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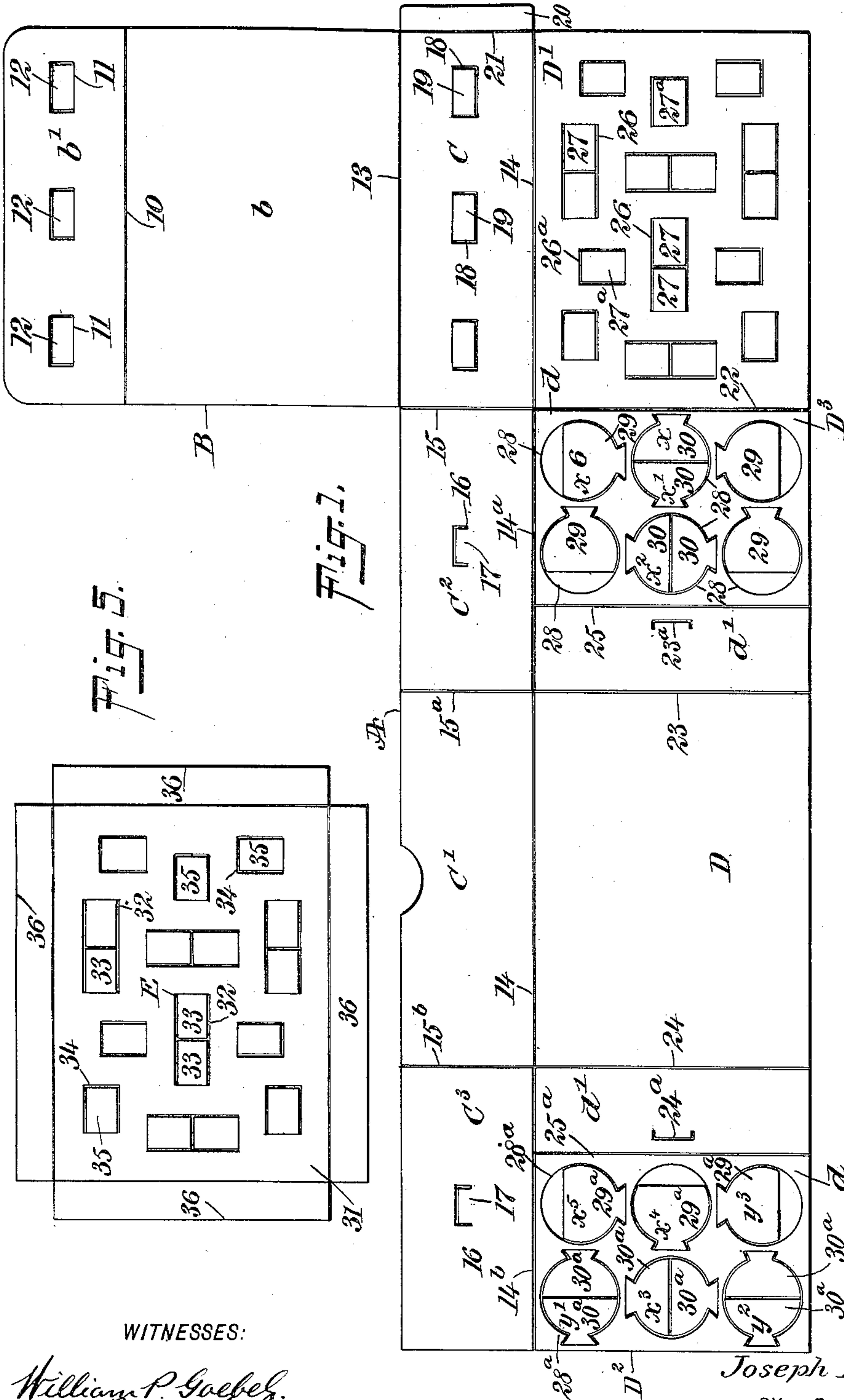
PATENTED NOV. 1, 1904.

J. T. CRAW.
PAPER BOX FOR PACKING BOTTLES.

APPLICATION FILED JAN. 27, 1904.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES:

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John A. Ken.

