No. 656,251.

Patented Aug. 21, 1900.

H. JOHANSEN.

BEEHIVE.

(Application filed Aug. 14, 1899.)

(No Model.)

3 Sheets—Sheet 1.

Fig 1

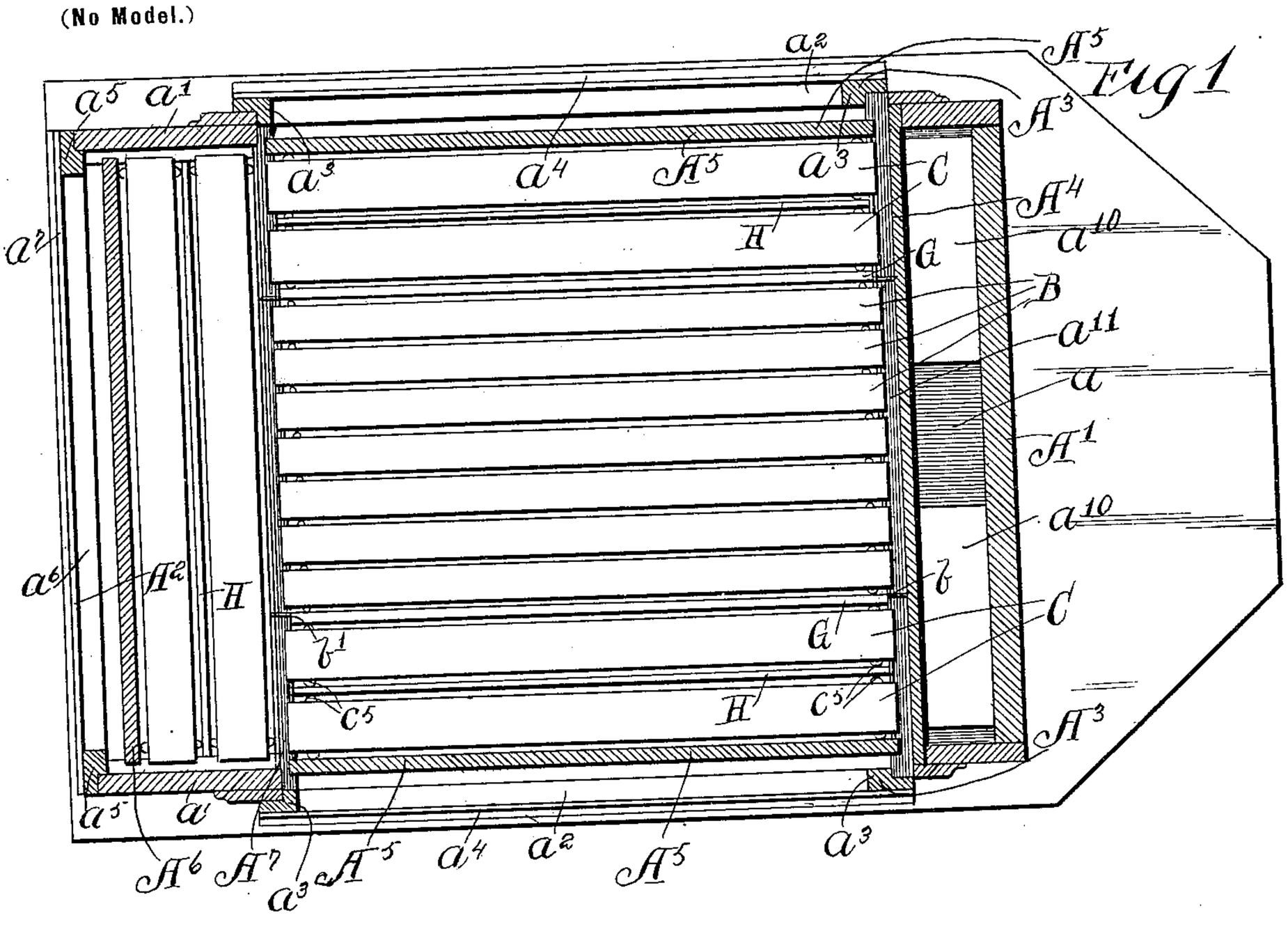
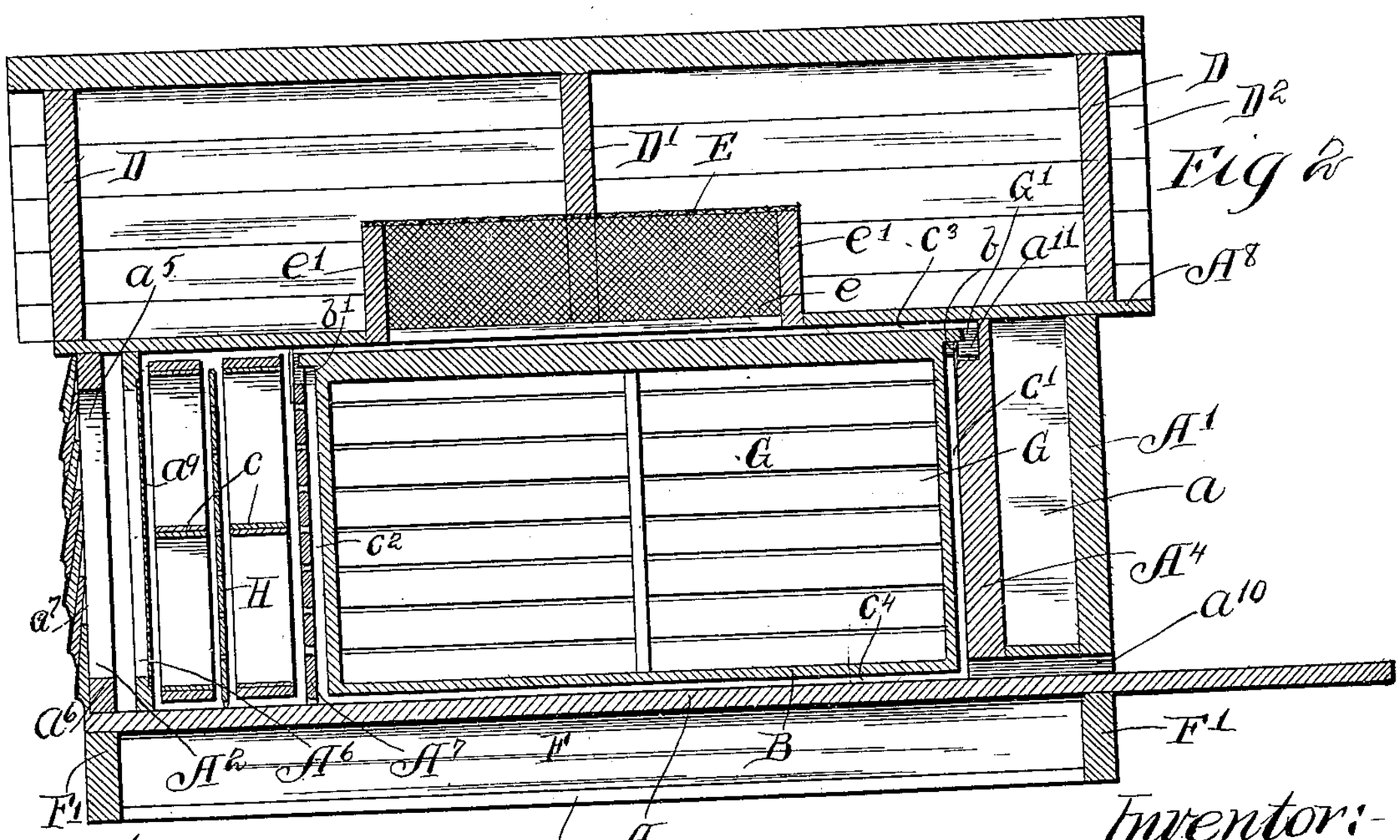


