

O. C. FENLASON.
 COLLAPSIBLE VENEER BOX FOR BERRIES, &c.
 APPLICATION FILED JUNE 20, 1908.

912,099.

Patented Feb. 9, 1909.

4 SHEETS—SHEET 1.

Fig. 1.

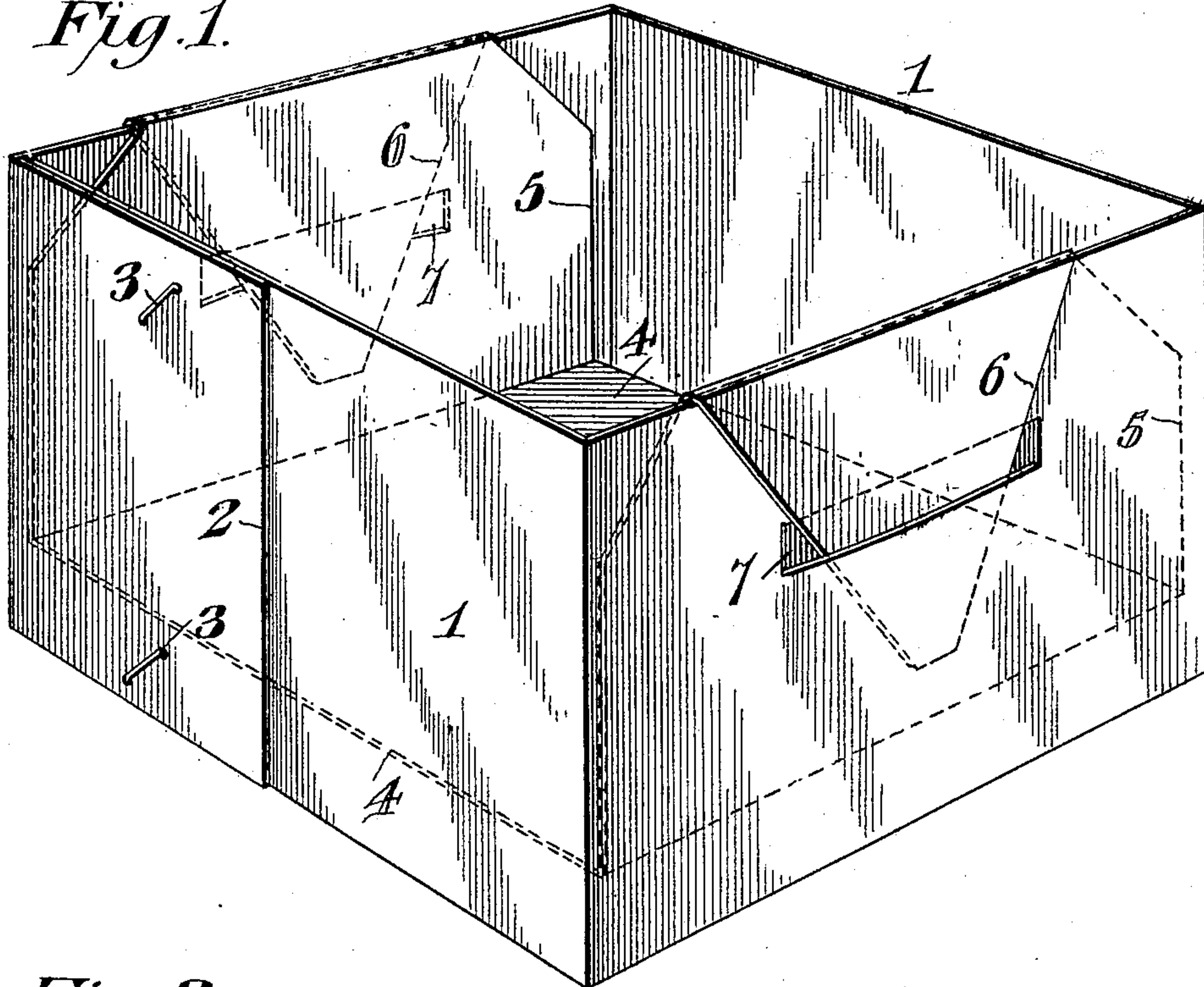
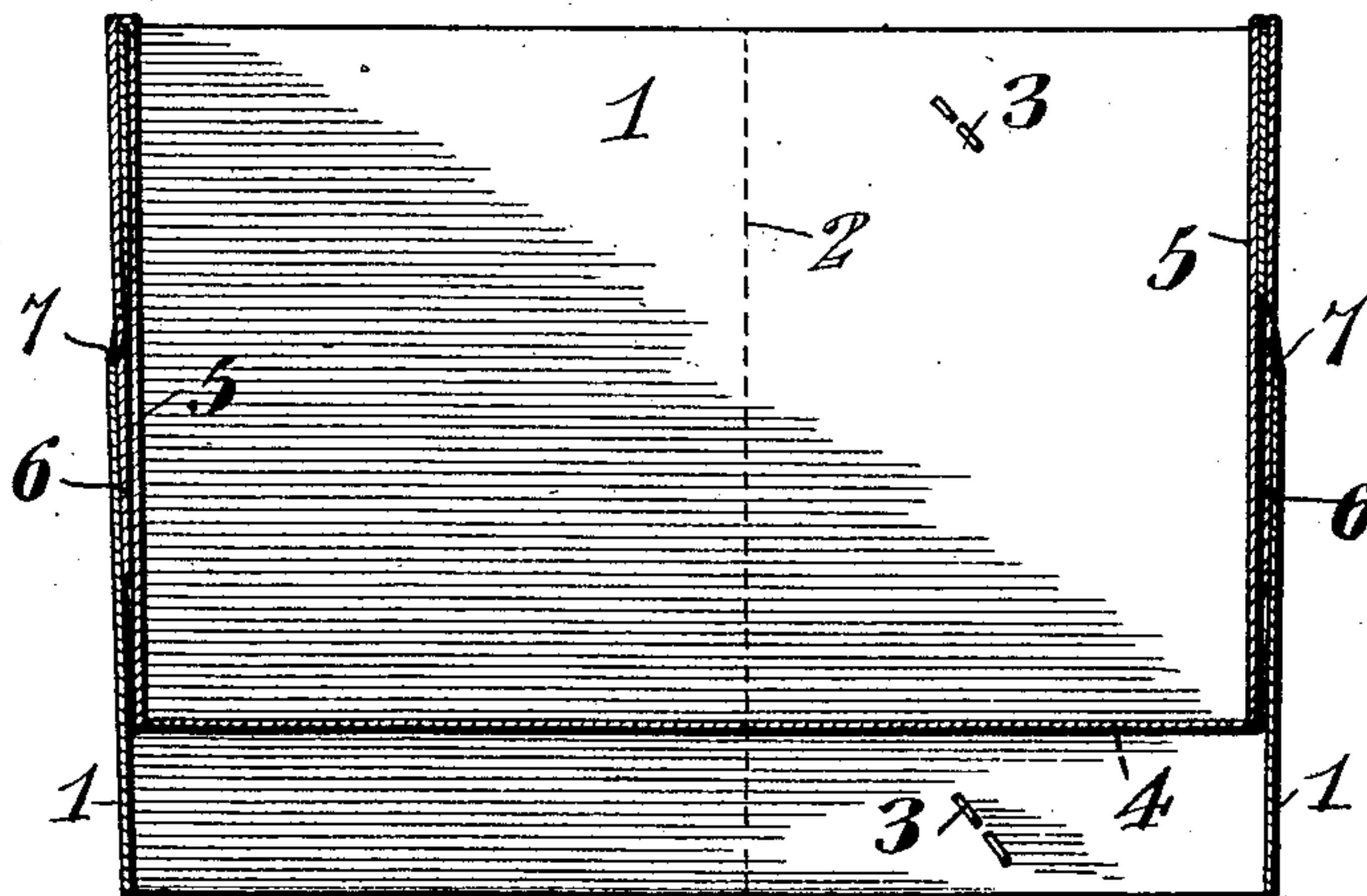


