

P. R. WARREN.

FOLDING BOX.

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944,063.

Patented Dec. 21, 1909.

2 SHEETS—SHEET 1.

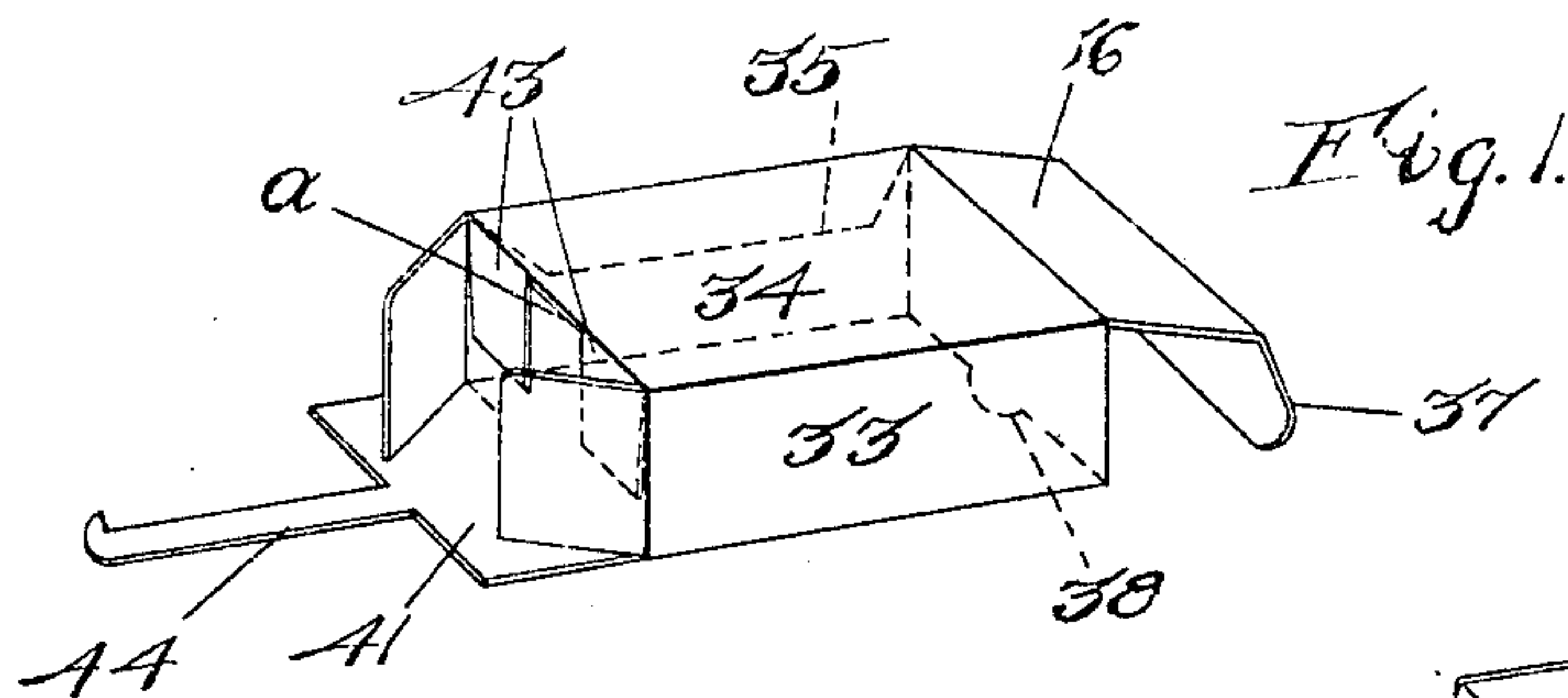


Fig. 1.

