

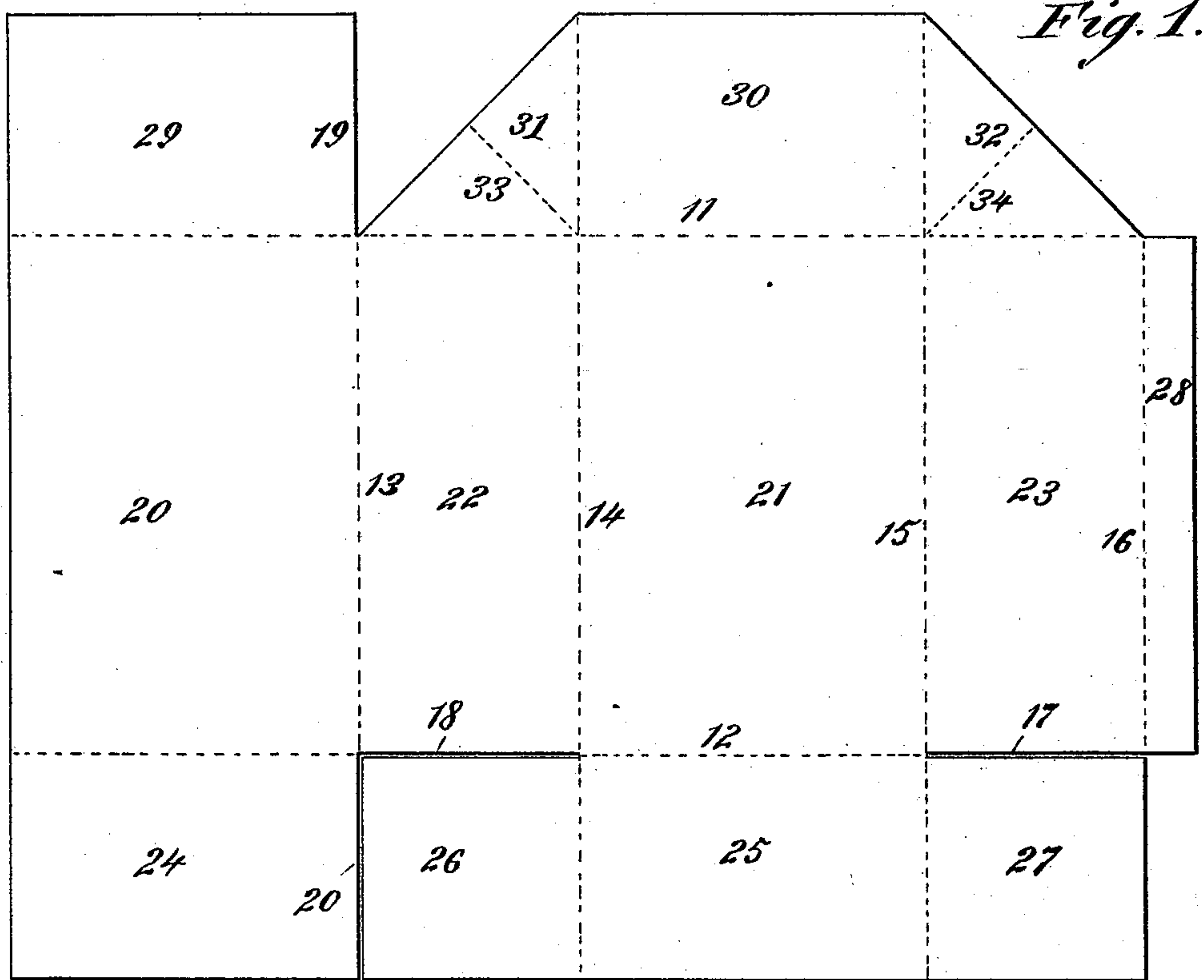
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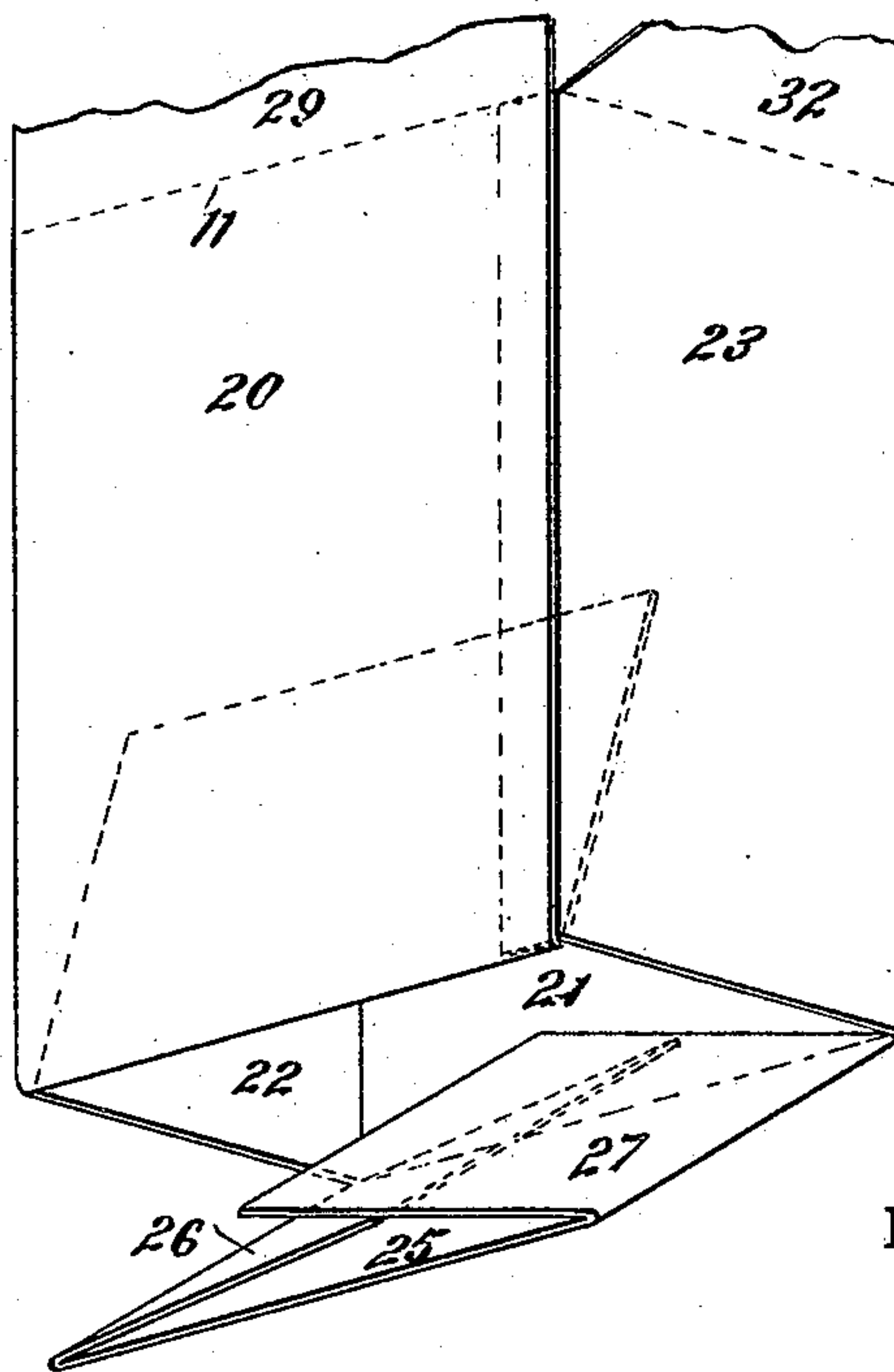
J. T. CRAW.  
PAPER BOX.