Fig 2



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(No Model.) 3 Sheets—Sheet 2.

Fig 3

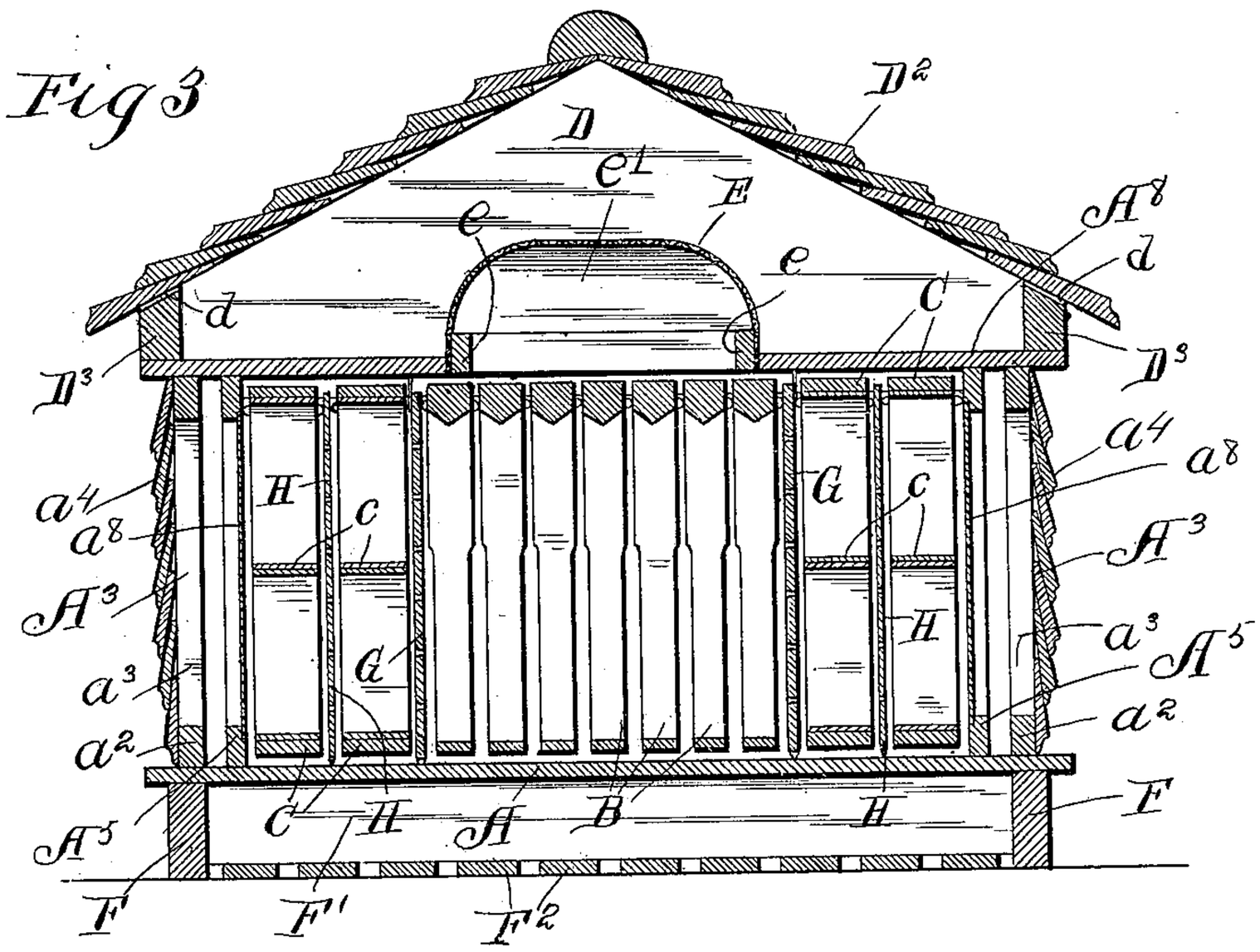


Fig 4

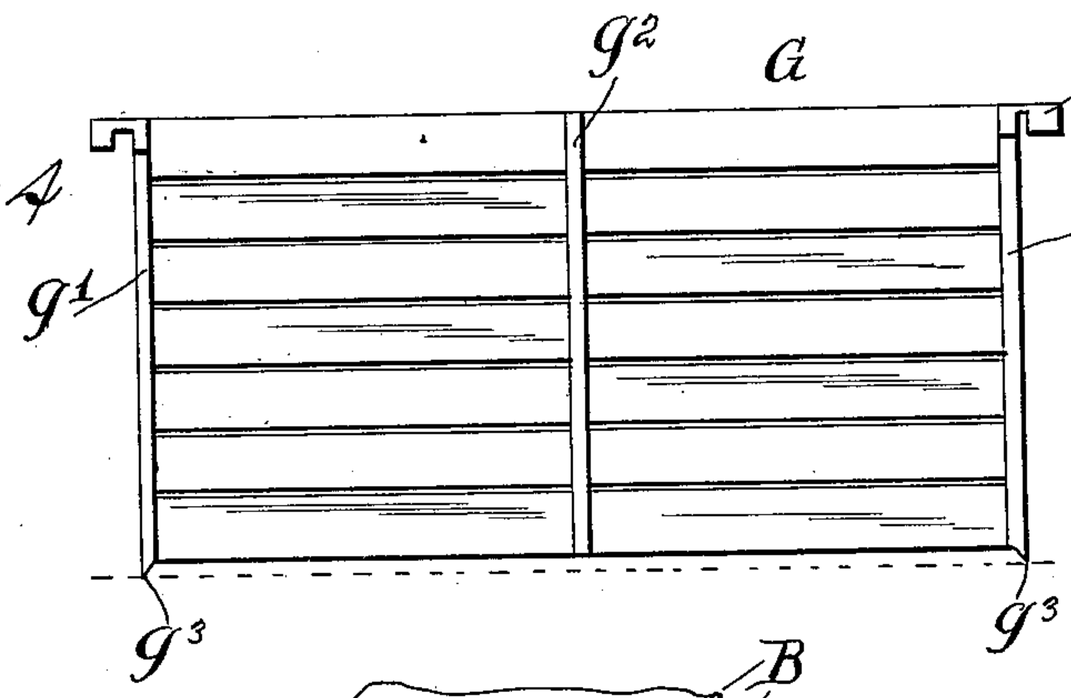


Fig 4a

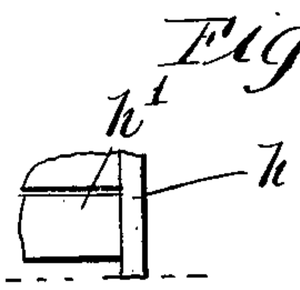
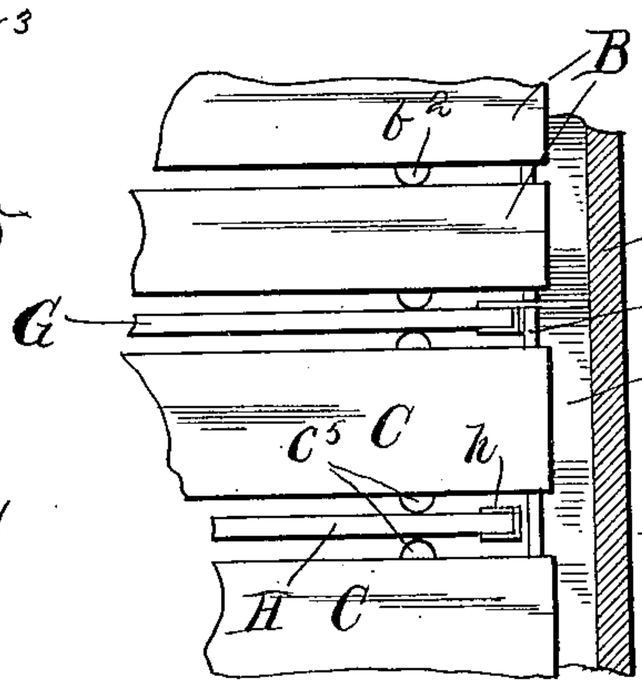


Fig 5



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(No Model.) 3 Sheets—Sheet 3.

