

No. 875,011.

PATENTED DEC. 31, 1907.

G. W. SWIFT, JR.
PAPER BOX.
APPLICATION FILED NOV. 27, 1906.

2 SHEETS—SHEET 1.

FIG. I.

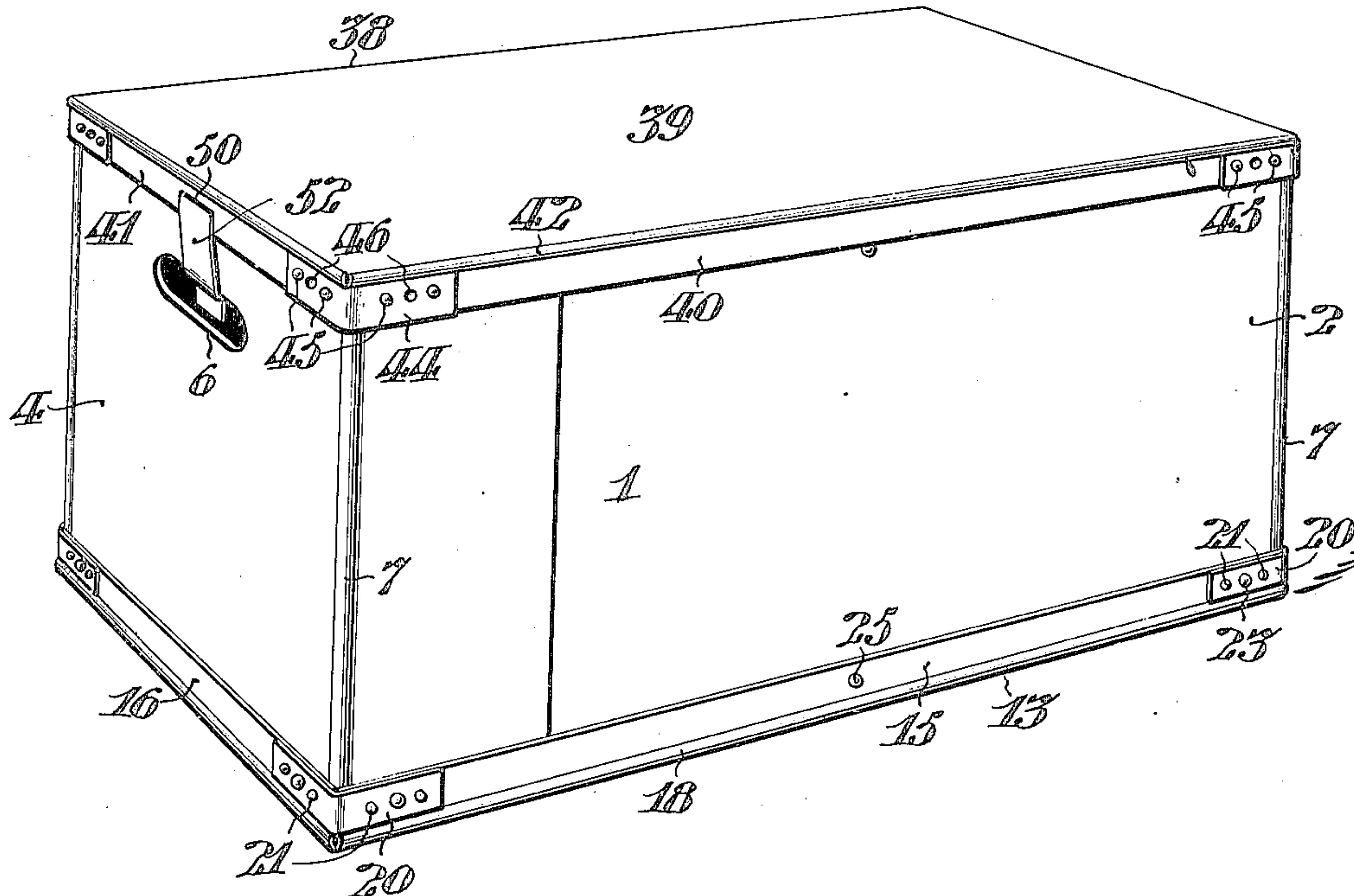


FIG. II.

