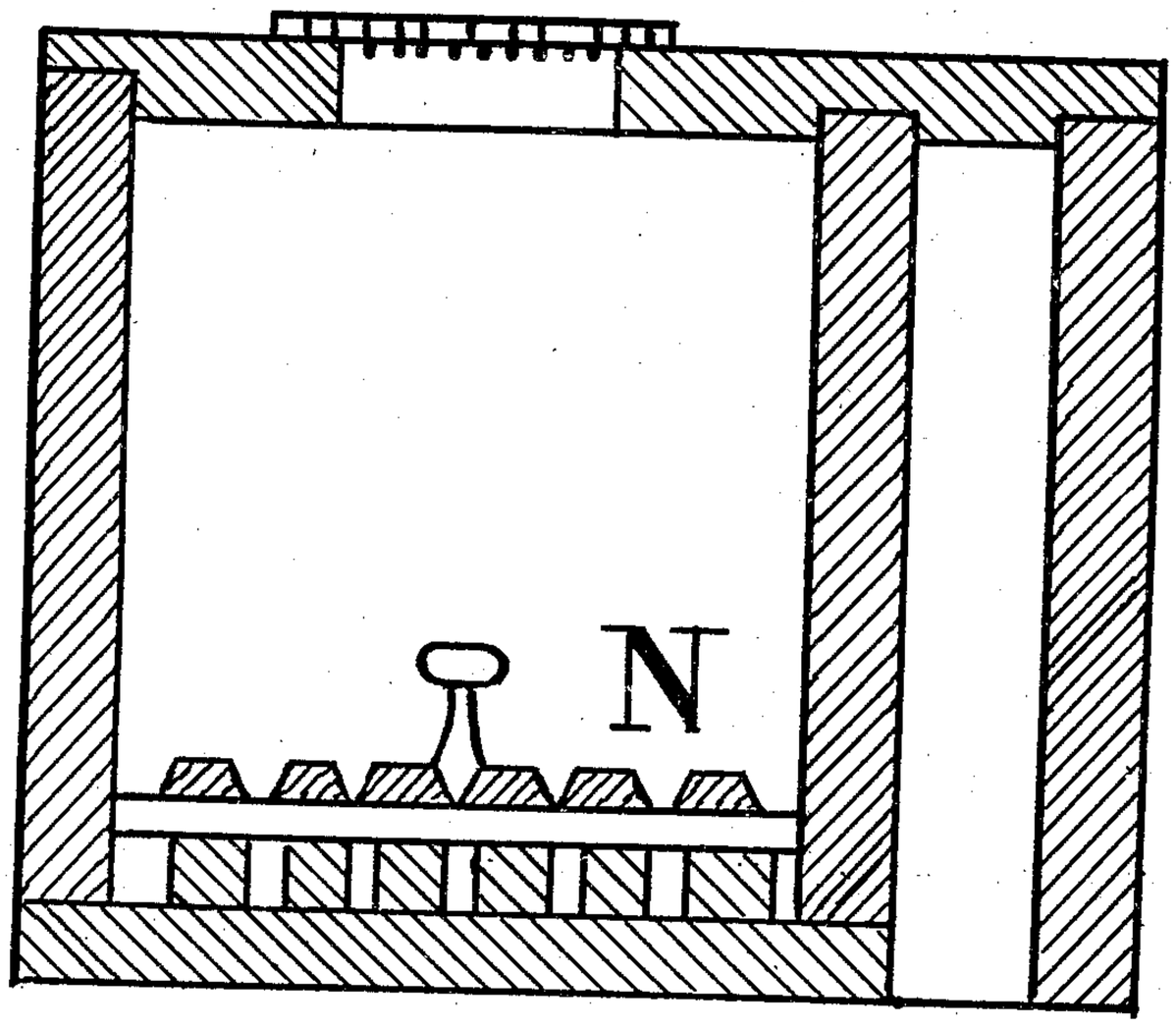
S. DAVIS.

BEEHIVE.

No. 9,883. PATENTED JULY 26, 1853.



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UNITED STATES PATENT OFFICE.

SYLVESTER DAVIS, OF CLAREMONT, NEW HAMPSHIRE.

BEEHIVE.

Specification of Letters Patent No. 9,883, dated July 26, 1853.