Fig 6

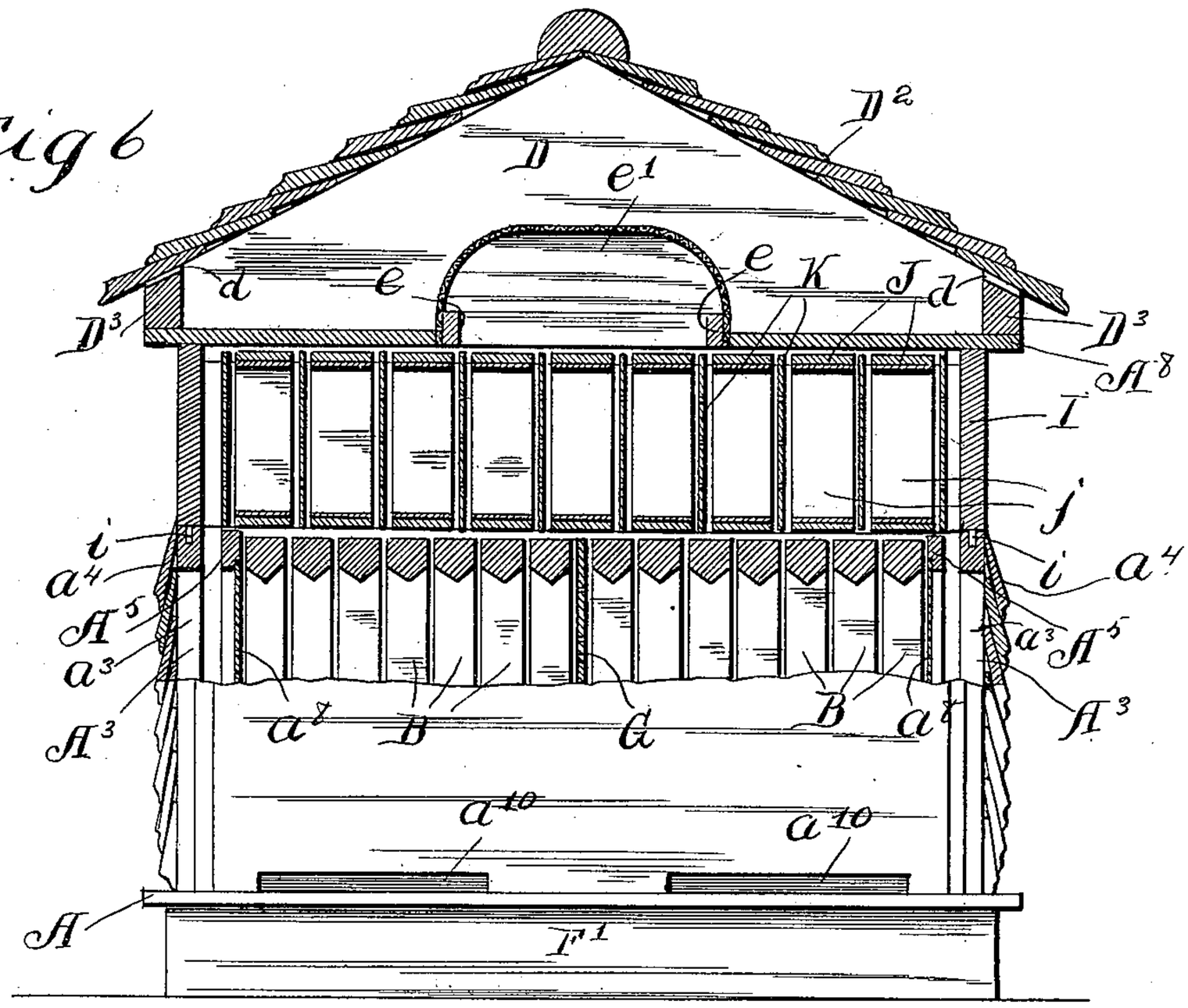


Fig 7

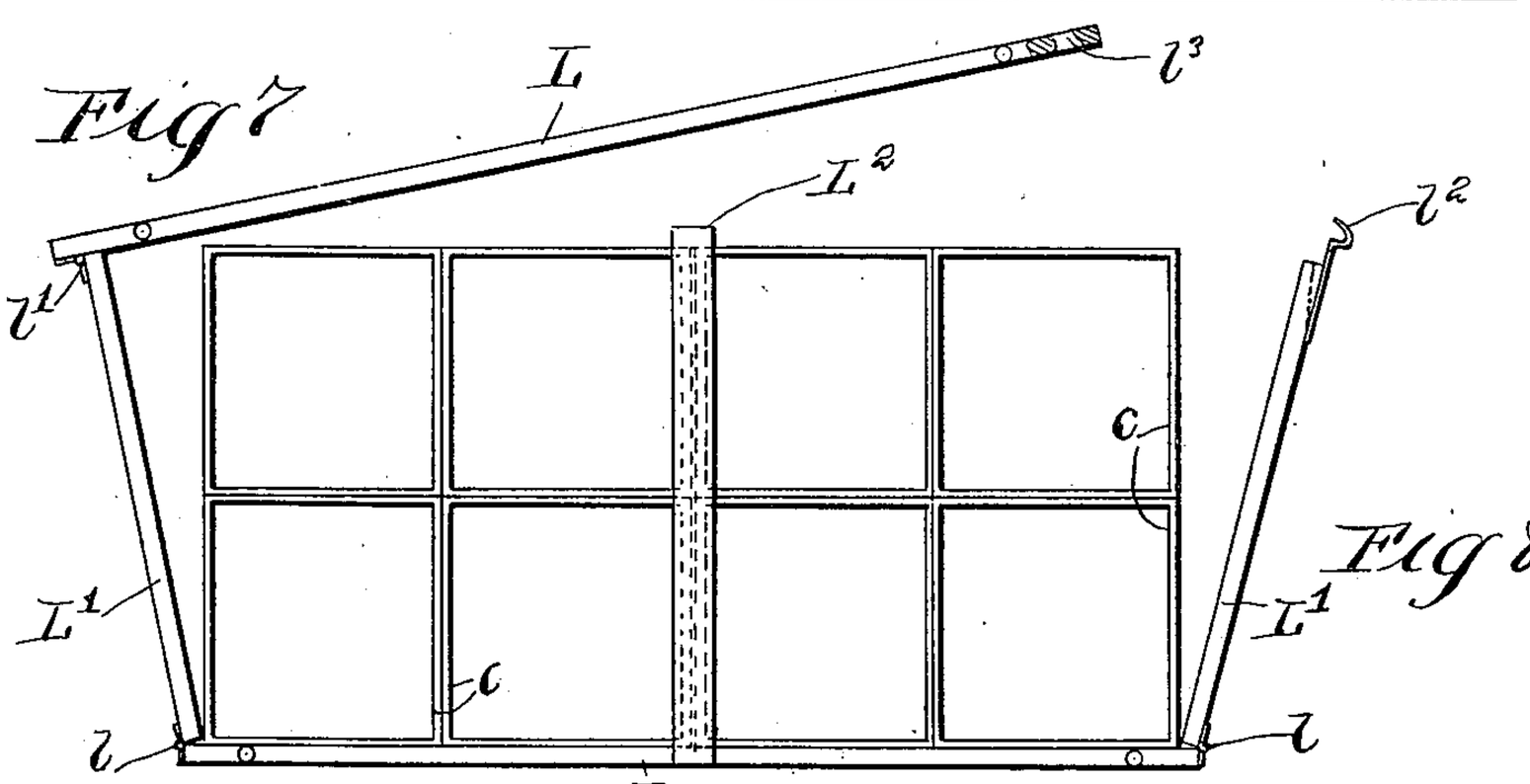


Fig 8

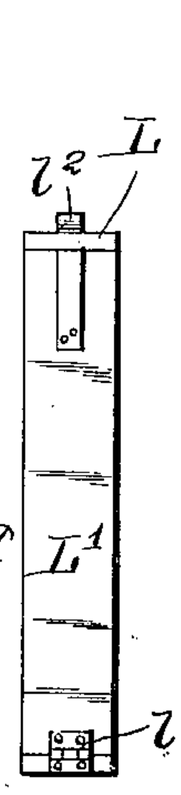