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Mumford

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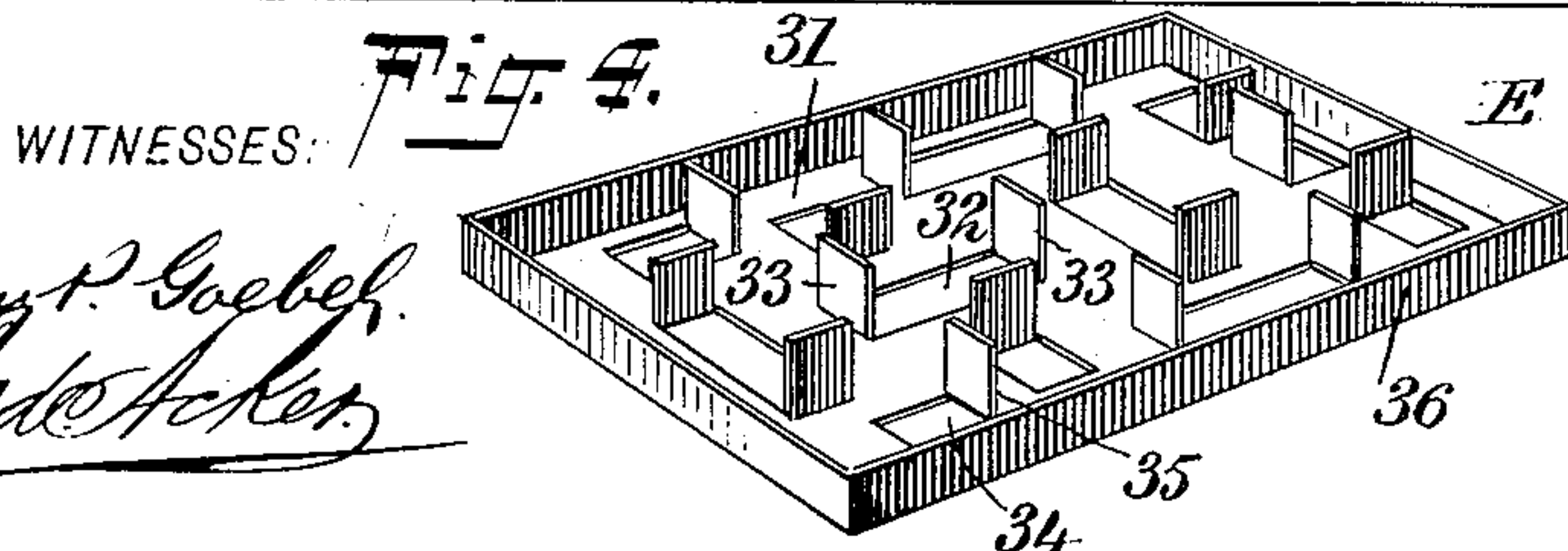
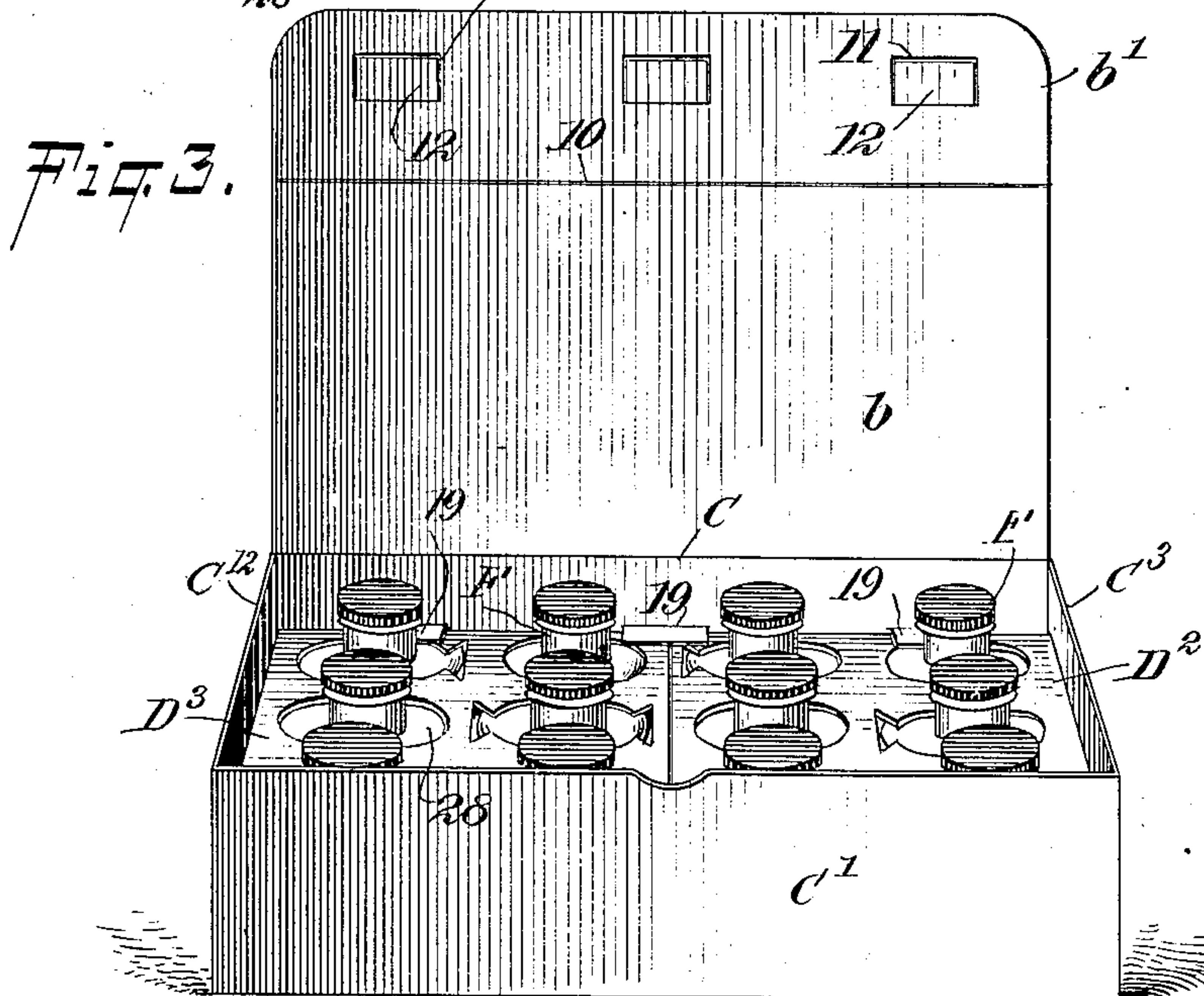
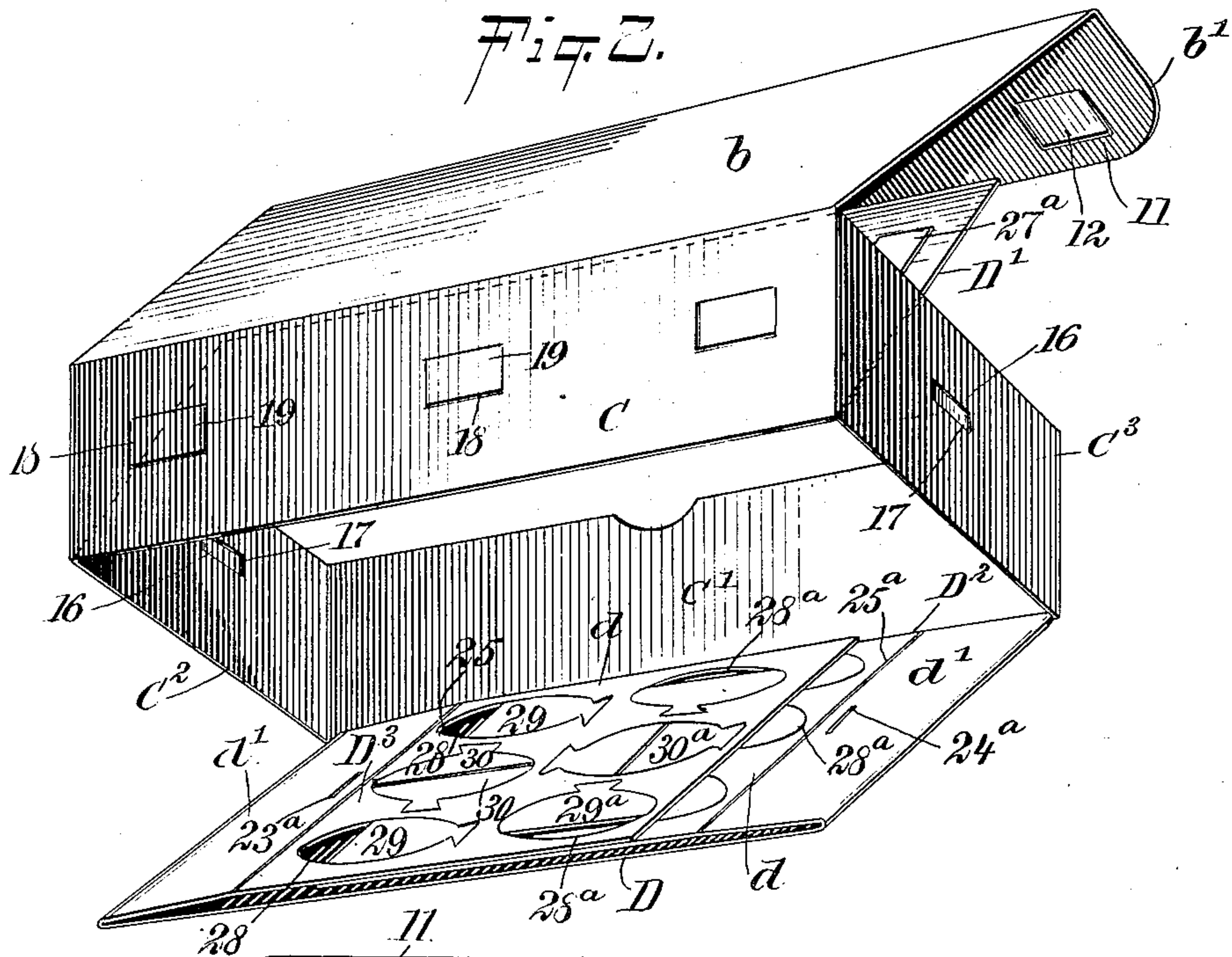