Fig. 2.



Witnesses

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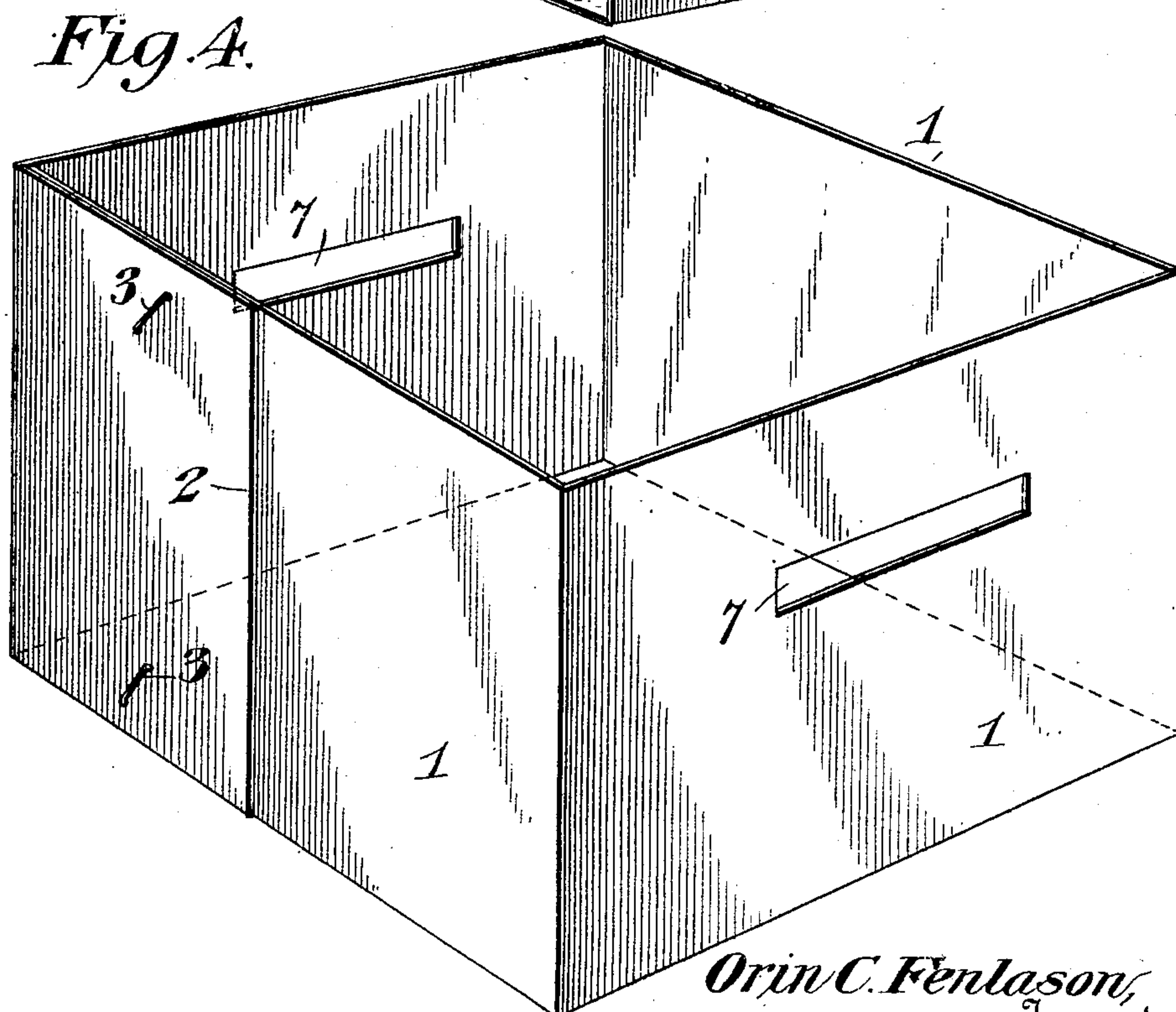
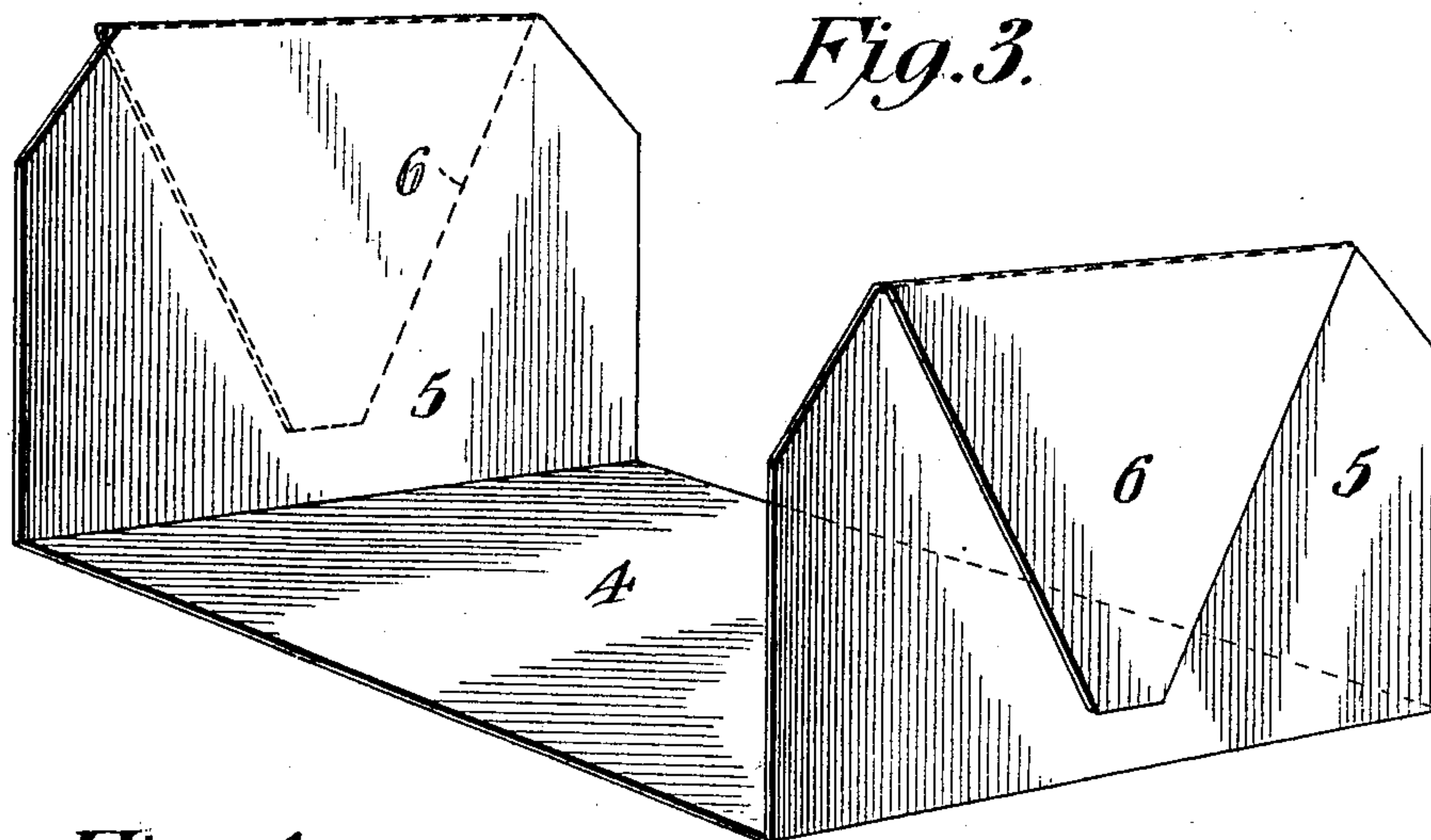
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4 SHEETS—SHEET 3.