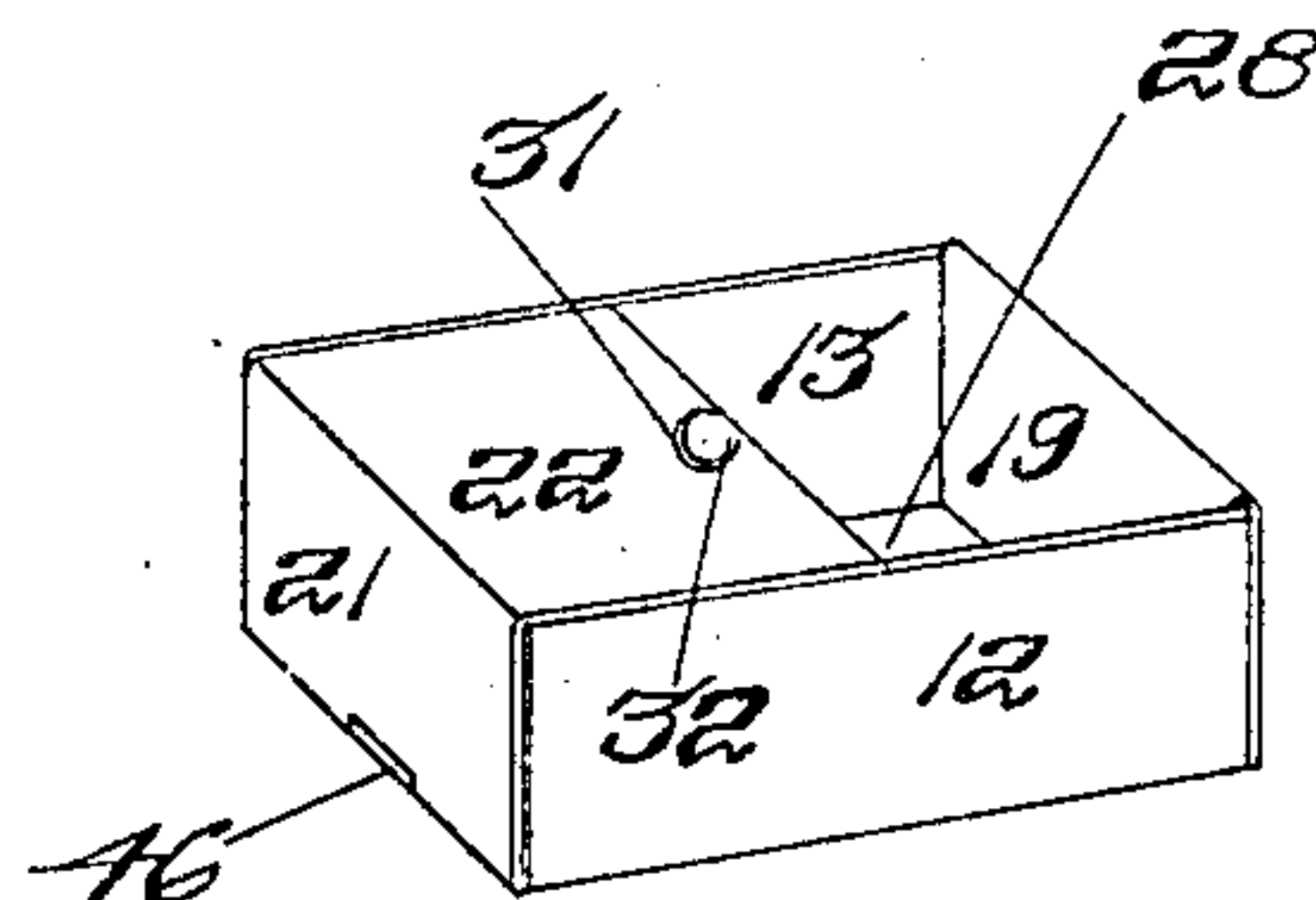


Fig. 2.