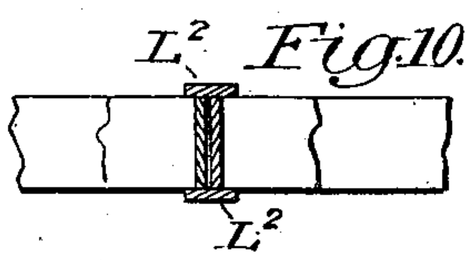


Fig. 10.



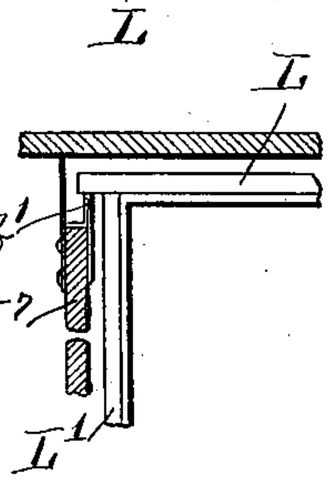
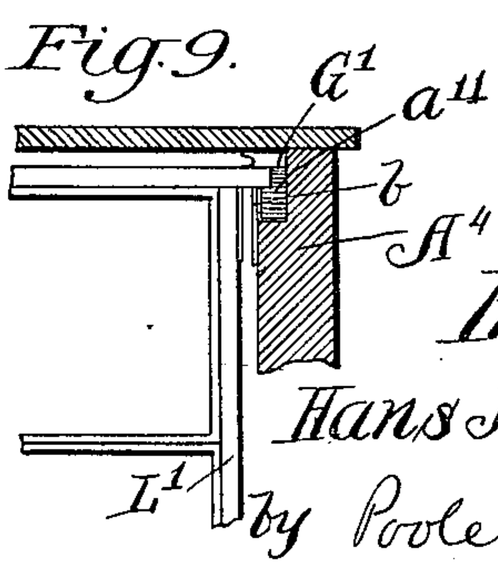


Fig. 9.