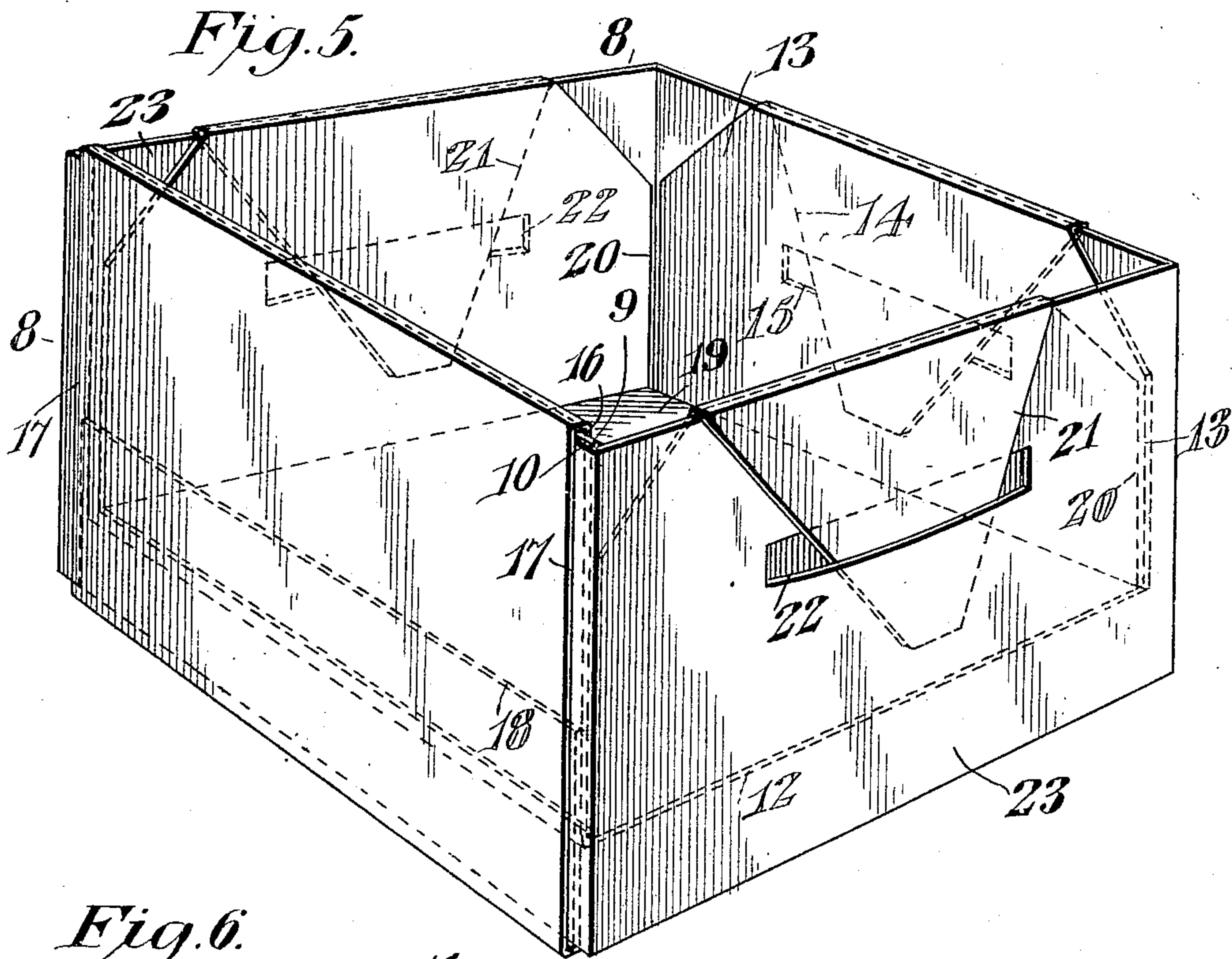
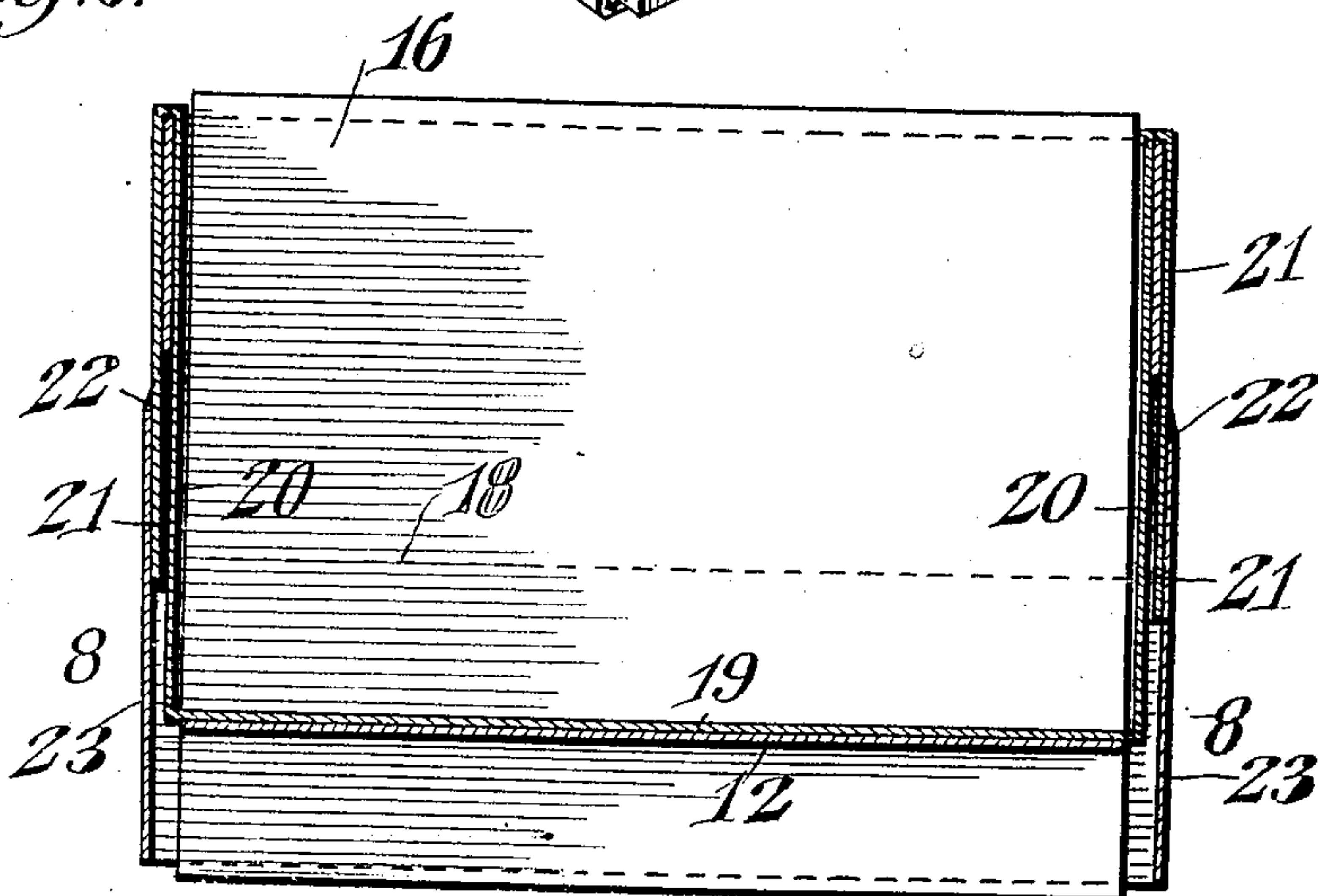