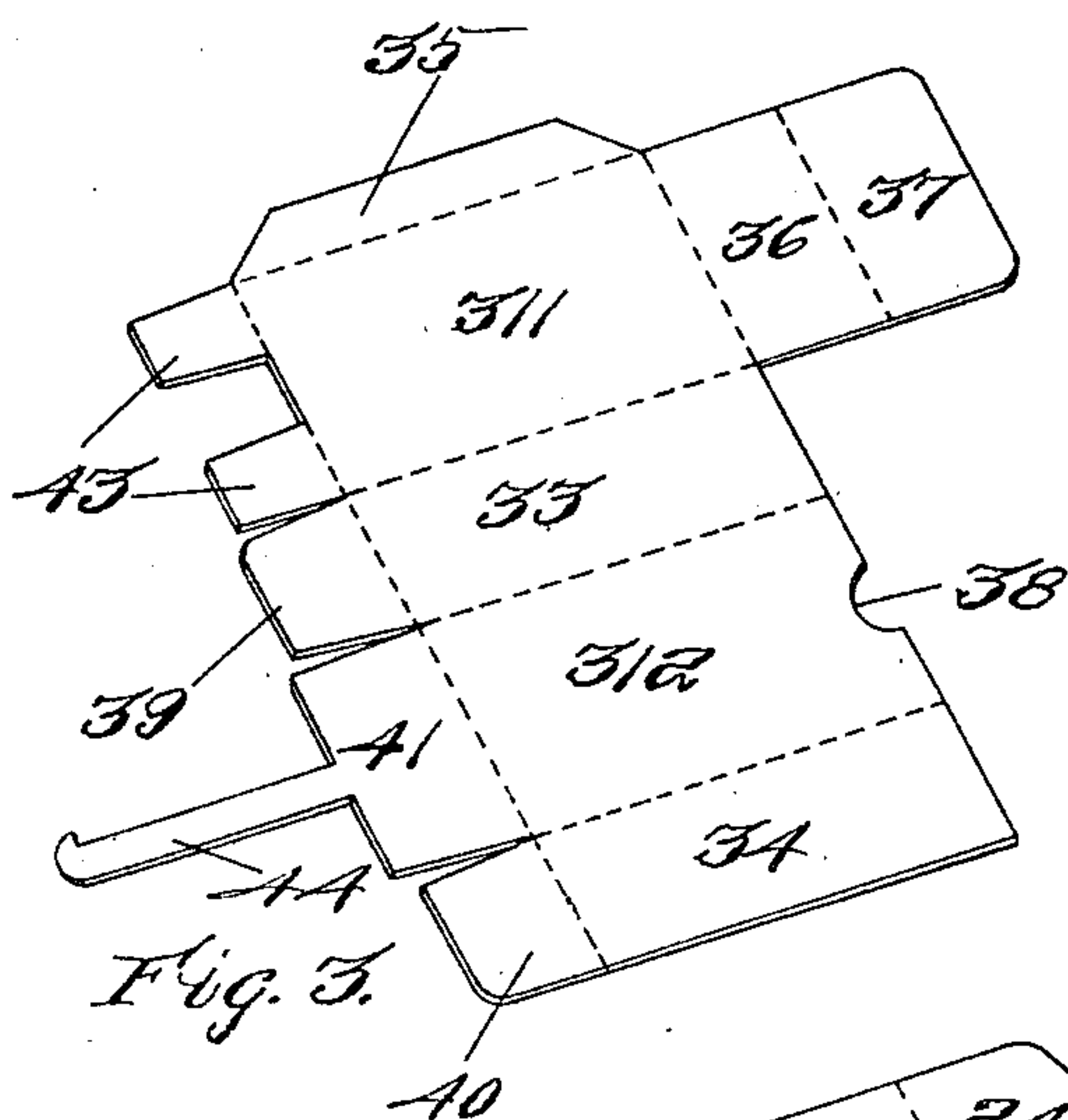


Fig. 3.