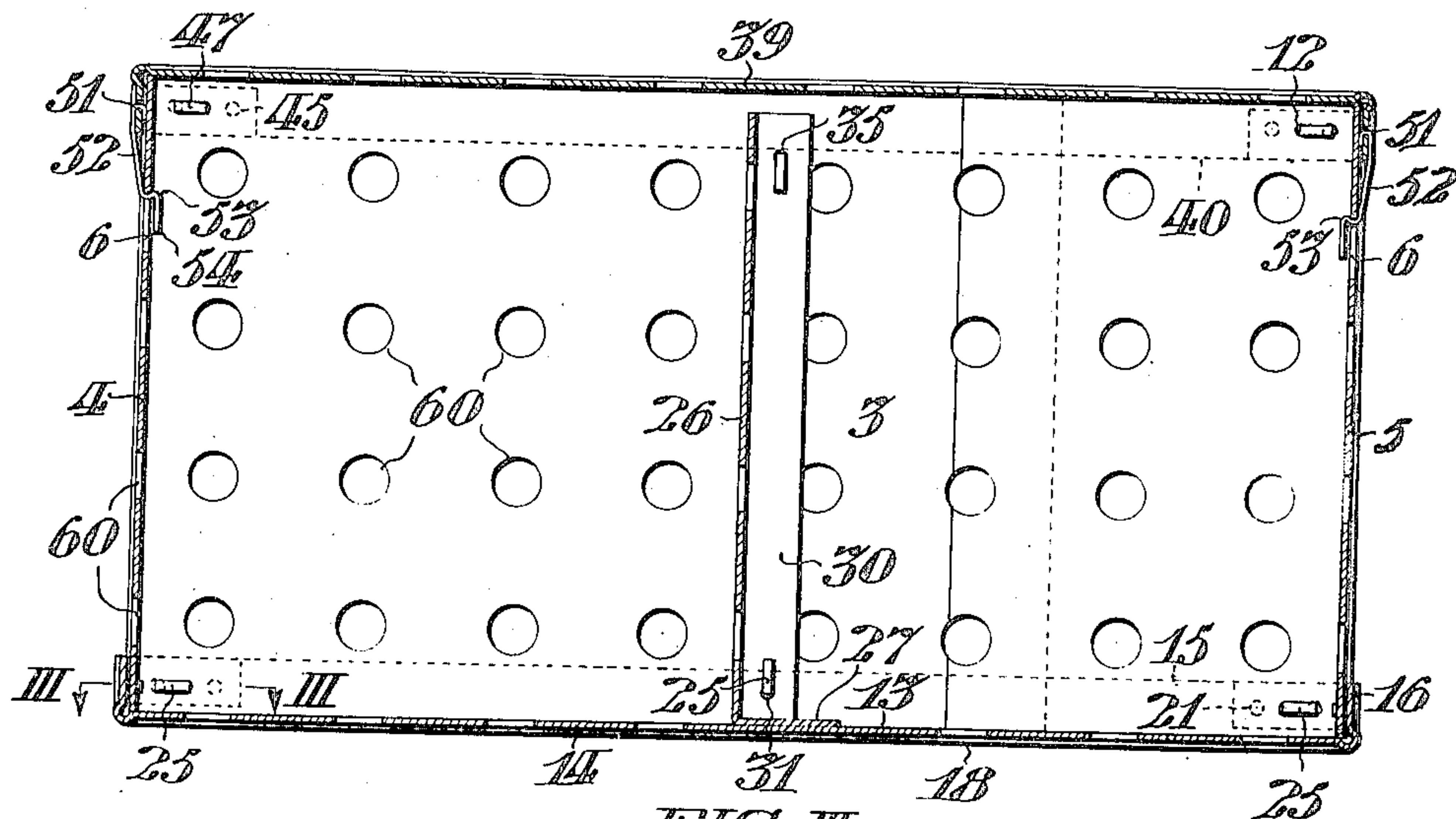