No. 355,977.

Patented Jan. 11, 1887.



*Fig. 2.*



WITNESSES:

*Donn Twitchell*  
*C. Sedgwick*

INVENTOR:

*J. T. Craw*  
*Munn & Co*

BY

ATTORNEYS.

(No Model.)

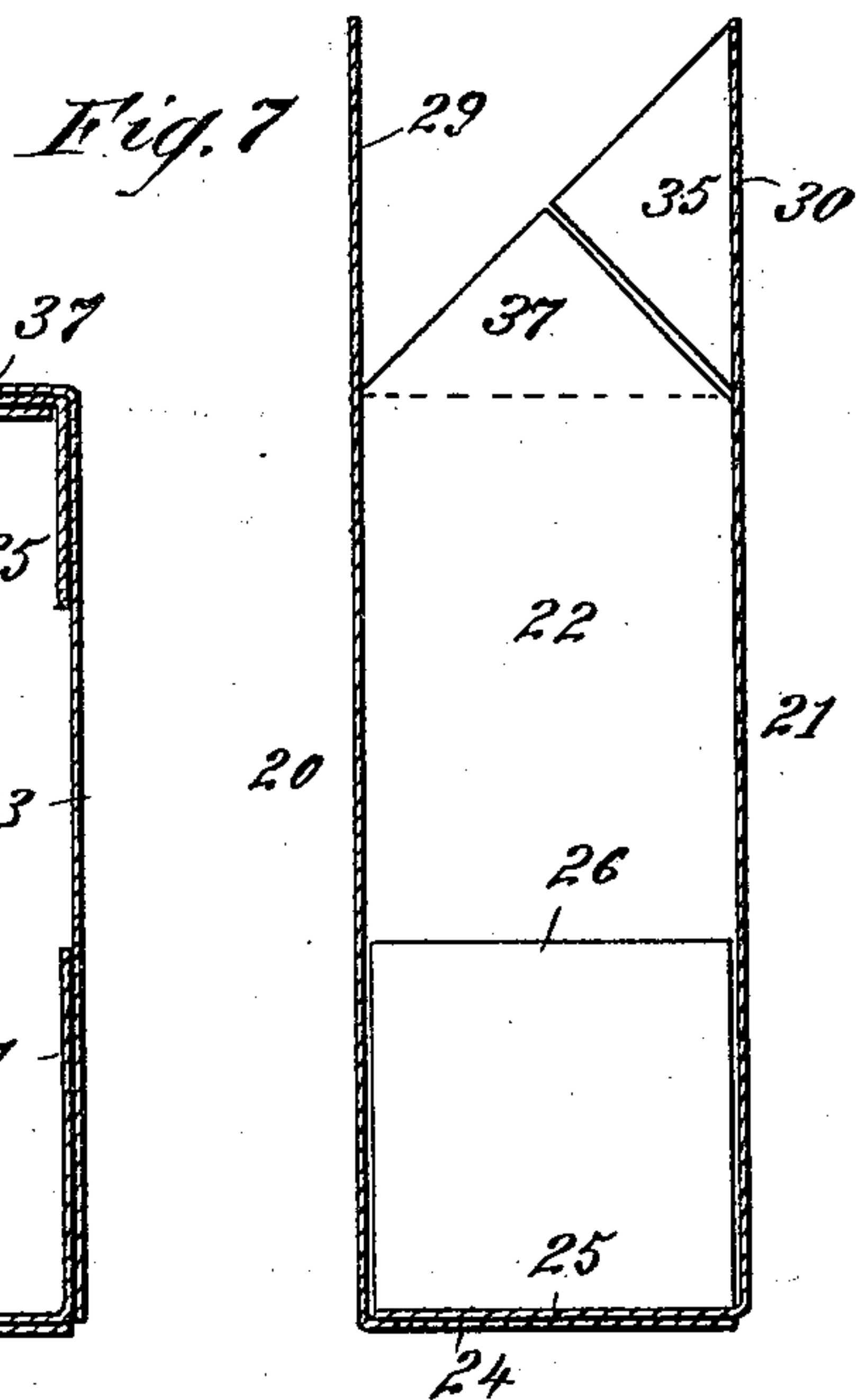