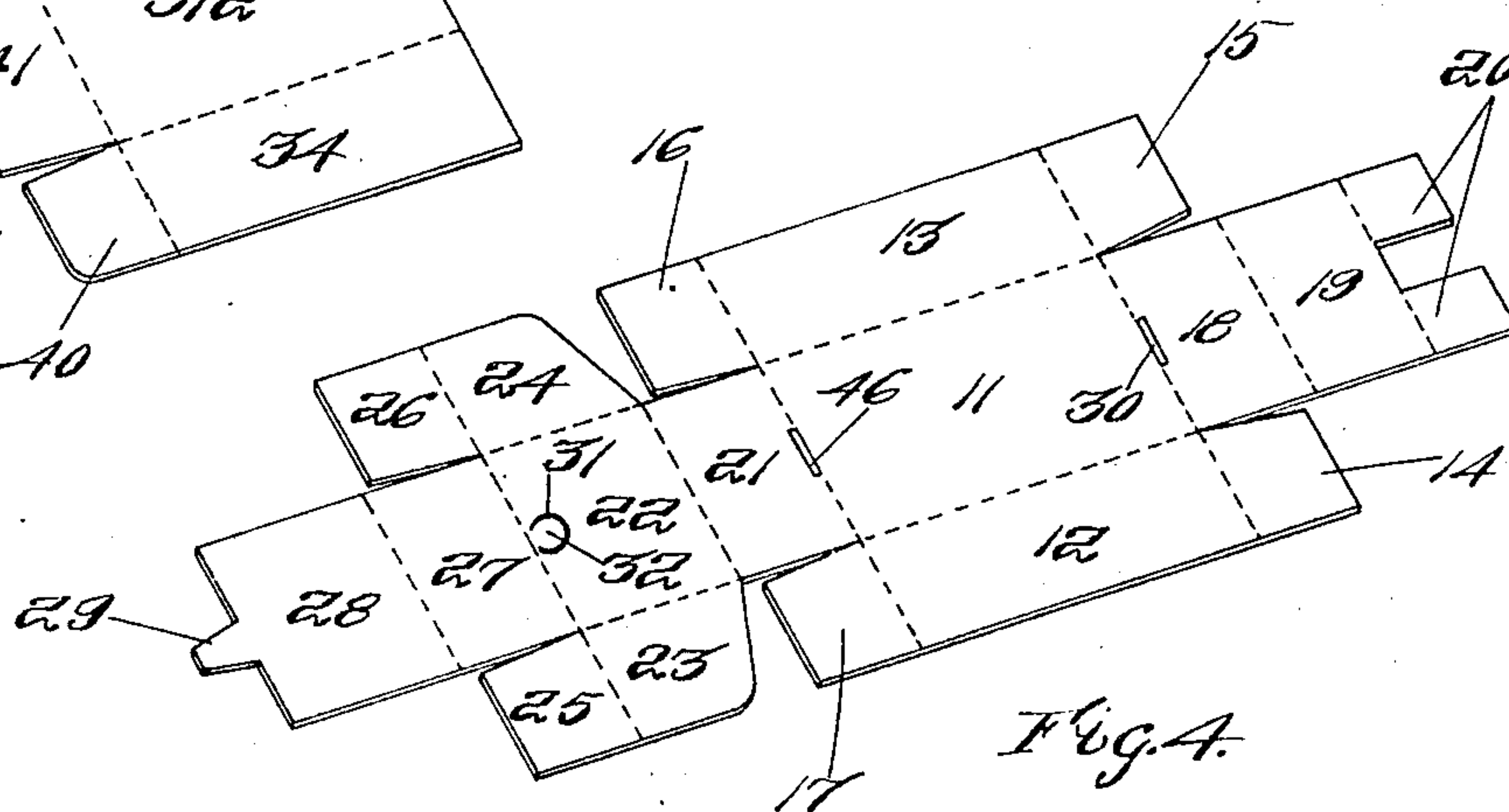


Fig. 4.