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UNITED STATES PATENT OFFICE.

HANS JOHANSEN, OF CHICAGO, ILLINOIS.

BEEHIVE.

SPECIFICATION forming part of Letters Patent No. 656,251, dated August 21, 1900.

Application filed August 14, 1899. Serial No. 727,197. (No model.)

To all whom it may concern:

Be it known that I, HANS JOHANSEN, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Beehives; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in beehives; and the invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a horizontal section of a beehive made in accordance with my invention. Fig. 2 is a central vertical section of the hive, taken from front to rear thereof. Fig. 3 is a transverse vertical section of said hive. Fig. 4 is a side elevation of one of the queen-bee excluders removed from the hive. Fig. 4ª is a detail of the lower portion of frame H. Fig. 5 is a fragmentary horizontal section, on an enlarged scale, showing adjacent brood and honey frames and illustrating the manner of supporting the same in the hive. Fig. 6 is a view, partly in front elevation and partly in transverse vertical section, showing an enlarged hive. Fig. 7 illustrates a honey-frame holder, showing the honey-frames in place therein. Fig. 8 is an end elevation of said holder. Fig. 9 is a fragmentary vertical section showing said holder in place within the hive. Fig. 10 is a cross-section of the frame-holder and the honey-frames shown in Fig. 7, the same being taken transversely through the strips L^2.

As shown in said drawings, A designates the bottom wall or floor of the hive, which wall is substantially rectangular; A′, the front wall; A^2, the rear wall, and A^3 A^3 the side walls. Said front wall is attached permanently to the bottom wall or floor, but the side and rear walls are herein shown and will preferably be made removable. Inside of the front wall is located an inner parallel wall A^4, which is also attached permanently to the floor and provides between the same and the front wall a space *a*. Similarly inside the side walls are located inner side walls A^5 A^5, and inside the rear wall is located a second and parallel wall A^6. Between the inner side walls A^5 is formed the main compartment or chamber, which is herein shown as rectangular in cross-section and within which are located the brood-frames B and honey-frame holders C, containing honey-frames *c*. The inner end wall A^4 constitutes the front wall of said chamber, and a partition A^7, consisting of a plurality of closely-spaced narrow strips of wood or metal, constitutes the rear wall of said main compartment. A^8 designates the upper wall of said compartment. Between said partition A^7 and the inner rear wall A^6 is formed a smaller chamber or compartment having the form of an oblong rectangle in horizontal section having its length disposed transversely of the hive containing, as herein shown, two honey-frame holders C. a' a' designate the side walls of said smaller or rear chamber. The top wall A^8 of the main chamber is extended over and forms the top wall of the smaller or rear chamber. The said smaller chamber is desirably made of the same length as the main chamber, so that the same honey-frame holders or brood-frames may be used interchangeably therein. Said walls a' are attached permanently to the bottom wall or floor. The partition A^7 is attached to the forward edges of the side walls a' of said rear compartment.

The outer side walls A^3 are formed of rectangular frames consisting of horizontal frame members a^2 a^2 and vertical frame members a^3 a^3 and narrow boards a^4, nailed thereto in overlapped or weather-board fashion. The vertical frame members of said side walls are rabbeted, as shown in Fig. 1, and said walls are held in place by having said rabbeted parts of the vertical frame members fitted against and between the inner wall A^4 at the front of the hive and the forward edges of the side walls a' of the rear chamber or compartment. The rear wall A^2 is made like the side walls, consisting of vertical frame members a^5 a^5, horizontal members a^6 a^6, and attached boards a^7. The vertical members a^5 are rabbeted and fit against and between the rear edges of the side walls a' of the rear compartment. Suitable fastening means will be employed to hold said side and rear walls in place. This arrangement affords ready

access to the interior of the main and rear chambers for the purpose of inspection or for removing or replacing the frame-holders. The inner side walls A^5 fit snugly between the inner front wall and the partition A^7 and rest on the floor of the hive. Said walls are not permanently secured in place, but may be secured in place by any suitable means, so that their positions may be readily changed toward and from the center of the main compartments, or they may be entirely removed, if desired. The inner rear wall A^6 is similarly secured in place. Said inner side and rear walls are provided with panes of glass a^8 a^9, thereby permitting the hive to be readily inspected when the side and rear walls are removed.

The roof of the hive is of gable form, being supported by triangular end pieces D and an intermediate triangular piece D'. The roof proper consists of narrow boards D^2, nailed to the upper inclined edges of the pieces D D' in overlapped relation. Said triangular pieces D D' are supported on the upper wall A^8 of the main and rear chambers or compartments of the hive. Preferably said top wall A^8 is attached permanently to the triangular supporting-pieces D D' of the roof, and the roof and said top wall are detachably secured to the upright walls of the hive in any suitable manner, so that the said parts may be removed and the interior of the hive made accessible for the purpose of removing honey or other desired purposes. Side rails D^3 are interposed between the side edges of the upper wall A^8 and the lowermost boards D^2 on each side of the roof. Said rails are inclined on their upper faces to correspond with the inclination of the upper edges of the supporting-pieces D D'. Preferably separated blocks *d* are interposed between said rails and the lowermost boards of the roof, so as to afford ventilating-spaces between the same. The spaces between the overlapped boards D^2 of the roof and the supporting end pieces D are also desirably left open, as shown in Fig. 3, to afford additional facility for ventilation.

Desirably the upper wall A^8 is provided with a central opening, which is inclosed by an upwardly-extending basket-like screen E, within which is provided a space into which the bees may pass. Said screen E is attached at its margin to a rectangular frame consisting of connected frame members *e e'*, inserted within the opening of the wall. Said opening is designed to afford additional space for the bees in winter-time and will be closed in any suitable manner during the working season to prevent the bees from building honey-cells therein.