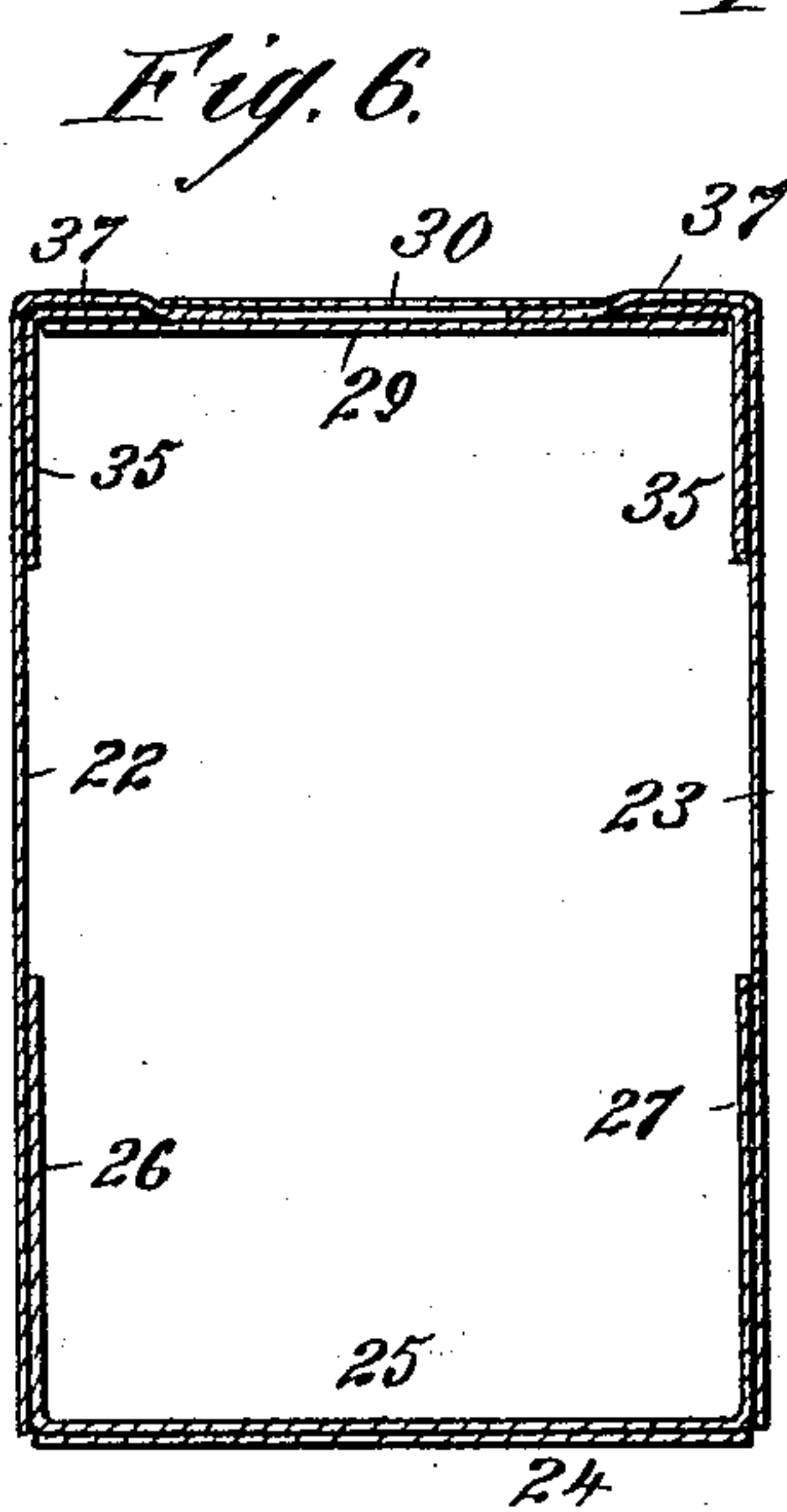
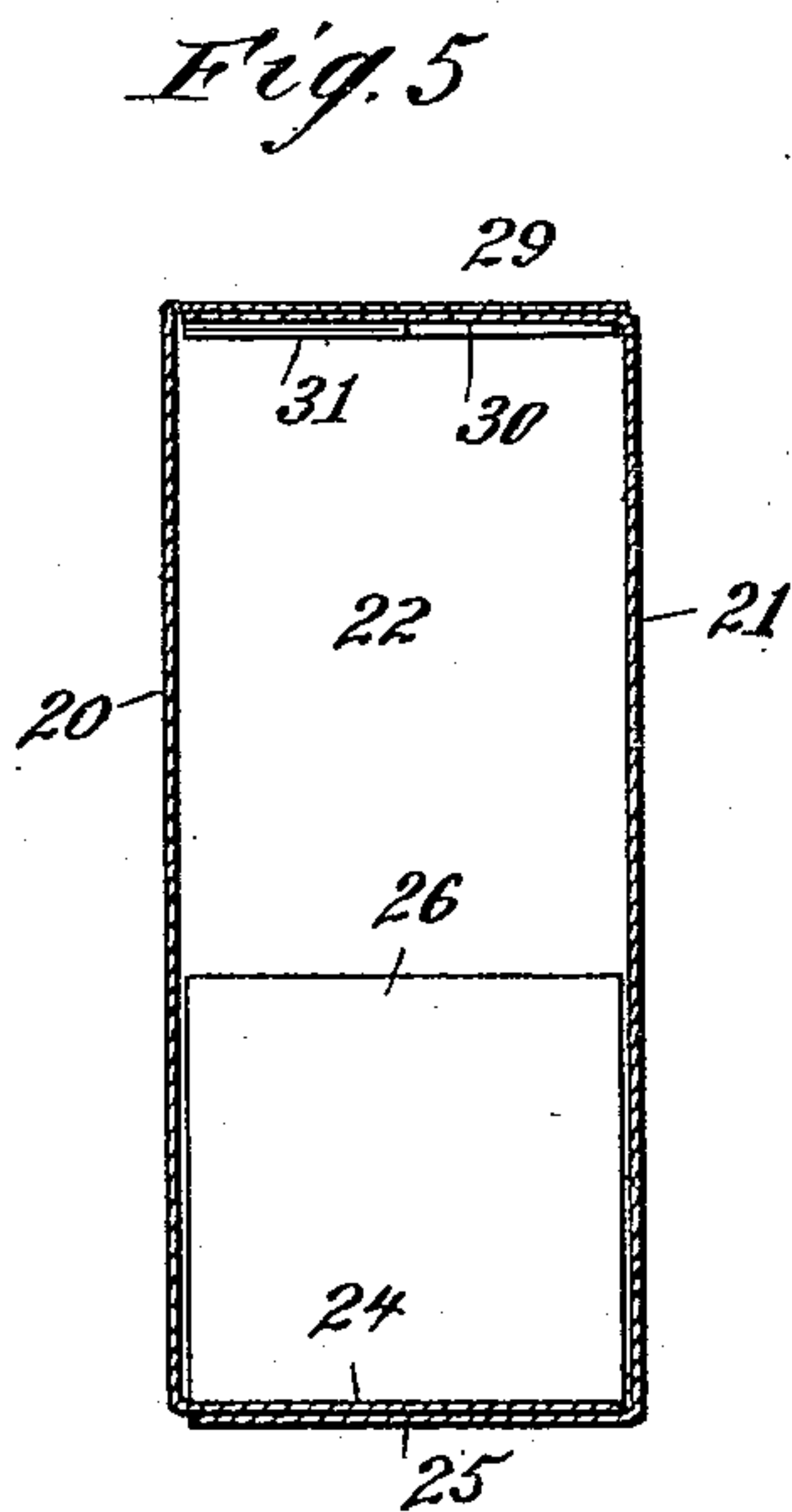
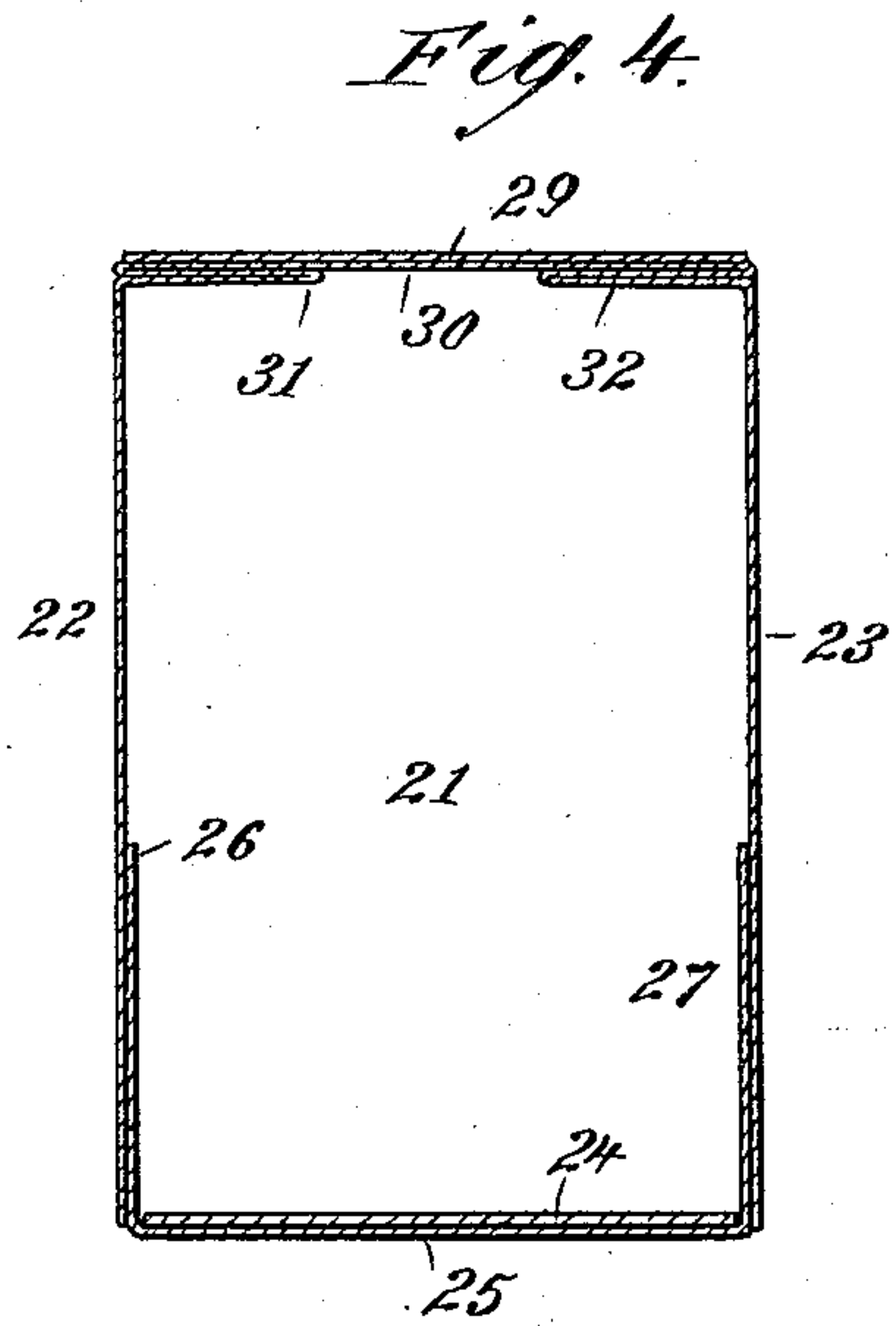