To all whom it may concern:

Be it known that I, SYLVESTER DAVIS, of Claremont, in the county of Sullivan and State of New Hampshire, have invented certain new and useful Improvements in Beehives; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, is a plan of a platform or basement, on which the hives are placed; Fig. 2, is a longitudinal section of the same, in the line *x*, *x*, of Fig. 1, and also of a hive and honey box placed thereon; Fig. 3, a transverse section of a hive, honey box and piazza, or open hive, in the line *y*, of Fig. 2; Fig. 4, front elevation of a narrow basement, a hive and a piazza; Fig. 5, view of a hive and a portion of the basement, with a box for transferring swarms from full hives to empty ones situated on the basement; Fig. 6, plan of a feed box to be placed over the hives, and Fig. 7, transverse section of the same.

Like letters refer to like parts in all the figures.

A broad shallow box A, inclosed on all sides except in front, and forming a platform or basement on which the hives are placed, is constructed so as to support any desired number of hives. It may be divided into any number of apartments by partitions extending from front to back, so that each apartment may be appropriated to a small number of hives (say two or four), and unconnected with the rest. Into the open front of each of these apartments is inserted a drawer H, extending back about half across the basement, and its back having the entire height of the interior of the basement while its front has about half of that height. The remainder of the front of the basement above said drawers is closed by sliding lids *d*, *d*. The drawers H, H, are intended to contain sweetened water or other saccharin fluid for feeding the bees, without exposing them, in bad weather. The front end of each is composed of a thick board, or plank, and projects about half its thickness beyond the basement, in which projecting part a perpendicular aperture *a*, is made, reaching from the top to a level with the bottom of the drawer, and thence horizontally into the inside of the same, for the purpose of conveying the food into, without opening the drawer or exposing it to the depredations of insects. An aperture is also made through the front of the drawer on a level with the bottom thereof, for drawing off the food when not fit for further use. It is closed by a plug *b*. A float K, is placed in the bottom of each feeding drawer for the bees to stand on, while feeding, and to protect them from being mired in the food. For this purpose it is constructed, first, with two or three slats of light wood and of slight thickness at the bottom, across which are placed, quite near each other, similar slats *e*, *e*, &c.; then, two or three more slats, parallel with the bottom slats, are placed upon the second series; and above all is placed a series of slats *c*, *c*, &c., directly over, and parallel with the second series. By this construction the bees, resting on the upper series of slats, are never mired, as the fluid never comes up between the upper slats. The basement is provided with glass windows in its top, over each drawer, for admitting light and looking therein. The lid *d*, as also the back of the drawer and of the basement, are provided with apertures *u*, *v*, *z*, which are covered with fine wire gauze, for the purpose of ventilation without admitting insects and vermin.

In the top of the basement, immediately in front of the back of each drawer H, is an aperture *f*, leading to the hives above; and immediately behind the back of each drawer is situated a sliding lid or valve, *g*, to which a cord *h*, is attached, and reaching forward through the back of the drawer and up through the top of the basement. When the drawer is pulled out for cleaning, or other purposes, the line *h*, is pulled with the other hand, which draws the lid *g*, after the drawer and closes the aperture *f*, thereby prohibiting the bees from descending from the hives; but, when the drawer is again pushed in, the said lid is shoved back and the aperture *f*, consequently opened again. An aperture *w*, covered with wire-gauze, opens from the back part of the basement into each hive, for the purpose of ventilating the same. Behind this aperture is a trap door S, in the top of the basement under each hive, and it is operated by means of a line reaching down under the basement, and is occasionally let down to clear the hive of filth.

The hives B, are placed upon the back part of the basement, and reach just forward of the apertures *f*, *f*, &c. The lower edge of the front side of each hive is beveled off and projects back over said apertures; as shown at *i*, Fig. 2, so that no filth can fall down through the apertures into the feeding boxes, but a free passage is afforded to the bees. Each hive is provided with a glass front for the purpose of viewing the inside of the hive; but a sliding lid *l*, shuts down before the glass and excludes the light from the inside of the hive. Between the adjacent hives are inclosed spaces, as seen at *m*, Fig. 3, large enough to allow the bees to pass up therein; and apertures *j*, *j*, &c., at the bottom, as well as an aperture *k*, at the top of each hive, opens from the inside into these spaces.