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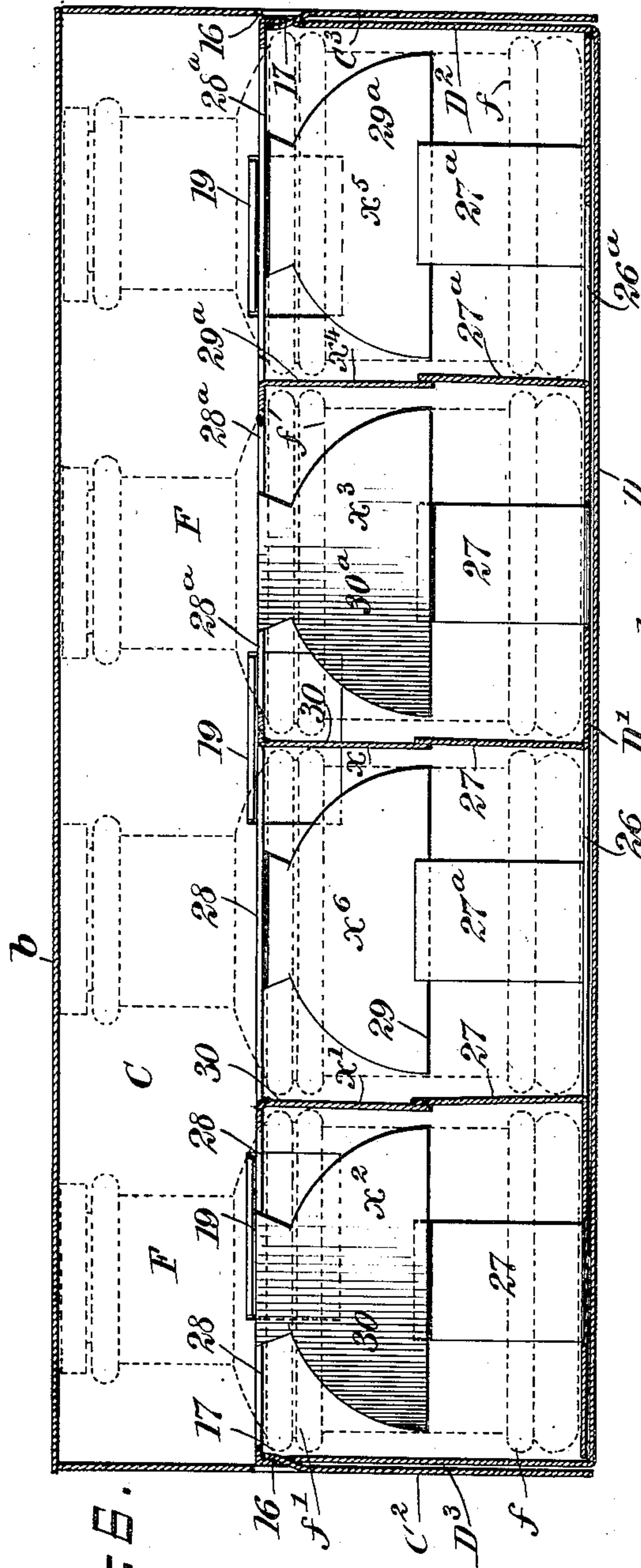