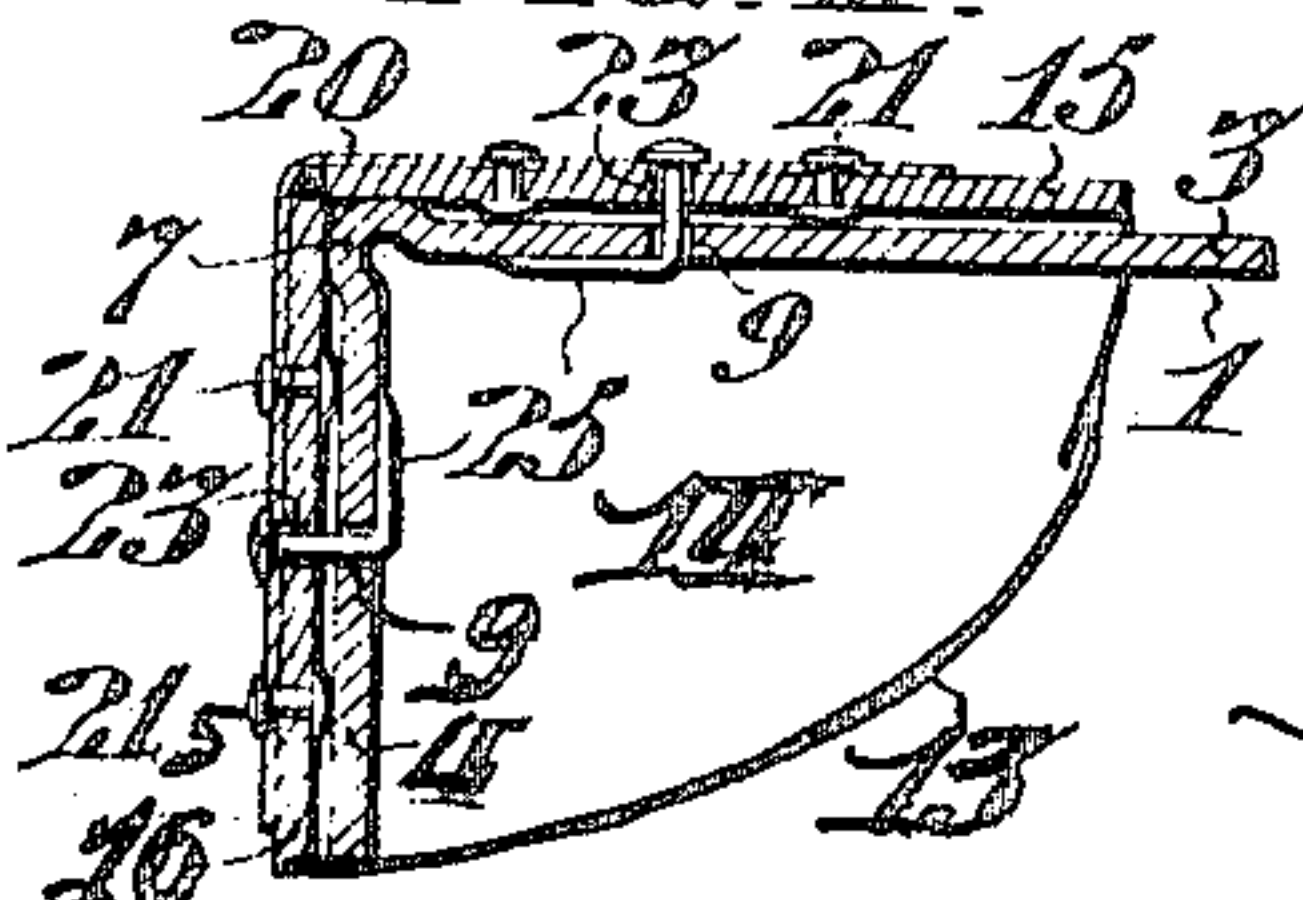