The hive is shown as supported on a rectangular frame consisting of side pieces F F and end pieces F' F', and said frame is closed at its lower side by slats F^2. The bottom wall A of the hive extends beyond the front wall to afford an approach for the bees, and the front wall is provided with two passage-ways a^{10} a^{10}, as herein shown, for the bees to the interior of the hive.

The brood-frames B, as shown in Figs. 1, 2, and 3, are rectangular and made of four rigidly-connected strips in the usual manner. The honey-frames *c* are of usual construction and are contained in ordinary rectangular frame-holders, as shown in Fig. 3. Said brood-frames and honey-frame holders are arranged lengthwise of said compartment, while the honey-frame holders in the rear compartment are arranged at right angles to those in the main compartment.

In the usual use of the hive the brood-frames are grouped in the center of the main compartment, as shown in Fig. 3, while the honey-frame holders are interposed between said brood-frames and the side walls of the hive and a portion located in the smaller or rear compartment. As shown in said Fig. 7, brood-frames are employed which occupy about one-half of the floor-space of the hive, and two frame-holders are placed on each side of the brood-frames, which together occupy the remaining half of the floor-space. These frame-holders, together with the frame-holders in the rear compartment, constitute substantially the proper proportion of the frame-holders to the number of brood-frames shown for a hive of usual or ordinary size. By reference to Fig. 2 of the drawings it will be seen that said brood-frames are supported from the inner front wall A^4 at one end and the partition A^7 at the other end, the upper members of said frames for this purpose being extended beyond the end members and rest upon metal strips *b b'*, secured to said front wall and partition, respectively. The honey-frame holders are similarly supported on said strips. Said frames and frame-holders are made shorter than the main compartment to provide spaces or passage-ways *c' c²* at the front and rear, respectively, for the bees, and spaces c^3 c^4 are left between the said frames and holders and the upper and lower walls, respectively, for the same purpose. The upper part of the inner front wall is cut away at a^{11} to afford a passage-way for the bees transversely of the hive. Said brood-frames are separated by means of stops, as shown, to provide spaces to permit the working bees to pass between the same.

Between the brood-frames and the honey-frame holders on each side of the main compartment is interposed a partition G, which is herein shown as made of a plurality of narrow slats or strips of wood or metal, so spaced as to permit the passage of the working bees therethrough, but to exclude the queen-bee from the honey-frames. Said partitions, which may be termed "queen-bee excluders," are movable within said compartment so as to be capable of being shifted to any desired position therein or be removed therefrom, as desired. They will desirably be made of a plurality of thin transverse metallic strips *g' g²*,

the strips at the ends being folded over the ends of the slats and secured thereto in any suitable manner. As a convenient means for temporarily holding said partitions in position the end strips are extended below the partition to provide toes g^3, as shown in Fig. 4, which are sharpened so as to readily enter the wooden floor of the hive. Said extension or toes g^3 are made of sufficient length to leave room between the lower slat of the partition and floor for the passage of the working bees. The passage-way a^{11} at the upper edge of the front wall A^4 being of sufficient width to permit the queen-bee to pass therethrough, the queen-bee excluders G are provided on their upper edges, at their forward ends, with wings G', which extend across said passage-way. A sufficient space, however, is left to permit the passage of the working bees throughout said passage-way. The other end of said partition may or may not be provided with such a wing.

Between each two adjacent honey-frame holders is interposed a partition H, similar to the partitions G. Said honey-frame holders are located at such distance apart that when the partitions H are located midway between the same a space is left between each frame-holder and the partition sufficiently wide for the passage of the bees. Said partitions H are provided for the purpose of preventing the bees building the honey-cells beyond the edges of the walls of the honey-frames. Said partitions are made similar to the excluding-partition G, (shown in Fig. 4,) and the end strips h are extended below the lowermost slats or bar h' of the partition, so that when said end strips are resting on the floor of the hive a space will be left between said lowermost slat and the floor to permit the passage of the working bees, as shown in Fig. 4^a. The honey-frame holders are provided with stops c^5, which engage said partitions and serve to hold the same separated therefrom to provide the required space for the passage of the bees between the same.

As will be noted from an inspection of Fig. 3, the brood-frames and honey-frame holders are movable within the main compartment, so that the same may be readily removed therefrom or shifted thereon and the proportionate number of honey-frame holders to the brood-frames increased or decreased, as found desirable. For instance, it may be desirable to have two swarms of bees in one hive. In this event two queen-bees are necessary, and it will be necessary, therefore, to provide means for separating the brood-frames and the queen-bees. In Fig. 6 I have shown a modified construction which is designed to answer these requirements. In said figure it will be noticed that all of the honey-frame holders have been removed from the main compartment of the hive and that said compartment is entirely filled with brood-frames. Said brood-frames, as herein shown, are divided into two groups having an equal number of frames by means of a central partition or queen-bee excluder G. Said parts are secured in place in the same manner as illustrated in the previously-described figures. In this arrangement of the frames the honey-frame holders in the rear or smaller compartment are not disturbed. Usually, however, the proportion of the honey-frame holders in this arrangement would be too small, and I have provided means for supplementing the hive above described whereby space may be added to the hive, within which an additional number of honey-frame holders may be placed. This is conveniently accomplished by inserting between the roof and the vertical outer walls of the hive a supplementary frame I, which is made to conform to the upper edges of said outer walls or otherwise constructed so that when set down over said walls it will afford a close fit between the same. Within the front compartment are located a plurality of auxiliary frame-holders J, which are arranged to extend lengthwise of the hive and are supported in said frame in a manner similar to the manner in which the frame-holders C are supported. The part of said auxiliary frame over the smaller or rearmost compartment will be similarly filled with frame-holders I, arranged parallel with the frame-holders C and supported in like manner. Partitions K are interposed between said frame-holders. Said frame-holders, as herein shown, are made of a width to hold but a single row of honey-frames j, but may be made of the same size as the other honey-frame holders, if found desirable. Said auxiliary frame may be held in rigid relation to the exterior walls of the hive proper by dowel-pins i or other fastening means. With this construction when a swarm of bees is occupying a hive and a new swarm has left the hive the honey-frame holders C C on each side of the hive, as shown in Fig. 3, may be removed from the hive, and the brood-frames, which are shown in Fig. 3 as occupying a central portion of the main compartment of the hive, may be moved over to one side of the hive and another set of brood-frames be placed in the other side of the hive for the new swarm, with the partition G between two groups of brood-frames, as shown in Fig. 6. After said brood-frames have been thus arranged the auxiliary frame I will be placed in position and the frame-holders J inserted therein in the manner before described and the roof afterward placed on the top of the auxiliary frame to close the same, as shown in Fig. 6.