Fig. 6.



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 4 SHEETS—SHEET 4.

Fig. 7.

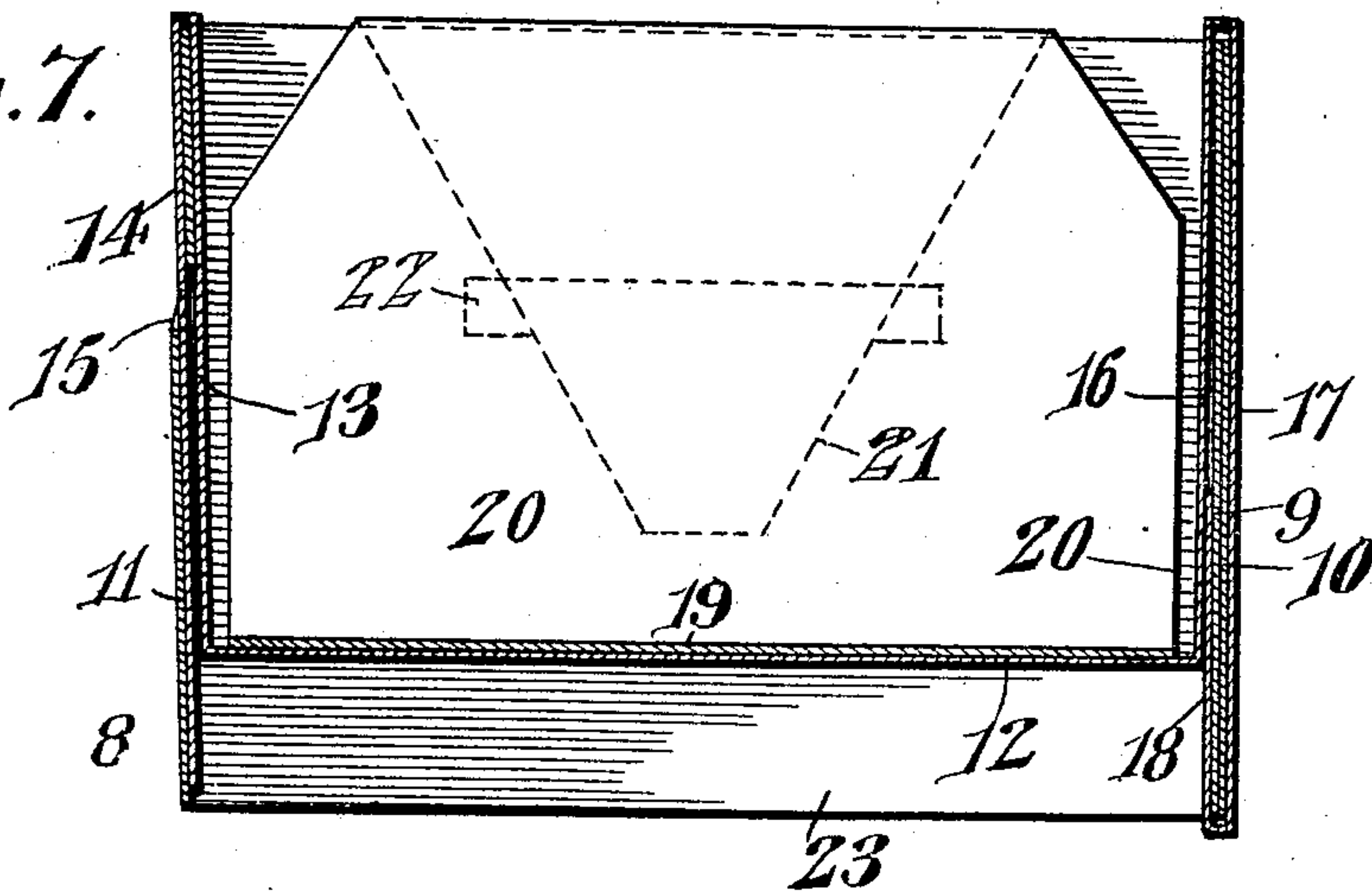
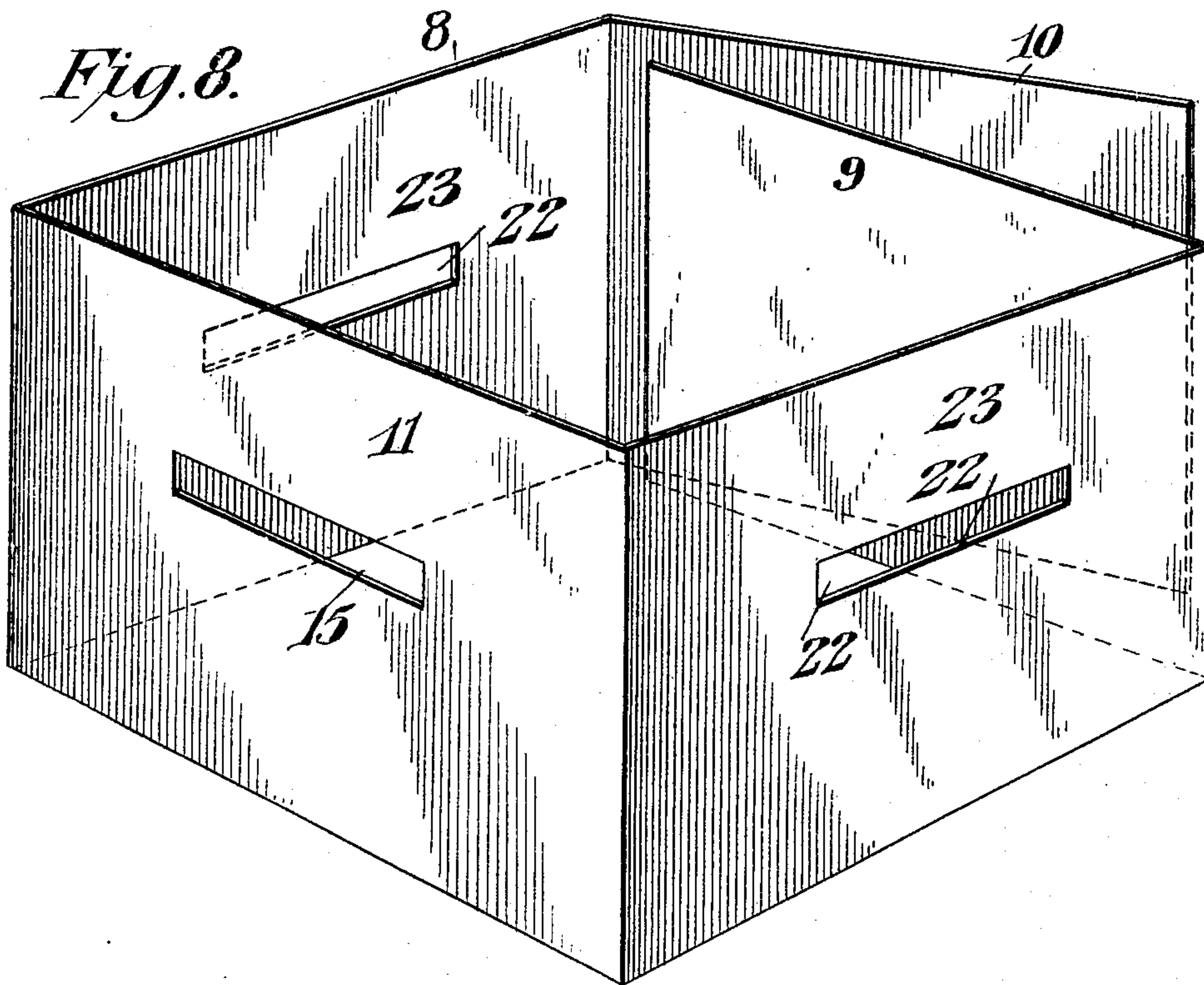


Fig. 8.



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UNITED STATES PATENT OFFICE.

ORIN C. FENLASON, OF HOQUIAM, WASHINGTON.

COLLAPSIBLE VENEER BOX FOR BERRIES, &c.

No. 912,099.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed June 20, 1908. Serial No. 439,539.

To all whom it may concern:

Be it known that I, ORIN C. FENLASON, a citizen of the United States, residing at Hoquiam, in the county of Chehalis and State of Washington, have invented a new and useful Collapsible Veneer Box for Berries, &c., of which the following is a specification.

The invention relates to improvements in collapsible boxes for berries, fruit, vegetables, etc.

The object of the present invention is to improve the construction of collapsible boxes for berries, fruit, vegetables, etc., and to provide a simple and efficient box of this character, adapted to be easily assembled and capable of being rapidly and cheaply manufactured by automatic machinery.

A further object of the invention is to provide a collapsible veneer box in which the grain of wood in the attached portions will run in the same direction, so that the wood will be free to swell and shrink uniformly without splitting or buckling.

Another object of the invention is to save wire in the manufacture of veneer boxes, and to provide one requiring only two staples in its construction.