FIG. III.



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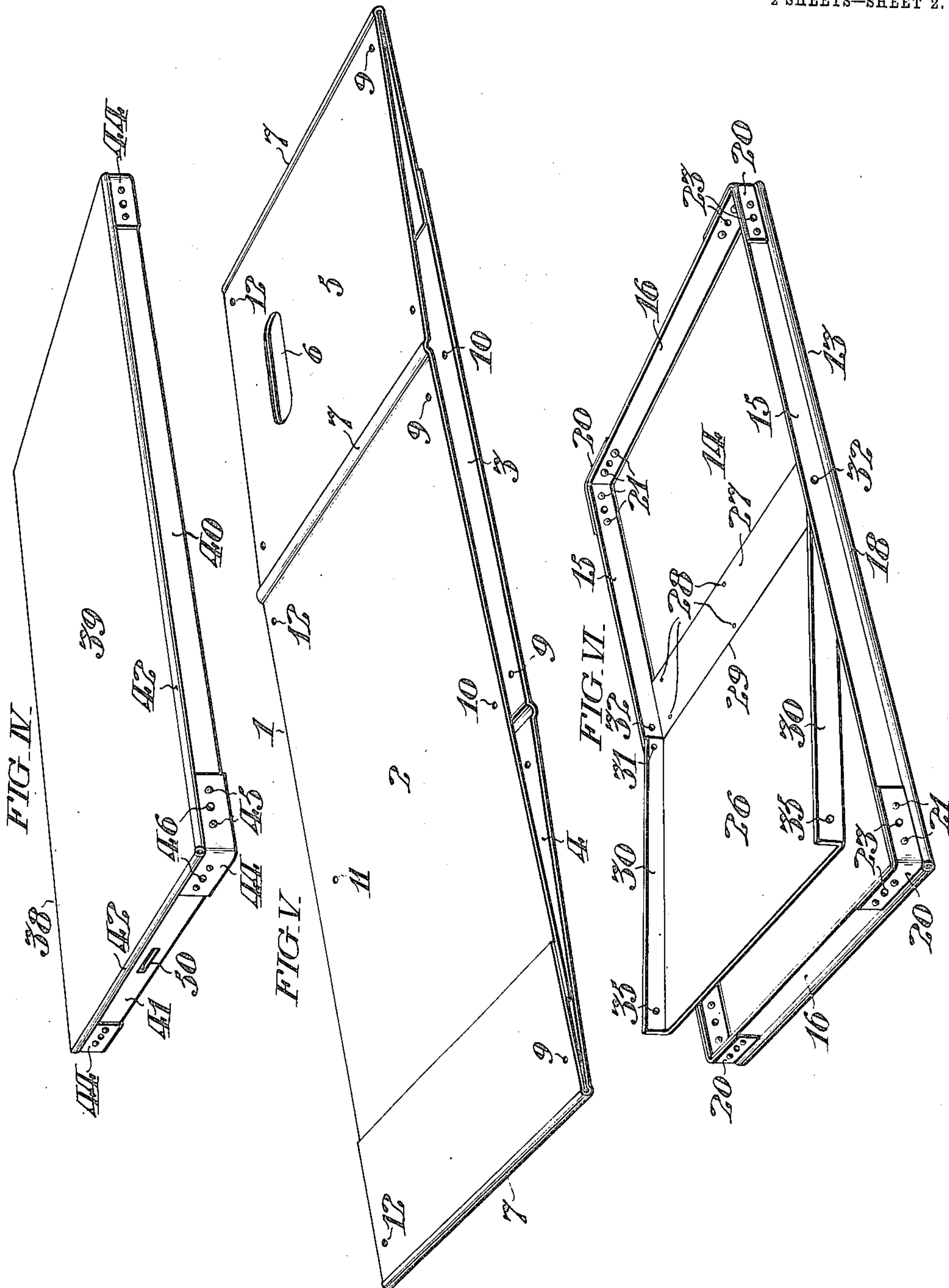
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2 SHEETS—SHEET 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE W. SWIFT, JR., OF BORDENTOWN, NEW JERSEY.

PAPER BOX.

No. 875,011.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed November 27, 1906. Serial No. 345,300.

To all whom it may concern:

Be it known that I, GEORGE W. SWIFT, Jr., of Bordentown, in the county of Burlington and State of New Jersey, have invented
5 a certain new and useful Improvement in Paper Boxes, whereof the following is a specification, reference being had to the accompanying drawings.

It is the object of my invention to provide
10 a substitute for the wooden crates of the type employed with cell cases, to transport eggs and other fragile products.