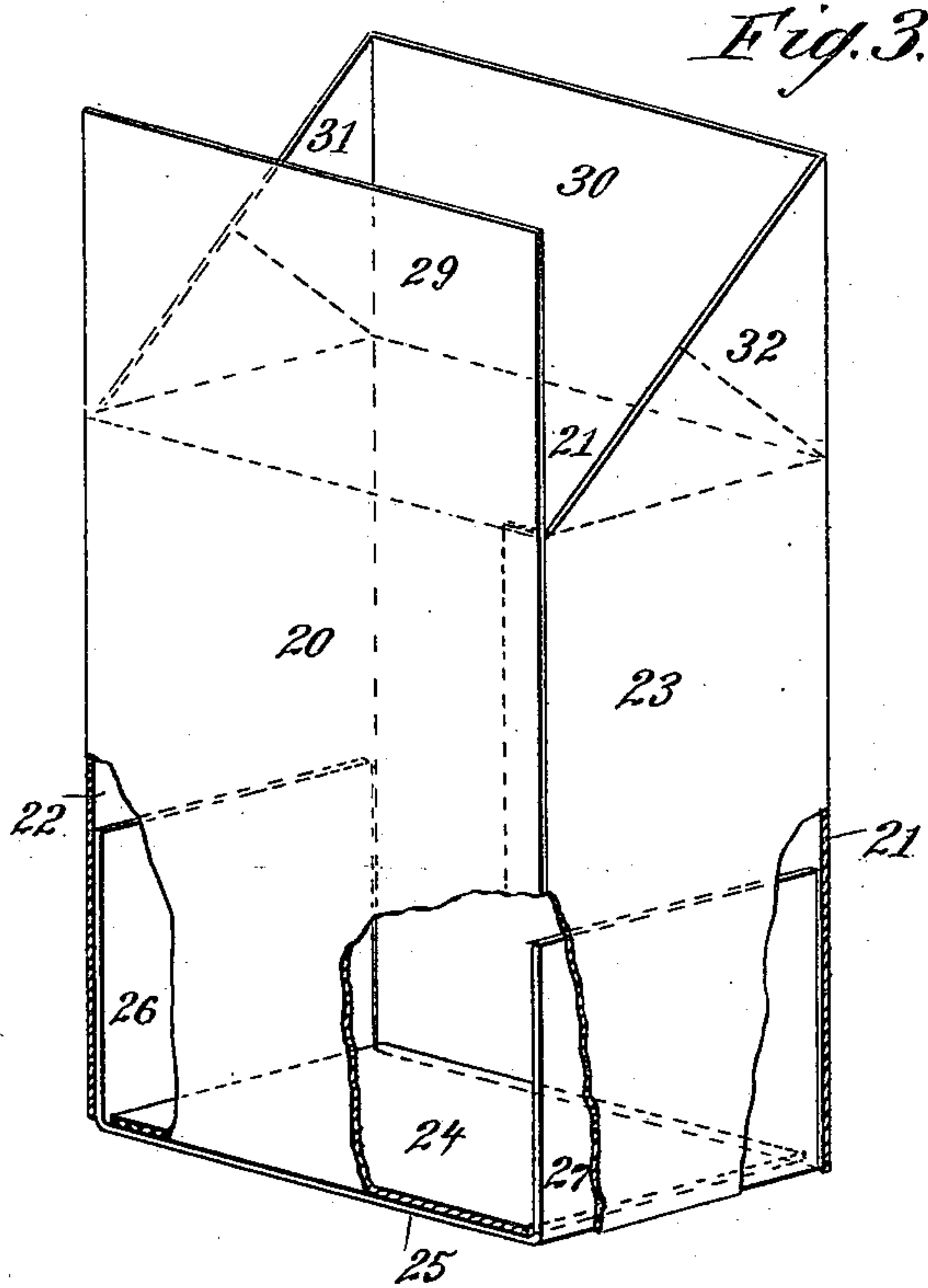
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J. T. CRAW.