The invention also has for its object to provide a veneer box adapted to reduce the freight charges for shipping it.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a perspective view of a collapsible veneer box, constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail perspective view of the separate detachable bottom and its supporting means. Fig. 4 is a perspective view of the body of the box, the bottom being removed. Fig. 5 is a perspective view, illustrating a modification of the invention and showing a box having a double bottom. Fig. 6 is a central vertical sectional view of the same. Fig. 7 is a similar view, taken at right angles to Fig. 6. Fig. 8 is a perspective view of the

body of the box, the overlapped ends being partially separated.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

In the embodiment of the invention in the form illustrated in Figs. 1 to 4 inclusive, the box is provided with a collapsible rectangular body portion 1, constructed of a single sheet or strip of veneer of sufficient length to form the four walls of the body portion, and to provide overlapping terminals at one of the walls. The strip or sheet of veneer is scored at the corners of the box, an extension 2 being provided at one end of the strip or sheet to overlap the other end portion, which is of sufficient length to form one of the sides of the box. The overlapped ends of the strip or sheet of veneer are pierced by the sides or legs of inclined staples 3, preferably two in number and located near the upper and lower edges of the body portion. The scoring of the veneer at the corners of the box enables the body to collapse or fold perfectly flat for shipping and storing, as will be readily understood. Owing to the particular construction of the rectangular body, it may be manufactured on a rotating, round or rectangular form instead of on a stationary rectangular form as heretofore, which is a great advantage. Also the construction of the body by this method effects a great saving in the wire, as a considerable less number of staples are employed. The box is equipped with a removable bottom 4, provided with upwardly extending supporting or hanger portions 5, having body engaging portions or flaps 6 at their upper ends. The bottom 4, the supporting or hanger portions 5 and the flaps 6 are constructed of a single strip or piece of veneer, scored transversely at the points where the strip is folded or bent to form the said bottom, supporting portions 5 and flaps 6. These scorings, which enable the strip to assume the form illustrated in Fig. 3, also permit the strip to be folded flat, as will be readily apparent. The bottom 4 fits within and conforms to the configuration of the body and prevents the same from collapsing when the box is in use. The bottom may be of an area coextensive with the interior dimensions of the box, or the strip of veneer, which forms the bottom, may be of a length slightly less than the box to leave the side space for ventilating the contents. The supporting or hanger portions, which are

arranged at the inner faces of the opposite sides or walls of the body, extend downward from the upper edges thereof and terminate short of the lower edges of the body to support the bottom a short distance above the lower edges of the box to prevent the berries, fruit, or other contents of the box from being bruised, when the box is placed upon a supporting surface. The flaps, which are tapered or triangular, are arranged exteriorly of the body and extend downward from the upper edge thereof and their lower portions are inserted in horizontal slots 7, punched or otherwise cut in the opposite walls of the body and located at a point intermediate of the upper and lower edges of the same. The introduction of the downwardly tapered flaps into the slots bends or flexes the material, which clamps the flaps and positively retains the bottom of the box in position. This clamping action extends to and includes the upper portions of the slotted sides or walls of the box, which is stiffened through such construction and arrangement. The detachable bottom is folded flat, and when unfolded it may be easily applied to the body, and there is no liability of the parts being incorrectly assembled and affecting the capacity of the box.

In practice the bottoms of the boxes will be packed and shipped separate from the bodies of the boxes, as this will result in a considerable saving in the freight. The collapsible body can be shipped in separate cars, taking the standard manufacturers' rate, while the bottoms can be shipped in full cars, taking the regular box shuck rate, which is much lower than the rate on material made up or fastened together by wire staples.

In the form illustrated in Figs. 5 to 8 inclusive of the drawings, the box is equipped with a double bottom, consisting of crossed strips of veneer, and the overlapped terminals of the body strip of veneer are clamped together by winding one of the bottom strips around the overlapped edges to form a clamp for the same, thereby obviating the necessity of stapling the overlapped ends and also enabling both the bodies of the boxes and the bottoms to be shipped at the regular box shuck rate in full cars. The body 8 is constructed of a single strip or sheet of veneer scored at the corners of the box, and the overlapped end portions 9 and 10 are coextensive in size with the opposite wall 11, and when the terminal portions 9 and 10 are fitted together in overlapped relation they form a wall of two plies or thicknesses. The lower member 12 of the double bottom is provided at one side adjacent to the wall 11 of the body of the box with an upwardly extending supporting portion 13 having a tapering flap 14 at its upper end to engage the upper portion of the contiguous wall 11. The tapering flap is introduced into a hori-

zontal slot 15 of the wall 11, and it operates to flex or bend the material, whereby both the flap 14 and the upper portion of the wall 11 are clamped. The lower member 12 of the bottom is provided at the opposite side with a clamp for engaging and holding the overlapped end portions 9 and 10 of the body of the box. The clamps include an inner upwardly extending supporting portion 16 and an exterior portion 17, extending downward from the upper edge of the body to the lower edge of the same and provided at the bottom with a terminal flap 18, extending upward within the body and having its upper portion interposed between the overlapped terminal portions 9 and 10 and the inner upwardly extending supporting portion 16.

In assembling the box, the body is arranged in rectangular form with the end portions 9 overlapped. The terminal extension or flap 18 is placed against the inner face of the terminal portion 9, and the veneer is wound around the overlapped portions 9 and 10. The other supporting portion 13 and its flap 14 are then engaged with the opposite side of the body of the box. The overlapped end portions 9 and 10 are firmly bound together by the clamp and are securely held in place.