In place of hives, at intervals of about 4 hives, is situated a piazza, or open hive, C, constructed of the same dimensions as, and resembling the hive, except that its rear end is open, as seen at *q*, Fig. 3. It has, however, no aperture in its upper part corresponding with the aperture *k*, in the hives; and the aperture (or apertures), at the bottom is closed by a sliding gate *p*, so as to allow admittance to the piazza, or not, as desired. Its front wall, also, is not beveled at the bottom as in the hives, so that no direct communication between the piazza and the feeding drawer is allowed. The use of the piazza is to form a sheltered entrance to the hives for the bees, but which may be closed at pleasure by the gate *p*, when the weather is not suitable for the bees to go abroad. It is also useful for separating a limited number of hives into societies, having free and direct communication among themselves but not with those beyond the piazza, by closing its aperture on one side and leaving the other open.

Upon each hive is placed a honey-box E, in which the bees may store extra supplies of honey, but not breed; and which may be removed and replaced, at pleasure, for procuring honey without disturbing the bees in the hives. They are arranged so that the space *m*, between each adjacent pair of hives may communicate with two boxes, as shown at *n*, *n*, Fig. 3. Each box is provided with a sliding glass lid on its front end, which serves as a window whereby to ascertain the quantity of honey within, and also as a door for removing the honey therefrom. The boxes are covered tightly with a case F, which shuts down over them and excludes the light. Each box is provided, at one corner, with a ventilating aperture *s*, covered with wire-gauze; and corresponding apertures, covered with wire-gauze, are formed in the case F, in corners alternate with those of the boxes, as shown at *t*, *t*, Fig. 3, in order to exclude all light from the boxes. The bees can pass from the feeding drawers to these boxes, by the apertures *j*, *j*, &c., and spaces *m*, *m*, without disturbing the hives.

Fig. 5, represents the manner of transferring a swarm of bees from one hive into another. The empty hive, to be occupied by the bees, is put in its place on the basement A, as shown in the drawings. The full hive B, is then inverted and placed against the front of the drawer H, which is partly drawn out. A box I, having its bottom and one side open, is placed over the hive and drawer with its open side close to the basement A. The side opposite the open side projects down the side of the hive sufficiently to close the apertures at the bottom of the same, and thus prevents the escape of the bees, except into the basement, whence they soon find their way into the empty hive, on the basement being pushed in.

When the drawer H, is removed for cleaning it, the lid *d*, is pushed down to the bottom of the basement, and another narrow lid inserted over it to close the entire front of that apartment of the basement.

Figs. 6 and 7, represent a plan and transverse section of a feeding box, similar in construction to the feeding drawer H, in the basement. It is to be placed over the hives in the place of a honey box E, with which it corresponds in size and arrangement, except that a passage *m′*, leads from the passage *m*, between the hives, outside of the box, and communicates therewith by means of the aperture *k′*, at the top. The float N, with the double tiers of slats *c′*, and *e′*, separated by cross slats, is arranged in a manner smilar to the float K, in the feed drawer; and the food is supplied through the right-angled aperture *a′*, and drawn off by removing the plug *b′*, in the same manner as the feed drawer H. Its top is also provided with a ventilating aperture *w′*, which is protected by wire-gauze like those above described. This box is intended for feeding the bees in cold weather when the bees are too benumbed to descend to the feed drawer below,—the heat ascending from the hive raising the temperature in the said box sufficiently to enable the bees to go up and feed therein.

By constructing the float for the feeding drawer of multiplied series of thin slats in such a manner that the upper series, upon which the bees stand, can never come in contact with the surface of the fluid bee food, I prevent the possibility of swamping the float, and miring or drowning the bees. These floats heretofore have been constructed of a perforated board, or a single series of connected slats, which rested upon the surface of the bee food. The bees, in feeding necessarily smear the surface on which they stand, with more or less of the saccharine matter, and also the apertures

through which they feed; consequently, the direct connection—by means of capillary attraction—between the smeared upper surface of the float, and the fluid bee food below the same, will cause the float to settle, and be immersed by the ordinary weight of the feeding bees—as soon as its upper surface becomes thoroughly smeared—and thereby cause the destruction of great numbers of the bees.

What I claim as my invention and desire to secure by Letters Patent is—

The manner of constructing the float K, or N, viz:—of two parallel series of slightly separated thin slats, placed one directly over the other, and separated by two or three cross slats, and supported by similar cross slats beneath the whole, for the purpose of allowing the bees to feed without being liable to be mired in the food beneath.

The above specification of my improvements in bee-hives signed by me this 23 day of Aug. 1852.

SYLVESTER DAVIS.

Witnesses:
A. F. Snow,
Edwin Ainsworth.