Fig. 6.

WITNESSES:

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[Signature]

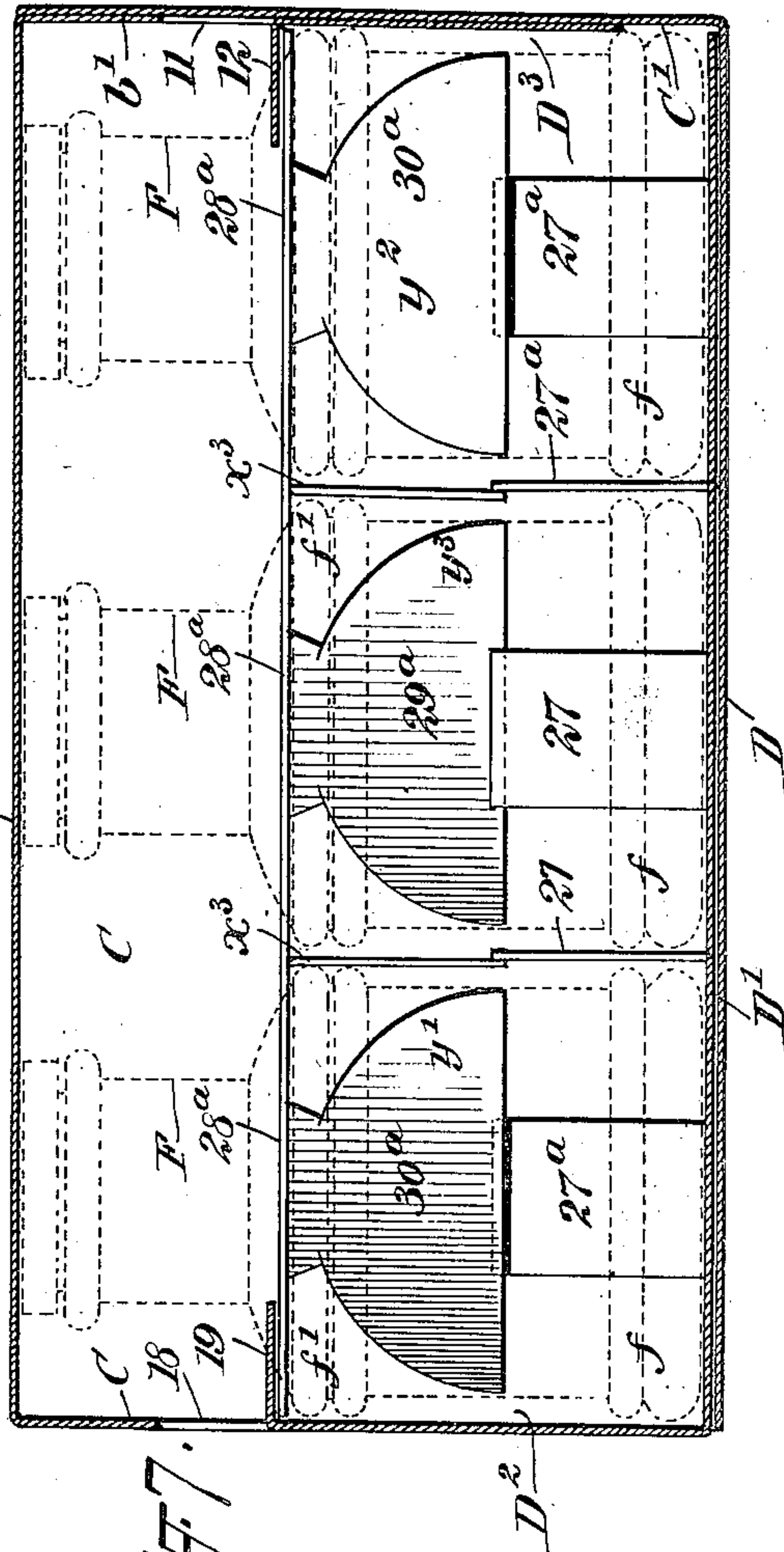


Fig. 7.

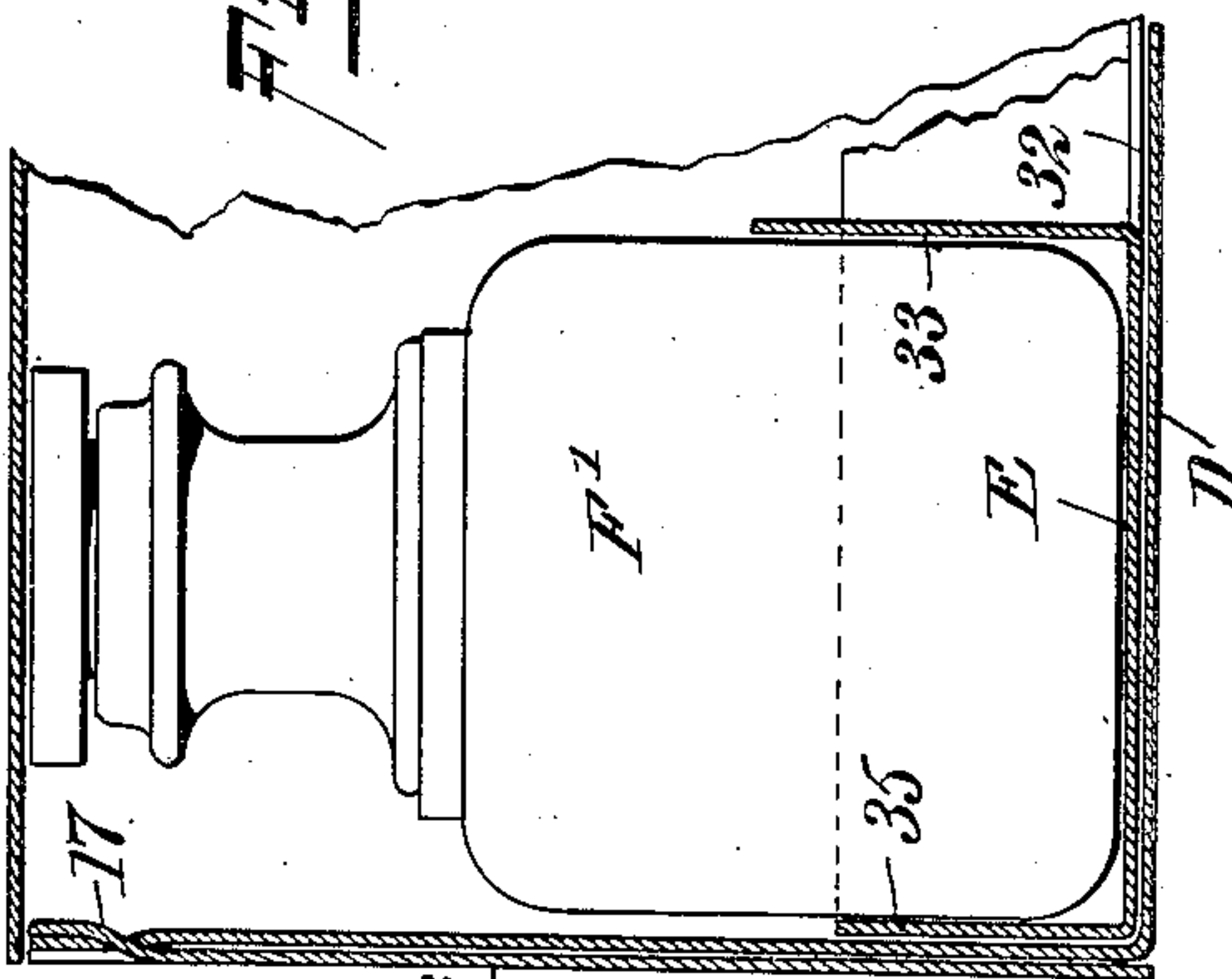


Fig. 8.

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UNITED STATES PATENT OFFICE.

JOSEPH T. CRAW, OF JERSEY CITY, NEW JERSEY, ASSIGNOR OF ONE-HALF
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PAPER BOX FOR PACKING BOTTLES.

SPECIFICATION forming part of Letters Patent No. 774,044, dated November 1, 1904.