Obviously the rear compartment may be filled with brood-frames, in which event if the proportion of honey-frames contained within the auxiliary frame I is too small another such frame and contained honey-frames may be employed. Moreover, it is sometimes desirable to rear queen-bees in excess of the number required by the swarms developed from a hive, and the construction of the hive af-

fords a convenient means of isolating such excess of number of queen-bees for propagating new swarms. This may be done by placing one of the brood-frames at one side of the main compartment and separating it from the adjacent brood-frames or honey-frame holders, as the case may be, by a partition or queen-bee excluder G, or said brood-frame containing the queen-bees may be located in any part of the said chamber or compartment and separated by the queen-bee excluders from the other parts of the chamber. Moreover, with the construction shown in Fig. 3 and without the addition of the auxiliary frame I the hive may be adapted for the use of two relatively-small swarms by removing one or more of the brood-frames and separating the remaining brood-frames by a partition or queen-bee excluder G. The main or principal feature of this part of my invention is comprised in the construction wherein the brood-frames and frame-holders are movably placed within the hive, so that the same may readily be shifted therein to adapt the hive to the different conditions above noted. A further advantage of this construction, beyond those above noted, is that during the winter season, when the bees are not working and when they occupy the brood-frames, the honey-frame holders are removed from the hive, both those contained in the main compartment and in the rear or smaller compartment, and the brood-frames grouped in the center of the hive and the space at the sides and rear of the same filled with a suitable insulating material—such as hay, straw, and the like—to maintain the temperature of that part of the hives occupied by the bees in a state favorable to the maintenance of the bees. The inner side walls A^5, as before stated, are movably secured in the main compartment of the hive, so that when a smaller number of brood-frames and honey-carrying frames are employed, as shown in Fig. 3, as for a small hive, the said inner side walls may be moved inwardly, so as to decrease the width of the main compartment to correspond with the number of frames contained therein. Also when said honey-frame holders are removed and the hive is prepared for winter in the manner before stated the said inner movable walls A^5 will desirably be moved up closely to the brood-frames and the insulating material placed between the inner side walls and the outer side walls A^3. The space contained between the roof and the upper wall of the hive will desirably be at all times filled with an insulating material, as may also the space contained between the bottom wall or floor and slats F^2 below the same. The space *a* between the exterior front wall and the interior front wall is also adapted to be at all times filled with such insulating material. During the winter months, when the construction shown in Fig. 6 is employed, a portion of the brood-frames will be placed in a separate hive, so as to permit the removing frames to be properly insulated by placing the same centrally in the hive and the insulating material around the same.

The construction described, embracing a horizontal bottom wall or floor, brood-frames and honey-holders which are supported with their lower edges slightly above said floor, and partitions constructed to afford passage for the bees between the same and the floor, is of considerable importance, as I have found by experience that the bees prefer to work in honey-frames which are located in the same general level as the brood-frames rather than above or below the same. With the construction described a horizontal passage is provided below said frames which intersects the spaces between the honey-frames and affords a ready access for the bees to the said frames. The provision of the glass in the inner side and rear walls A^5 A^6 is of considerable importance, as it enables the honey-frames to be inspected when in place within the hives and without the necessity of disturbing the bees or being exposed thereto. Obviously as the glass is herein provided for the purpose of observation any material serving the purpose may be employed therefor.

I have shown in Figs. 7, 8, and 9 a form of honey-frame holder which may be used in the construction of hives herein shown or may be employed in other forms of hives, if desired. Said frame is made of the same form as the frames C, hereinbefore referred to; but the members thereof are hinged at their points of connection, so that the same may be removed from the group of honey-frames contained therein. As shown in said drawings, L L designate the horizontal members of said frame-holder, and L′ L′ the vertical members thereof. Said vertical members are hinged to the lower horizontal member in a manner to swing in a plane parallel with the plane of said horizontal member by means of ordinary leaf-hinges *l*, and the upper horizontal member is similarly hinged to one of the vertical members by a like hinge *l′*. The upper end of the other vertical member is provided with a spring-latch l^2, which engages a socket l^3 in the adjacent end of the upper horizontal member. The lower horizontal member is provided between its ends with vertical strips L^2, preferably one on each side thereof, between which honey-frames are inserted. Said strips support the adjacent edges of the two central rows of honey-frames and prevent the same from falling laterally away from the holder. When the frame is in its closed position, the spring-latch l^2 engages the socket l^3 of the upper horizontal member and acts to hold the frame members rigidly together. Said upper horizontal member extends beyond the vertical end members in position to engage the supporting-strips *b b′* when the same are inserted within the hive, as shown in Fig. 9. This construction affords a ready means of removing the honey-frame from the holders. Said frame may obviously be made

to contain the single-depth honey-frame, like those which occupy the auxiliary frame, as seen in Fig. 6.

The supporting-frames, made as described, serve to cover and protect the outer faces of the individual honey-frames, and thereby to prevent the same being soiled by the bees. Consequently when the honey-frames are removed from the supporting-frames they present a clean and attractive appearance and are much more satisfactory to the buyer or consumer than would otherwise be the case.

I claim as my invention—

1. A beehive comprising a compartment or chamber provided at the opposite sides thereof with parallel supporting-ledges, brood-frames and honey-frame holders supported on said ledges, and shiftable laterally thereon, and a movable queen-bee-excluding partition between said brood-frames and honey-frame holders, and laterally shiftable in said chamber to any position desired, said partition being made of open-work construction, and supported on the floor of the hive by means temporarily holding it stationary.

2. A beehive comprising a compartment, a brood-frame arranged centrally thereof, a honey-frame holder located in each side of the brood-frame and between the same and the side wall of the inclosure, and a removable queen-bee-excluding partition made of open-work construction which permits the passage of the working bees therethrough located between said brood-frame and each honey-frame holder and free to be laterally shifted to any position desired in said inclosure.

3. A beehive comprising a compartment having removable side walls, brood-frames and honey-frame holders located side by side in said compartment, a movable queen-bee-excluding partition or partitions interposed between the brood-frames and honey-frames, and movable transparent walls located inside of the said removable side walls of the compartment.