The form of my invention hereinafter described comprises three separate and distinct
15 members, *i. e.* a base, body and lid which may be collapsed for shipment to the producer but which are so constructed and arranged that they may be erected, assembled and connected, without skilled labor, to
20 form a rigid rectangular receptacle.

My invention comprises the various novel features of construction and arrangement hereinafter more definitely specified.

In the drawings, Figure I, is a perspective
25 view of a box conveniently embodying my improvement. Fig. II, is a vertical longitudinal sectional view of said box. Fig. III, is a fragmentary sectional view taken on the line III, III, in Fig. II. Fig. IV, is a perspective view of the box lid shown in Fig. I.
30 Fig. V, is a perspective view of the box body shown in Figs. I and II, but in collapsed position. Fig. VI, is a perspective view of the box base, shown in Figs. I and II; the central partition being slightly raised from its collapsed position thereon.

In said figures; 1, is the body member comprising the opposite side walls 2, and 3, and the end walls 4, and 5. Said end walls 4, and
40 5, are provided with hand holes 6, and all of said walls are connected by unitary curved offset portions 7, at their junctions. Said body 1, has apertures 9, at its lower edge to receive distinct attaching means to connect
45 it with the base member, and also has apertures 10, and 11, to receive distinct attaching means to connect it with the flanges of the central partition which is permanently attached to said base member. Said body
50 1, is also provided with apertures 12, to receive distinct attaching means whereby it may be secured to the flanges of the lid if desired.

The base member 13, comprises the plane
55 panel 14, having the opposite side flanges 15, and end flanges 16. Said base member has

the curved offset portions 18, at the junctions of said panel 14, and flanges 15, and 16, similar to the offset portions 7, shown in Fig. V. The corners of said base member 13, are
60 reinforced by right angular plates 20, one of which is shown in section in Fig. III. Each of said plates 20, is permanently secured to the flanges 15, and 16, of the member 13, by distinct attaching means, conveniently riv-
65 ets 21, constructed and arranged as shown in Fig. III, and, each of said plates 20, is provided with apertures 23, which register with the apertures 9, in the body member 1, above described; so that when the box is erected
70 from the collapsed position shown in Figs. IV, V, and VI, to the rectangular position shown in Fig. I; said base member 13, may be permanently secured in rigid relation with
75 said body member 1, by distinct attaching means entered through said registered apertures 23, and 9, and conveniently consisting of wrought metal pins or nails 25, which, as
80 shown in Fig. III, have heads exterior to said plates 20, engaging the latter, and have points clenched in contact with the plane inner surfaces of the body 1.

The partition 26, comprises the flap 27, which is permanently secured to said panel 14, conveniently by wire nails 28, so that
85 said partition may be bent upwardly on the line 29, (shown in Fig. VI,) until it stands vertically as shown in Fig. II. Said partition is provided with opposite side flanges 30; having at their lower ends, apertures 31,
90 which register with the apertures 32, in the opposite side flanges 15, in said base member 13, and the apertures 10, in the lower edge of the member 1, shown in Fig. V; so that distinct attaching means such as the pins
95 25, may be entered through said registered apertures 10, 32 and 31, and be permanently secured therein like the pins 25, shown in Fig. III. The upper ends of said partition flanges 30, are provided with sockets 35,
100 which register with the apertures 11, at the upper edge of said body 1, shown in Fig. V, and which may be secured thereto by distinct attaching means such as above described, so as to retain said partition 26, in
105 the vertical position shown in Fig. II, in rigid relation with said body member 1.

The lid member 38, comprises the plane panel 39, having the opposite side flanges 40, and end flanges 41, connected therewith
110 by the curved offset portions 42, and, said flanges 40, and 41, are reinforced at the