The upper member 19 of the double bottom is constructed substantially the same as the bottom 4, and is provided with upwardly extending supporting portions 20, having tapering flaps 21 at their upper ends for engaging horizontal slots 22 in the other two opposite side walls 23 of the body. The tapering flaps exert the same clamping action on the engaged sides or walls of the body of the box as heretofore described, and the boxes resulting from the crossed bottom members has the advantage of possessing maximum strength, and at the same time entirely eliminating staples, or other fastening devices, which change the character of the completed boxes relative to the freight rates for shipping the boxes. The upper member of the box by being interlocked with the sides 23 of the body effectually prevents the same from being forced outward by the contents of the receptacle. This completely eliminates any outward movement of the end portions 9 and 10 in the clamp, in which they are held. Both of the bottom members are adapted by means of their scorings to be folded flat and compact for shipping or storing.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A collapsible or knock-down veneer box including a body consisting of a single strip of veneer scored at the corners to permit the body to collapse or fold inwardly and provided with opposite slots, and a bottom having supporting portions extending upward

from the bottom to the upper edges of the body and provided with flaps depending from the upper edges of the body and extending through the said slots from the exterior of the body.

2. A collapsible or knock-down veneer box including a body consisting of a single strip of veneer scored at the corners to permit the body to collapse or fold inwardly and provided with opposite slots, and a bottom having supporting portions extending upward from the bottom to the upper edges of the body and provided with flaps depending from the upper edges of the body and extending through the said slots from the exterior of the body and bending or flexing the material, whereby both the flaps and the upper portions of the slotted sides are clamped.

3. A collapsible or knock-down veneer box comprising a veneer body provided with opposite slots, and a veneer bottom having supporting portions extending to the upper edges of the body and provided with exterior tapering flaps passing through the slots of the body and flexing or bending the material, whereby the upper portions of the slotted sides of the body are clamped and the bottom frictionally retained in place.

4. A collapsible or knock-down veneer box including a rectangular body consisting of a strip of veneer and provided in three of its walls with slots and having the ends of the strip overlapped at the other wall, and a bottom composed of two crossed strips of veneer having terminal portions engaging the slots, one end of one of the strips of the bottom being wound around and binding the overlapped ends of the body strip and securing the same together.

5. A collapsible or knock-down veneer box including a rectangular body consisting of a strip of veneer and provided in three of its walls with slots and having the ends of the strip overlapped at the other wall, and a bottom composed of two crossed strips of veneer having terminal portions engaging the slots, one end of one of the strips of the bottom being wound around and forming a clamp for frictionally engaging and holding the overlapped ends of the body strip together.

6. A collapsible or knock-down veneer box including a rectangular body consisting of a strip of veneer and provided in three of its sides with slots and having the ends of the strip overlapped at the other side, and a bottom composed of two crossed strips of veneer provided with supporting portions extending upward to the upper edges of the body and having terminal flaps depending at the exterior of the body and extending through the said slots, one end of one of the strips being provided with means for clamping the overlapped ends of the body strip for holding the same together.

7. A collapsible or knock-down veneer box

including a rectangular body consisting of a strip of veneer and provided in three of its sides with slots and having the ends of the strip overlapped at the other side, and a bottom composed of two crossed strips of veneer provided with supporting portions extending upward to the upper edges of the body and having terminal flaps depending at the exterior of the body and extending through the said slots, one end of one of the strips being wound around the overlapped ends of the body and forming a clamp for holding the same together.

8. A collapsible or knock-down veneer box including a rectangular body consisting of a strip of veneer having its terminals overlapped at one of the sides of the box, and a bottom consisting of crossed strips of veneer provided with supporting portions extending upwardly to the upper edges of the body and suspending the bottom therefrom, one of the strips being provided with means for holding the overlapped terminals of the body strip together.

9. A collapsible or knock-down veneer box including a rectangular body consisting of a strip of veneer having its terminals overlapped at one of the sides of the box, and a bottom consisting of crossed strips of veneer provided with supporting portions extending upwardly to the upper edges of the body and suspending the bottom therefrom, one of the strips being wound around the overlapped terminals and forming a clamp for holding the same together.

10. A collapsible or knock-down veneer box including a rectangular body consisting of a strip of veneer having its ends overlapped at one side of the body, the latter being provided at the opposite side with a slot, a bottom member consisting of a strip of veneer and provided with supporting portions extending upwardly to the upper edges of the body of the box, one of the supporting portions being provided with a flap extending downward and passing through the said slot, and the other supporting portion being extended to embrace and clamp the overlapped ends of the body, and a second bottom member consisting of a strip of veneer crossing the first mentioned bottom member and engaging the opposite walls of the body.

11. A collapsible or knock-down veneer box including a rectangular body consisting of a strip of veneer having its ends overlapped at one side of the body, the latter being provided at the opposite side with a slot, a bottom member consisting of a strip of veneer and provided at one side with an upwardly extending supporting portion having a flap at the top arranged exteriorly of the body and passing through the said slot, the said member being provided at the opposite side with a clamp frictionally engaging the overlapped ends of the body strip and com-

posed of an inner supporting portion extending upward to the upper edges of the body, and an outer portion extending downward to the lower edges of the body and provided
5 thereat with an inner upwardly extending flap interposed between the supporting portion of the clamp and the overlapped ends, and a second bottom strip crossing the first
10 the opposite walls thereof to hold the over-

lapped ends of the body strip against outward movement in the clamp.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ORIN C. FENLASON.

Witnesses:

ELMER V. SMITH,
ALTON R. KELLOGG.