Application filed January 27, 1904. Serial No. 190,840. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH T. CRAW, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Paper Box for Packing Bottles, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a knockdown box adapted for packing bottles, especially such bottles as are used for marketing small quantities of ink, mucilage, or the like, which box may be constructed to receive bottles having top and bottom body-flanges, the bottles having straight or smooth bodies, the box being furthermore so constructed that the bottles may be conveniently and expeditiously placed in position or removed and be held safely packed and separated for transportation or storage without the use of sawdust or like packing material now commonly employed for such purpose.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the blank for the box laid flat. Fig. 2 is a perspective view of the box partly folded. Fig. 3 is a perspective view of the box open and illustrating bottles packed therein. Fig. 4 is a perspective view of a tray which may be used at the bottom of the box. Fig. 5 is a plan view of the blank for the tray shown in Fig. 4. Fig. 6 is a longitudinal vertical section through the folded box, drawn on a large scale and illustrating how the bottles are held in place and held separated. Fig. 7 is a central transverse section through the box shown in Fig. 3, one of the confining-flaps appearing in edge view; and Fig. 8 is a vertical section through a corner portion of a box, illustrating the tray shown in Fig. 4 in position in the box and the adaptation of the box for packing straight or smooth bodied bottles.

The blank for the box is shown in Fig. 1 and consists of a body A in the form of a parallelogram and an extension B from a side of the body at one end. This extension B near its outer end is crossed by a score-line 10, dividing the extension member B of the blank into a cover-panel *b* and a locking-flap *b'* for the cover. This locking-flap *b'* for the cover is provided with a series of longitudinally-arranged openings 11 and tabs 12, integral with corresponding edges of the said openings, as is shown in Figs. 1, 2, and 3.

The extension-section B from the body A of the blank is partially separated from the said body by a score-line 13 extending transversely of the said extension section or member B. Score-lines 14 are produced longitudinally upon the body portion or section A of the blank a predetermined distance from the edge adjacent to that from which the extension member B is carried. These score-lines are in the same longitudinal plane, but are intersected by cuts 14^a and 14^b, likewise in the same longitudinal plane with the score-lines. The cut 14^a is located between the two score-lines, and the cut 14^b extends from the left-hand end of the left-hand score-line to the left-hand edge of the body of the blank. Transverse score-lines 15, 15^a, and 15^b extend, respectively, from the intersection of the cut 14^a with one of the score-lines 14 and the intersection of the cut 14^a with the right-hand end of the other score-line 14 and from the intersection of the left-hand end of said last-named score-line 14 with the end cut 14^b. These score-lines 15, 15^a, and 15^b extend to the edge of the said body of the blank from which the extension B is carried and divide this portion of the body of the flap into four panels C, C², C', and C³. These panels are body-panels, and the panel C at the right constitutes the back of the body when the box is made up. The left-hand intermediate panel C' constitutes the front of the body and the panels C² and C³ the ends of the said body when the box is set up. The end panels C² and C³ are provided with cuts or openings 16, having tabs 17 integral with one of their edges, and cuts or openings 18 are made in the back panel

C, and tabs 19 likewise extend from a wall of these latter cuts or openings.

A sealing-flap 20 extends from the right-hand or outer end of the rear panel C of the body, being adapted for sealing engagement with the left-hand end panel C³ when the body of the box is set up, the said sealing-tab 20 being partially separated from the back panel C by a score-line 21.

A transverse cut 22 is made in the body of the blank, extending from the junction of the cut 14^a and the right-hand score-line 14 to the opposing edge of the blank, and parallel score-lines 23 and 24 are likewise produced in this portion of the blank, dividing the said portion of the blank, which may be designated its lower portion, into four panels D' D³ D D². The left-hand intermediate panel D, which is just below the front panel C' of the body, is the main bottom panel of the box, the panel D' at the right of the lower section of the blank constitutes an auxiliary bottom for the box-body, and the panels D² and D³ constitute in the made-up box confining-flaps for the material placed in the body of the box.

Each confining-flap D² and D³ is divided into two sections, a main section *d* and an attaching-section *d'*, and these divisions are made by score-lines designated, respectively, as 25 and 25^a. The main sections *d* of these confining-flaps are larger or smaller than the attaching-sections *d'*, according to the height of the box, and in each attaching-section *d'* of a confining-flap a longitudinal slot is produced, (designated, respectively, as 23^a and 24^a.)

The auxiliary bottom panel D' is provided with a series of openings 26 and 26^a, the openings 26 being of greater length and of greater area than the openings 26^a, and from opposing walls of the longer openings 26 tabs 27 are integrally formed, while a single tab 27^a is similarly provided for each of the smaller openings 26^a. The longer openings and the shorter openings are so grouped relative to each other that when the tabs are raised to the vertical position (shown in Figs. 6, 7, and 8) the tabs will bear such relation to each other that at the central portion of the said auxiliary bottom the bottoms of bottles F can be placed on the auxiliary bottom D', between four upright tabs 27 and 27^a, the tabs engaging with the four sides of the bottom portion of the bottle extending up in engagement with the lower rib *f* of a bottle when the bottle is provided with a lower rib *f* and an upper rib *f'*, and the bottles which are adjacent to the sides or ends of the box-body when the box is complete will engage with the sides or ends of said box-body and with the upright tabs 27 and 27^a, which serve to separate the inner side faces of the marginal bottles from the opposing faces of the bottles at the central portion of the box. Thus each bottle at its bottom is held virtually in a pocket consisting of upright tabs, and these tabs serve

to cushion the sides of the bottles at their bottoms and prevent one bottle from engaging with its neighbor.