4. A beehive comprising a compartment or chamber having a horizontal bottom wall or floor, parallel supporting-ledges on the upper edges of opposite walls thereof, a group of laterally-separated and shiftable brood-frames supported on said ledges centrally in said compartment, laterally-separable and shiftable honey-frame holders located at either side of said brood-frames and between the same and the side walls of the compartment, and queen-bee-excluding partitions made of open-work construction which permits the passage of the bees therethrough located between said brood-frames and honey-frame holders and free to be shifted laterally to any position desired in the chamber, and partitions located between the several honey-frame holders.

5. A beehive comprising a compartment or chamber, a movable brood-frame in said chamber, a movable honey-frame holder also in said chamber, and a movable queen-bee-excluding partition between said frame-holder and said brood-frame, said partition being provided on its lower edge with sharpened projections which are adapted to engage the bottom wall or floor of the hive.

6. A beehive comprising a compartment or chamber, a movable brood-frame located in said chamber, a movable honey-frame holder also located in said chamber, and a queen-bee-excluding partition between said frame-holder and said brood-frame, said partition consisting of parallel slats connected by transverse end strips, which latter project below the lowermost slat of the partition and are provided with sharpened lower ends.

7. A beehive comprising a compartment or chamber, a group of removable brood-frames in said chamber, a group of honey-frame holders, partitions between said honey-frame holders, and projections on said frame-holders adapted for engagement with the partitions to maintain the same out of contact with the partitions.

8. A beehive comprising an inclosure, a partition in said inclosure dividing the interior thereof into a main compartment and a smaller compartment, said partition being constructed to permit the passage therethrough of the working bees but to exclude the queen-bee, a group of brood-frames in said main compartment, honey-frame holders also in said compartment, a queen-bee-excluding partition between said frames and honey-frame holders, and honey-frame holders located in said smaller compartment.

9. A beehive comprising an inclosure, a partition in said inclosure dividing the interior thereof into a main compartment and a smaller compartment, said partition being constructed to permit the passage of the working bees therethrough but excluding the queen-bee, a group of brood-frames in said main compartment, shiftable honey-frame holders also in said compartment and removable and shiftable queen-bee-excluding partitions between said frames and honey-frame holders, and honey-frame holders located in said smaller compartment.

10. A beehive comprising an inclosure having side and end walls, a permanent partition in said inclosure dividing the interior thereof into a main compartment and a smaller compartment, said partition being constructed to permit the passage therethrough of the working bees and to exclude the queen-bee, a group of brood-frames in said main compartment, honey-frame holders also in said main compartment, said frame-holders and brood-frames being supported from the upper edges of the said permanent partition and a parallel wall of the inclosure, a queen-bee-excluding partition between said brood-frames and honey-frame holders, and honey-frame holders located in said smaller compartment.

11. A beehive comprising an inclosure having end and side walls, a group of brood-frames in said inclosure, a group of honey-frame

holders also in said inclosure, and a movable queen-bee-excluding partition between said frame-holders and brood-frames, one wall of said inclosure being provided at the upper edge thereof with a groove to afford a transverse passage for the working bees from one side of the hive to the other and the partition being provided with a wing which projects into said groove to prevent the passage of the queen-bee therethrough but which does not exclude the working bees.

12. The combination with a beehive comprising a main compartment or chamber having side and end walls, and a removable top wall or roof, a group of shiftable brood-frames in said compartment, a plurality of shiftable honey-frame holders also in said compartment, and a shiftable queen-bee-excluding partition between said brood-frames and honey-frame holders, of an auxiliary frame which is adapted to be inserted between the upper edges of said side and end walls of the inclosure and the upper wall thereof, and honey-frame holders in said auxiliary frame, said top wall or roof when the auxiliary frame is not employed being fitted upon the walls of the main chamber or compartment.

13. A honey-frame holder comprising flexibly-connected end and side members, one of said end members being detachably connected at one end with the adjacent side member to permit the removal of the honey-frames from the holder.

14. A honey-frame holder comprising flexibly-connected end and side members, one of said end members being detachably connected with one side member and one of the side members being extended beyond the end members to afford projections by which to suspend the holder.

15. A honey-frame holder comprising flexibly-connected side and end members, one of said end members being detachably connected with one side member to permit the removal of the honey-frames from the holder, and strips extending between said side members intermediate said end members, said strips being attached to one of said side members and adapted to engage the side edges of the adjacent honey-frames which are contained within the holder.

16. A honey-frame holder comprising flexibly-connected side and end members, and a spring-latch attached to one end of one of said members and adapted for engagement with the adjacent end of one of the other members, whereby said members are detachably connected to permit the holder being removed from the honey-frames.

17. A beehive having a compartment or chamber provided with removable side walls and adapted to receive both brood-frames and honey-frame holders, and laterally-shiftable partitions in said chamber which are free to be moved to any desired position therein and adapted for positive holding connection with the floor of the hive and forming lateral spaces adapted to contain honey-frame holders in summer or fillings of non-conducting material in winter.

18. A beehive having a large and a small compartment divided by an open queen-bee-excluding partition, of which the larger compartment is adapted to receive both brood-frames and honey-frame holders and the smaller compartment to receive honey-frame holders located at right angles to those in the large compartment, a movable queen-bee-excluding partition located in said larger compartment contiguous to the brood-frames and forming at either side thereof spaces adapted to receive the honey-frame holders.

19. A beehive having a chamber and brood-frames located in said chamber, the wall of said chamber being provided with two lateral bee-inlet openings located one on each side of the center of said chamber, and a queen-bee-excluding partition between the brood-frames in said chamber and between said bee-inlet openings.

20. A beehive comprising an inclosure for the honey-frame holders having an outer removable wall and inside of said wall provided with an inner wall constructed to permit observation therethrough of the honey-frames when the outer wall is removed, said inner wall engaging the top and bottom walls of the hive and said top and bottom walls being constructed to permit said inner wall to be shifted from one side to the center of said inclosure.

21. A beehive comprising a compartment, laterally-shiftable brood-frames and honey-frame holders therein and a laterally-shiftable queen-bee-excluding partition between said brood-frames and honey-frame holders, said brood-frames, honey-frame holders and partition being separated by spaces from the side, bottom and top walls to permit the passage of the working bees therethrough.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 7th day of August, A. D. 1899.

HANS JOHANSEN.

Witnesses:
GERTRUDE BRYCE,
WILLIAM L. HALL.