corners of said member 38, by right angular plates 44, which are permanently connected with said flanges by distinct attaching means 45, similar to the attaching means 21, above described with reference to Fig. III. It may be noted that said lid plates 44, comprise apertures 46, which register with the apertures 12, at the upper edge of the body member 1, so that said lid 38, and body member 1, may be connected by distinct attaching means 47, entered through said registered apertures 46, and 12, like the attaching means 25 above described with reference to Fig. III. The opposite end flanges 41, on said lid 38, are provided with slots 50, in which the hooked ends 51, of the clasps 52, are engaged as shown in Fig. II, and, said clasps 52, have recessed flanges 53, adjacent to their free ends 54, which may be entered through the hand holes 6, in the body 1, so as to engage the latter as shown in Fig. II, and thus prevent accidental displacement of said lid 38, with respect to the body 1. It may be noted that although said clasps 52, are substantially rigid, the portions of the end flanges 41, with which the hooked ends 51, of said clasps are engaged, as shown in Fig. II, are flexible enough to permit said clasps to be swung into and out of engagement with the end walls 4 and 5, of the body 1, without disengagement of said clasps from said flanges 41. When secured solely by said clasps 52; said lid 38, may be conveniently detached from the body 1, by manually turning the ends 54, of said clasps, outwardly with respect to said holes 6, the hinged connection of the hooked ends 51, of said clasps with the flanges 41, on the lid permitting such movement without displacement of said hooked ends 51, although the latter may be manually disengaged when desired.

It is to be understood that when the member 1, is collapsed as shown in Fig. V, and the partition 26, is collapsed into the base member 13, (in which it is shown only partially collapsed in Fig. VI,) the three members 1, 13 and 38, may be compactly disposed in parallel plane relation for transportation, the advantage of such collapsibility being that the cost of transportation of the empty boxes is thereby reduced to the minimum.

It being desired to erect the box members from the collapsed relation shown in Figs. IV, V, and VI, to the assembled position in Figs. I and II; the base member 13, is placed upon the floor, the partition 26, upturned, and, the body member 1, being unfolded with its corners rectangular, is set within the flanges 15, and 16, on said base member. Thereupon, fastening means, such as the pins 25, shown in Fig. III, are entered through the apertures in said members 13,

and 1, as above described, thus permanently connecting them; with the partition 26, maintaining the opposite side walls 2, and 3, of the body 1, braced in rectangular relation with the end walls 4 and 5. Thereupon, the space within said body 1, may be filled with cell cases packed with eggs or other articles. The lid 38, being then fitted in the position shown in Figs. I, and II, with the clasps 52, having their hooked ends engaged with said lid, said clasps may be engaged with the body 1, as above described to retain the lid in closed position.

Boxes constructed and assembled as above described may be transported without accidental displacement of the lid member 38, although the latter is only retained by the clasps 52; however, if it is desired to more securely fasten the lid, distinct attaching means, such as pins 47, aforesaid, may be entered through the registered apertures in the lid plates and flanges and body, and be clenched within the latter, like the pins 25, shown in Fig. III.

For many purposes, it is preferable to form such boxes of heavy paper with the imperforate walls as shown in Figs. I, IV, V, and VI. However, if they are to be used for packing eggs or other articles in cold storage, I prefer to provide said walls with perforations 60, as shown in Fig. II, to permit the passage of air currents through each box around the contents thereof.

It is to be understood that I do not desire to limit myself to the precise details of construction and arrangement above described as it is obvious that various modifications may be made therein without departing from the essential features of my invention as defined in the following claims.

I claim:—

1. A collapsible box, comprising a base, a body and a lid which are distinct and primarily separate; said base having a partition provided with a flap secured to said base, and having opposite side flanges fitted to said body; registered apertures being provided in said body and partition flanges; distinct attaching means connecting said body and partition through said registered apertures; marginal flanges on said base and lid; right angular reinforcing plates fitted to said base and lid flanges at the corners thereof; distinct means permanently connecting said plates with said flanges; said corner plates being provided with apertures adapted to register with apertures in said body; distinct devices connecting said body and base through said registered apertures in said corner plates; and clasps each having one end connected with said lid and the other end adapted to detachably engage said body through a hole in the latter, substantially as set forth.

2. A collapsible box comprising a base, a body, and a lid which are distinct and prima-

rily separate; said base having a partition provided with a flap secured to said base, and having opposite side flanges fitted to said body; registered apertures being provided 5 in said body and partition flanges; distinct attaching means connecting said body and partition through said registered apertures; marginal flanges on said base and lid; right angular reinforcing plates fitted to said base 10 and lid flanges at the corners thereof; distinct means permanently connecting said plates with said flanges; said corner plates being provided with apertures adapted to register with apertures in said body; and distinct 15 devices connecting said body and base through said registered apertures in said corner plates, substantially as set forth.

