* is a plain sheet 20 inches long and 12 inches wide. The bottom board and collaterals are confined to the hive in their respective places by staples and hooks *f* and the whole hive or any part thereof may be varied in its shape or size to suit the fancy or convenience of its owner.

*Specification of the uses of the perfect bee hive.*—First. The apertures through the center of the bottom board readily discharges all filth that falls from among the combs; at the same time its projection in the rear of the hive forms the most convenient alighting place and secures the bees from being driven away by the wind in chilly weather. This bottom board may be removed at pleasure for entering swarms, pruning and renewing the combs, and various purposes of the apiary. Second. The ventilators serve as coolers to the hive as well as to afford more or less air as occasion and circumstances require in regulating its internal heat, so as to preserve the healthful condition of the young broods, securing the bees from suffocation when the entrances are closed for feeding, preventing robberies by the bees of other hives, or removing them from one place to another, also to regulate the temperature of the hive so as to prevent swarming, and lead the bees into the collateral box to form new colonies and divide off swarms, instead of swarming, and prevent the entrance of every insect into the imperfect vacuum from within or without the hive. Third. The thermometrical chamber is designed as a regulator, so far that when the thermometer is placed therein the apiarian can determine the healthful condition of his bees, the quantity of air necessary to be admitted by the use of the ventilators, and also to determine the most appropriate time for dividing off swarms for new colonies, as well as to prevent swarming, and molting in hot weather. Fourth. The apertures of unequal size in the same hole forms a shoulder in the orifice which enables the apiarian to use wood or cork stops which are nonconductors of heat or cold, moreover it prevents the staples from entering so far as to enable the bees to attach sheets of comb to them, and endanger the interior of the hive by breaking down, or mutilating the combs on their removal. Fifth. The curved slide is used by placing the same in a perpendicular position upon the side of the hive with its longest edge resting on the cleat that is designed as a support to the collateral box,

or chamber (as the case may be) so that when propelled forward with one hand until the curve finds its place corresponding with the aperture in the side of the hive, the stop is carefully removed with the other, so far that the slide will force it along beyond the aperture and prevent the escape of any of the bees from the hive, when another stop may be removed in like manner until all are removed. Now hooks confined in the front and rear of the hive are thrown over the upper edge of the slide which confines it in its place while the collateral is added, and the slide withdrawn. When both collaterals are thus added the perfect swarmer is changed to the perfect bee hive and nonwarmer. When it is desired to change the hive from a nonwarmer to a swarmer, the curved slide is inserted between the collateral, and hive, confined by hooks as already described, and another slide inserted next to the collateral so as to confine the bees and prevent stings when the same is removed. Now the use of the curved slide is reversed so that as the stop is placed in the curve the slide is drawn back far enough for the stop to enter its aperture until all the stops are replaced, and when both collaterals are thus removed the hive is changed back to a perfect swarmer. Sixth. The collateral chamber is used as a depot for drawers or other vessels designed as receptacles in which the bees stow surplus pure honey, which may be removed and taken for rent by the use of the slides in the manner already specified by removing the whole at once. As the bees soon find their way back to the parent hive the chamber may be emptied of its contents new boxes or other vessels inserted and the collateral chamber returned to its appropriate place on the parent hive to be filled again with honey.

What I claim as my own invention and not previously known in the foregoing described bee hive is—

1. The mode of regulating the ventilation of the hive by means of tubes lined with wire gauze and having apertures to which the adjustable caps perforated with similar apertures are adapted the whole being constructed in the manner herein set forth.

2. I claim also combining with the central box or hive one or more collateral boxes containing smaller hives No. 2 and No. 4 as set forth in combination with the mode of ascertaining and regulating the temperature of the hives by means of thermometrical and ventilating apparatus N and X the whole being constructed and operating substantially in the manner described.

JOHN M. WEEKS.

Witnesses:

W. THOMPSON,  
JOHN LYNCH.