The form of blank shown in Fig. 1 is especially adapted for the construction of a box in which bottles are to be packed, having upper and lower external annular ribs *f* and *f'* as stated, or similar exterior projections.

It will be observed that by the arrangement of the tabs on the auxiliary bottom D' the bottom portions of the bottles placed in the box may be held in place and packed with perfect safety without the interposition of sawdust or like packing material, and each bottle can be removed from the box as clean and as presentable as when it was placed therein.

The bottles at their upper portions, or those portions just below the necks, are held in position by the confining-flaps D² and D³, hereinbefore mentioned. The main section *d* of the confining-flap D³, near the right-hand end of the blank, as shown in Fig. 1, is provided with a series of circular openings 28, through which openings the necks of the bottles F freely pass. All of the said openings are preferably provided with dovetail recesses, some of the openings having but one recess in their edges and others being provided with two opposing recesses, as is shown in both Figs. 1 and 2. The openings 28, having a single recess, are each provided with a single tab 29, connected with the wall of the opening at the recessed portion thereof, while the openings having two recesses in their walls are provided with two tabs 30, extending from the recessed portions of said openings to the central portions thereof. The tabs 30 are connected with the walls of said openings 28 likewise at the recesses therein. The tabs 29 and 30 are adapted to be carried vertically downward, as is shown in Figs. 6 and 7, so as to engage with the outer side portions of the bottles at the upper annular flanges or ribs *f'*, and thus separate and cushion one bottle relative to its neighbors. The openings are provided with the double and the single tabs, because the sides of the bottles presented to the inner faces of the body of the box need no dividing or guarding tab. The main section *d* of the other confining-flap, D², is similarly formed to the main section of the confining-flap D³, being provided with a series of circular openings 28^a to receive the necks of bottles, and sundry of these openings likewise have a single recess in the wall, while others have two opposing recesses. The openings having the single recesses are provided with single tabs 29^a, while the openings having the double recesses are provided with dual tabs 30^a.

In the made-up box the box is adapted usually to contain a dozen bottles, and while the auxiliary bottom D' separates and protects the bottom portions of all of the bottles each

confining-flap receives, protects, and holds in place a half-dozen only of the bottles. Therefore in the made-up box the inner edges of the confining-flaps are made to practically abut, as is illustrated in Fig. 3.

In order that the sections shown in Figs. 6 and 7 may be thoroughly understood, I have designated sundry of the tabs on the confining-flap D^3 , which appears in the said Figs. 6 and 7, by the following arbitrary designations, which are likewise expressed on said Figs. 6 and 7—namely, x, x', x^2, x^5 —and the corresponding designations for the same purpose expressed on the confining-flap D^2 read x^3, x^4, x^5, y', y^2 , and y^3 . These designations are likewise properly expressed on Figs. 6 and 7 of the drawings.

In making up the box the body-panels C, C', C^2 , and C^3 are bent upon their dividing score-lines and form a rectangular structure to obtain the rectangular formation shown in Fig. 2, and the sealing-flap 20 is then attached to one of the end panels. The cover b is then bent over the skeleton body thus formed on the score-line 13, and the closing or locking tab b' of the cover is bent downward at an angle to the cover, so that it can enter the body and engage with the inner face of the front C' , as shown in Fig. 7. The auxiliary bottom D' , carrying the tabs 27 and 27^a , is then bent upward within the body to a point beneath the cover, as is shown in Fig. 2, and two confining-flaps D^2 and D^3 are now folded one upon the other and both upon the main panel D , as is also shown in Fig. 2. The main panel, D with the folded confining-flaps, is now pressed upward to close the bottom portion of the skeleton body D described, and the confining-flaps are then carried vertically upward within the body to an engagement with the inner ends of the body, and then the auxiliary bottom D' is forced downward between the opposing confining-flaps to an engagement with the main bottom. Thus the main and the auxiliary bottoms are held in close relation to each other. The tabs 27 and 27^a of the auxiliary bottom D' are then brought to a vertical upright position, and the tabs 17 at the ends of the body are made to enter the slots 23^a and 24^a in the connecting-sections d' of the confining-flaps D^2 and D^3 , thereby locking the bottom and the body in firm engagement. Next the confining-flaps are carried downward in direction of each other to the horizontal position shown in Fig. 3, and the tabs 29 and 30, 29^a and 30^a , carried by the confining-flaps, are brought to their downwardly-extending operative position. Prior to bringing the confining-flaps to the folded position shown in Fig. 3 the bottles are arranged at their bottom portions between the lower tabs 27 and 27^a , and then as the confining-flaps are closed downward the necks of the bottles pass up through the openings 28 and 28^a in the confining-flaps, while

the cushion-tabs carried by these flaps assume their proper positions between the neighboring bottles.