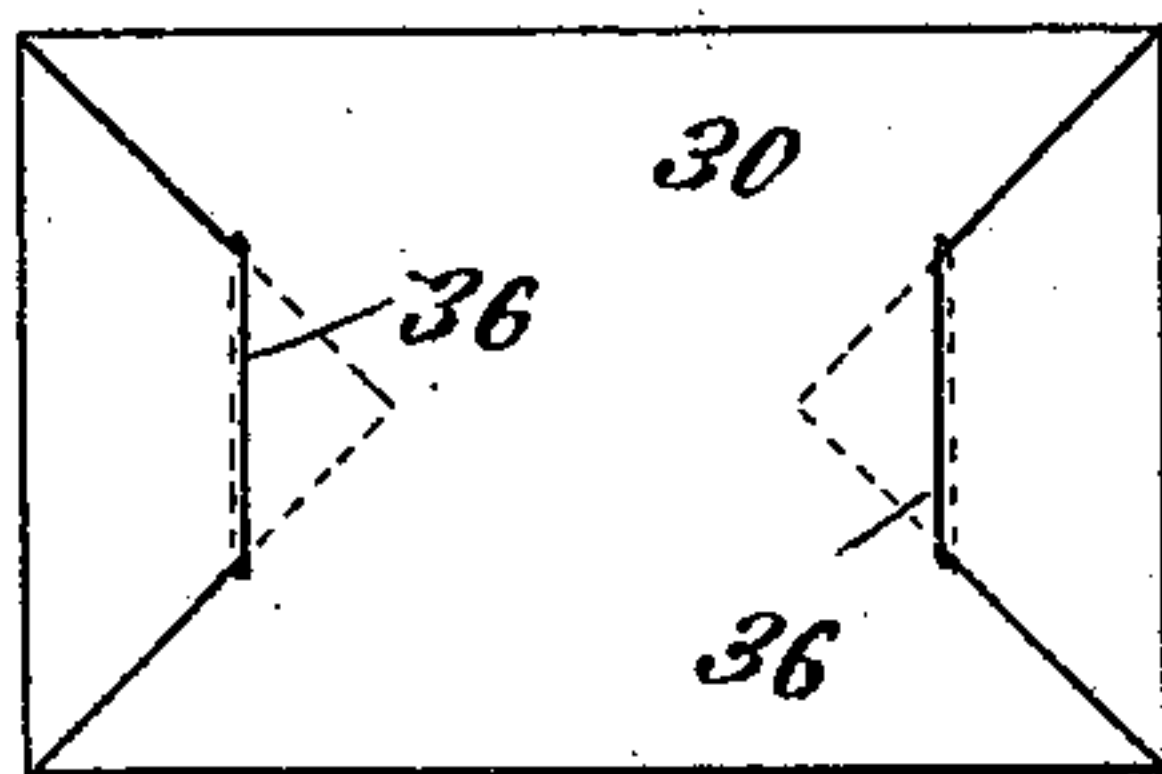
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WITNESSES:  
*Down Twitchell*  
*C. Sedgwick*