3. In a collapsible box, comprising a base, a body, and a lid which are distinct and primarily separate; said base comprising a 20 plane panel and marginal flanges; right angular reinforcing plates fitted to said base flanges at the corners thereof; distinct means permanently connecting said plates with said 25 flanges, said flanges being provided with open apertures adapted to receive attaching means distinct from the means securing said plates to said flanges; and, a partition having a flap fitted to said panel; distinct means per- 30 manently connecting said flap with said panel; said flanges on said partition extending parallel with the side flanges on said panel, and, said partition flanges being provided with open apertures adapted to re- 35 ceive distinct attaching means, substantially as set forth.

4. In a collapsible box, comprising a base, a body, and a lid which are distinct and primarily separate; said base comprising a 40 plane panel and marginal flanges; right angular reinforcing plates fitted to said base flanges at the corners thereof; distinct means permanently connecting said plates with said flanges, said flanges being provided with 45 open apertures adapted to receive attaching means distinct from the means securing said plates to said flanges, substantially as set forth.

5. A collapsible box, comprising a base 50 member, a body member, and a lid member, which are distinct and primarily separate; said base and lid having reinforcing corner plates permanently secured therein; and said body and said base plates having aper- 55 tures adapted to register with each other, and, distinct devices connecting said body and base through said registered apertures, substantially as set forth.

6. In a collapsible box, a right angular reinforcing plate comprising apertures for fast- 60 ening devices; means permanently securing said plate to one of the box members; a distinct member of said box provided with apertures adapted to register with the aper-

tures in said plate; and, distinct removable 65 fastening devices adapted to be entered through said plate and members, and rigidly connect them, substantially as set forth.

7. In a collapsible box, the combination with a body member; of a lid member pro- 70 vided with flanges extending parallel with said body member, exterior to the latter; a right angular reinforcing plate fitted to said lid flanges at the corners thereof, and comprising a plurality of apertures; fastening 75 means entered through certain of said apertures connecting said plate solely with said lid flanges; and, fastening means entered through other of said apertures connecting 80 said plate with said body member, substantially as set forth.

8. In a collapsible box, the combination with two separable casing members of frangible material respectively arranged to fit 85 one within the other and one being a body member; of a reinforcing plate carried by the outer one of said members independently of said inner member; means permanently con- 90 necting said plate with said outer member; and, detachable connecting means entered through said plate, said outer member and said inner member, substantially as set forth.

9. In a collapsible box, the combination with two separable casing members; of a par- 95 tition detachably connecting said members; means permanently connecting said partition to one of said casing members permitting its oscillation thereon; and, detachable connecting means entered through registered 100 openings in the other casing member and said partition, substantially as set forth.

10. In a collapsible box, the combination with separable casing members of frangible material respectively forming a base, a lid, 105 and a body connecting said base and lid; of metallic reinforcing plates respectively carried independently by said base and said lid, at the corners thereof; means permanently connecting said base plates with said base; 110 means permanently connecting said lid plates with said lid; detachable connecting means, distinct from said casing members, entered through said lid plates, lid and body; detachable connecting means, distinct from 115 said casing members, entered through said base plates, base and body, a partition detachably connecting said base and body; means permanently connecting said partition to said base, permitting its oscillation 120 thereon; and detachable connecting means entered through said partition and said body, connecting them in rigid relation, substantially as set forth.

11. In a collapsible box, the combination 125 with separable casing members of frangible material respectively forming a base, a lid and a body connecting said base and lid; of

metallic reinforcing plates respectively carried independently by said base and said lid, at the corners thereof, means permanently connecting said base plates with said base;
5 means permanently connecting said lid plates with said lid; detachable connecting means distinct from said casing members, entered through said lid plates, lid and body; and detachable connecting means, distinct
10 from said casing members, entered through

said base plates, base and body, substantially as set forth.

In testimony whereof, I have hereunto signed my name at Bordentown, N. J. this 24th day of November, 1906.

GEORGE W. SWIFT, JR.

Witnesses:

R. H. AARONSON,

ANNA S. EVANS.