In order that the confining-flaps shall not shift from their adjusted position when the box is handled, the tabs 19 at the back C of the box are forced inward and vertically downward to the position shown in Fig. 3, causing the said tabs to bear downward upon the upper rear edges of the confining-flaps, and then the tabs 12 in the locking-flaps b' of the cover are likewise forced inward, so as to bear upon the said confining-flaps D^2 and D^3 at their forward edges when the closing or locking flap b' of the cover has been passed down into the body of the box, as is clearly shown in Figs. 6 and 7.

It may be desirable under certain conditions to provide a tray E as a substitute for the auxiliary bottom D' . The bottom 31 of this tray is provided with long and short openings (designated, respectively, as 32 and 34) corresponding to the long and short openings in the auxiliary bottom, and in the long openings 32 dual tabs 33 are oppositely located, and at the single openings 34 single tabs 35 are formed. These tabs correspond to the tabs 27 and 27^a , described with reference to the auxiliary bottom D' . The bottom 31 of the tray E is preferably provided with a marginal upwardly-extending flange 36.

When bottles F' are to be packed, such as are shown in Fig. 8—namely, bottles having smooth sides or sides with no projections—it is only necessary to form the box with the auxiliary bottom D' or to introduce the tray E into the bottom portion of the box, as when the tabs carried upward from the tray or the auxiliary bottom pass between the opposing faces of neighboring bottles they separate and cushion the said bottles sufficiently to prevent them from being damaged in transportation or through handling for other purposes. Therefore the confining-flaps D^2 and D^3 can be omitted entirely and the box be provided with any suitable form of cover which may rest directly upon the top surface of the corks of the bottles after they have been packed in the box.

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

1. In paper boxes, a body having tabs on its sides, a bottom, and confining-flaps, each formed of sections one section having a folding connection with the body and provided with openings to receive the tabs of the body, and the other section provided with openings and with tabs connected with the walls of the openings and adapted to be bent downwardly, as set forth.

2. In paper boxes, a body, a bottom therefor, confining-flaps each formed of sections, one section having a folding connection with the bottom and the other provided with open-

ings and tabs at the said openings, and an auxiliary bottom on the main bottom between the confining-flaps, as set forth.

3. In paper boxes, a body, a bottom there-
5 for, division-tabs extending upward from the said bottom, confining-flaps located within the body above the bottom and arranged to fold over the bottom, the said confining-flaps having openings therein and tabs having folding
10 connection with the said confining-flaps adjacent to the said openings, the tabs of the confining-flaps being capable of entering the said openings and of being folded downward therefrom, as set forth.

15 4. In paper boxes, a body having tabs at its ends, a bottom having division-tabs, and confining-flaps each formed of sections, one section being provided with openings and with tabs at said openings, and the other having a
20 folding connection with the bottom and provided with openings to receive the tabs on the ends of the body, as set forth.

5. In paper boxes, a body and confining-flaps having folding connection with the body
25 located within the same at a point above the bottom, the said confining-flaps being provided with series of openings and with division-tabs having folding connection with the flaps adjacent to the openings therein, and
30 locking devices for the said confining-flaps, extending beyond the inner face of the said body over the said flaps, as specified.

6. In paper boxes, a body, a folding bottom therefor, an auxiliary bottom connected
35 with the main bottom, a series of flexible tabs arranged to extend upward from the auxiliary bottom and confining-flaps connected with the main bottom, being arranged within the said body intermediate of the top and bottom, the
40 said confining-flaps being provided with openings therein, and division-tabs connected with the confining-flaps adjacent to the openings therein and arranged to fold down from the said confining-flaps in direction of the bottom
45 of the box, for the purpose set forth.

7. In paper boxes, a blank comprising a rectangular body and an extension from one side edge of the body at one end, the said extension having score-lines dividing it into two

panels, a cover-panel and a closing-flap for 50 the cover-panel, the body of the blank being divided by longitudinal score-lines and cuts and intersecting transverse score-lines into body-panels for the box, embracing a back panel at the end of the body of the blank ad- 55 jacent to the extension, an intermediate front panel and end panels at each side of the intermediate front panel, the end panels having tabs formed therein and likewise the back panel, and a sealing-flap at the outer end of 60 the back panel, the remaining portion of the said body of the blank being divided by transverse score-lines and cuts into a bottom section, intermediate of the ends of the blank, an auxiliary bottom section at the end of the 65 blank at which the extension is located, and panels at each side of the bottom panel, subdivided by score-lines, the main divisions of the latter panels having openings therein and flaps at the openings, the minor divisions of 70 the latter panels having slots therein, the auxiliary bottom panel being provided with openings and tabs at the margins of the said openings, arranged to fold in the said openings, as described. 75

8. A paper box, comprising a skeleton body, a cover having a closing-flap, a main bottom, an auxiliary bottom having spaced tabs projecting upwardly therefrom, and confining-flaps located within the body below the cover, 80 and having openings therein and downwardly-projecting tabs adjacent said openings, as set forth.

9. A paper box, comprising a skeleton body, a cover, a bottom having spaced tabs project- 85 ing upwardly therefrom, and confining-flaps located within the body intermediate of the cover and bottom and having openings therein and downwardly-projecting tabs adjacent said openings, as set forth. 90

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH T. CRAW.

Witnesses:

J. FRED. ACKER,

JNO. M. RITTER.