INVENTOR:  
*J. T. Craw*  
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# UNITED STATES PATENT OFFICE.

JOSEPH T. CRAW, OF JERSEY CITY, NEW JERSEY.

## PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 355,977, dated January 11, 1887.

Application filed November 15, 1886. Serial No. 218,913. (No model.)

*To all whom it may concern:*

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

This invention relates to the manufacture of paper boxes, and especially to that class of boxes commonly known as "siftless knock-down boxes," the main objects of the invention being to provide a box which may be quickly set up, and which when set up will have a perfectly flat springless bottom without exposed folds, the blank from which the box is made being so cut and scored that when the parts are adjusted to place they will be, as it were, locked against displacement, and that, too, without the aid of paste or other viscid material except upon the main paste-flap.

To the ends named the invention consists of a box made from a blank that is cut and scored to form the sides, ends, paste-flap, double bottom, and rectangular end flaps of the boxes, as will be hereinafter described, and specifically pointed out in the claims.

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

Figure 1 is a view of the blank from which my box is formed, the blank being so cut that when folded it will constitute a box having my preferred form of top or cover. Fig. 2 is a perspective view of the partially-completed box, the inner bottom flap being represented partially folded to place, while the main bottom and the end flaps are represented as they appear prior to being moved to place. Fig. 3 is a perspective view of the box, wherein the parts of one side and end of the box are broken away, the several parts of the blank being represented as they appear when folded to complete the bottom of the box, the top of the box being represented as it appears prior to the closing of the box. Fig. 4 is a longitudinal sectional elevation of the box. Fig. 5 is a cross-sectional elevation of the same. Fig. 6 is a longitudinal sectional elevation of a modified construction, the different folds being given to the blank to form the bottom, while the top is represented as being formed

with tucks. Fig. 7 is a cross-sectional elevation of a box constructed and folded as represented in Fig. 6, the top, however, being represented as it appears when open; and Fig. 8 is a plan view of the form of box illustrated in Figs. 6 and 7.

In making such a box as the one illustrated in the drawings above referred to, I take a rectangular blank and score it longitudinally at 11 and 12 and transversely at 13, 14, 15, and 16, cutting the blank at 17 and 18 upon the line of the score 12, and at 19 and 20 upon the line of the score 13; also cutting the blank from the point of the intersection of the scores 11 and 13 diagonally to the edge of the blank at the end of the score 14, and diagonally from the intersection of the scores 11 and 16 to the edge of the blank at the end of the score 15.

In the blank so formed, 20 and 21 become the sides of the box; 22 and 23, the ends; 24, one thickness of the bottom, and in my preferred manner of folding the inner thickness of said bottom, while 25 forms the other thickness of the bottom, preferably the outer thickness; 26 and 27, the end flaps; 28, the main paste-flap; 29 and 30, the double top, and 31 and 32 the top folds.

In forming a box from the blank illustrated in Fig. 1 and described as above, the blank is first bent upon the score 14, the paste-flap 28 being bent over so as to be borne upon by the side 20. The bottom portion, 24, is then bent in and pressed against the side 20, the flaps 26 and 27 are folded upon the bottom portion, 25. Said bottom portion is folded down until the lower opening of the box is closed. The flaps 26 and 27 are then pressed out against the inner faces of the ends 22 and 23, and the portion 24 is pressed down between the flaps 26 and 27 and against the upper face of the outer bottom, 25. This is my preferred manner of folding the box, and in practice the bottom formed as described will be found to be perfectly flat and at the same time very secure; but if deemed advisable lines of paste may be applied to the outer faces of the flaps 26 and 27, so that said flaps will adhere to the inner faces of the ends 22 and 23. This pasting, however, will be found to be entirely unnecessary and superfluous except when exceedingly fine material is to be packed within the box.

Boxes having bottoms formed as above de-



scribed may be placed so as to stand in a vertical position upon the pan or platform of any of the ordinary forms of automatic scales, and being so placed will receive their charge or load from the scales without tilting, one of the most serious objections of the ordinary form of knockdown box being that the numerous tucks and folds caused by the adjustment of the parts produce a bulging, springy bottom, which prevents the boxes from standing in a steady vertical position.

After the boxes have been filled their open ends are formed by folding in the folds 31 and 32 upon the line of scores 33 and 34, which scores are drawn inward to intersect the angles formed by the meeting of the scores 11 and 14 and 11 and 15. After the folds 31 and 32 have been adjusted, as described, the outer top flap, 29, is folded down and pasted to the upper surface of the inner top flap, 30, and in this manner I form my preferred style of box; but in certain cases it might be deemed advisable to substitute cuts for the scores 33 and 34, such a construction being represented in Figs. 6 and 7, and by so cutting the blank I form end tucks, 35, that are integral with the top portion, 30, and in this top portion, 30, I form transverse cuts 36.

In folding the box described the top portion, 29, is folded down to close the top of the box, the tucks 35 are folded down so as to extend at right angles from the top portion, 30, which portion is then folded down, the tucks 35 passing inward between the ends 20 and 23 and the ends of the top portion, 29, after which the locking-flaps 37 are bent over and their apices inserted within the transverse cuts 36 of the top portion, 30, thus forming a box that will be practically siftless.

Instead of folding the bottom portion, 24, within the body of the box before introducing the end flaps, 27, such end flaps may be first folded upon the bottom portion, 25, the por-

tion 25 then folded over, and the end flaps folded out against the inner faces of the ends 22 and 23, after which the bottom flap, 24, may be folded down and pasted to the outer face of the bottom flap, 25.

A box constructed as described will be found to possess sufficient strength and rigidity to resist the test of a diagonal strain—that is, to resist the test of a strain applied diagonally to its corners.

If desired, the end of the flap 27 may be cut off in a line with the score 16, as represented in Fig. 1; but this cutting is not absolutely necessary.

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

1. The herein-described box, constructed from a blank consisting of a rectangular strip cut and scored to form the sides, ends, paste-flap, double bottom, and rectangular end flaps of the box, substantially as and for the purpose set forth.

2. The herein-described paper box, constructed from a blank consisting of a rectangular strip cut and scored to form the sides, ends, double bottom, rectangular end flaps, top flaps, and top folds of the box, substantially as and for the purpose set forth.

3. A blank for paper boxes cut and scored to form sides 20 and 21, ends 22 and 23, bottom portions, 24 and 25, end flaps, 26 and 27, and a paste-flap, 28, substantially as described.

4. A blank for paper boxes cut and scored to form sides 20 and 21, ends 22 and 23, bottom portions, 24 and 25, end flaps, 26 and 27, a paste-flap, 28, top portions, 29 and 30, and top folds, 33 and 34, substantially as described.

JOSEPH T. CRAW.

Witnesses:

EDWARD KENT, Jr.,  
C. SEDGWICK.