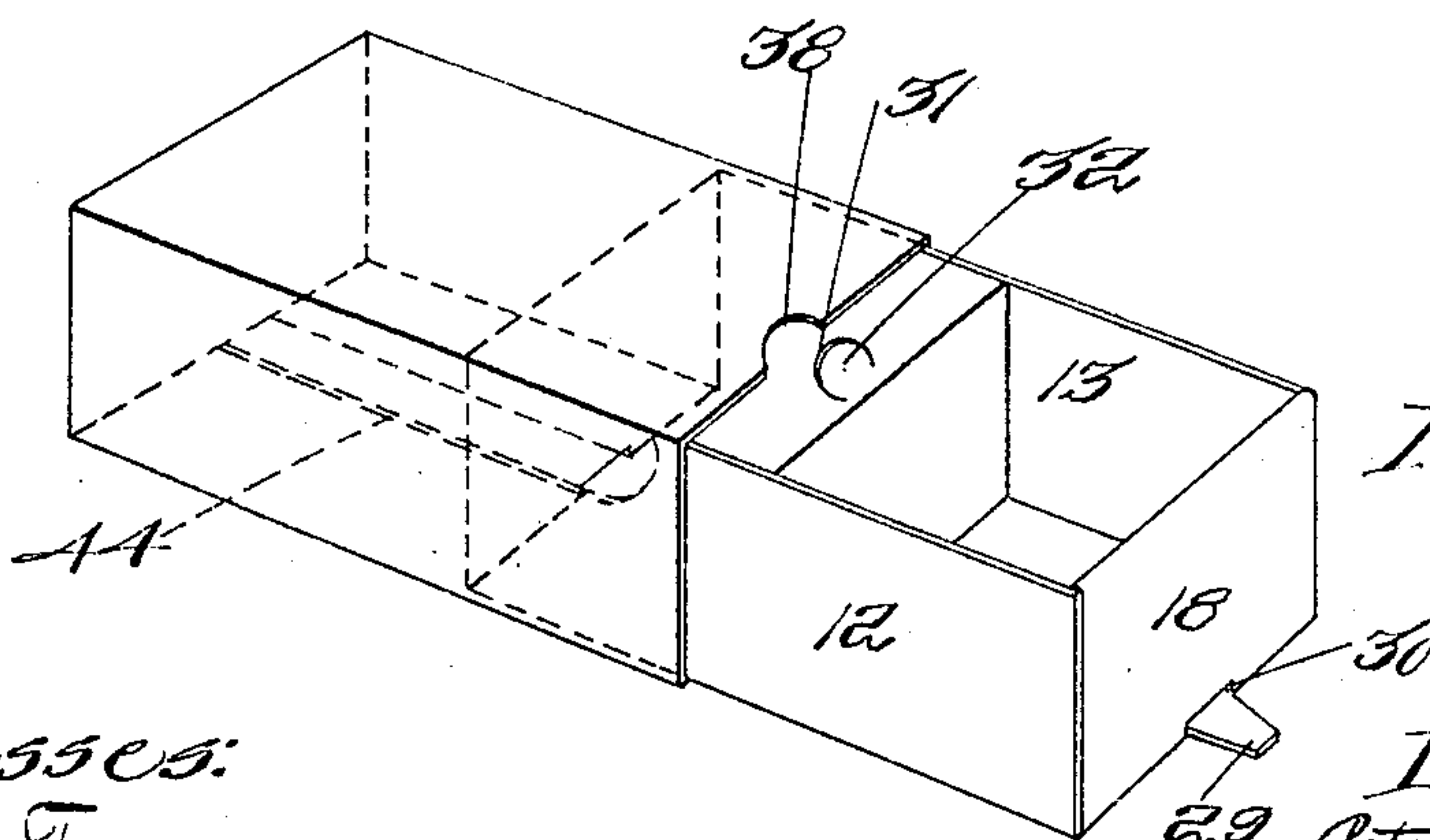


Fig. 5.

Witnesses:

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# UNITED STATES PATENT OFFICE.

PETER R. WARREN, OF LOWELL, MASSACHUSETTS.

## FOLDING BOX.

944,063.

Specification of Letters Patent. Patented Dec. 21, 1909.

Application filed August 31, 1909. Serial No. 515,487.

*To all whom it may concern:*

Be it known that I, PETER R. WARREN, citizen of the United States, residing at Lowell, in the county of Middlesex and State of Massachusetts, have invented a certain new and useful Improvement in Folding Boxes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to boxes constructed from cardboard and the like, and particularly to the class of boxes known as folding boxes which may be knocked down and shipped flat, to be set up by the user. The box embodying my invention is particularly adapted to contain phonograph needles or other small articles which it is desirable shall be kept separated into two or more classes, for example used and unused, by means of compartments in the box. In case the box is used for phonograph needles, the used needles are kept in one compartment and the unused needles are kept in the other. The box is so constructed that the needles in one compartment are not liable to work under or through the partition and into the other compartment, thus reducing to a minimum the danger of mixing the used and unused needles which is likely to result in injury to the phonograph records with which the needles are used, since it is important that a needle should only be used once. The box is also so constructed that it is very tight when closed which is important especially in moist climates as it tends to prevent such articles as needles from rusting. Further the box is so constructed that the cover and the body thereof cannot be separated from each other in ordinary use. This frequently prevents the spilling of the contents of the box which would otherwise occur if the cover and body were separable.

The invention will be fully understood from the following description taken in connection with the accompanying drawings, and the novel features thereof are pointed out and clearly defined in the claims at the close of the specification.

In the drawings,—Figure 1 is a view in perspective of the tubular cover or outer casing for the box, turned bottom up to show the parts more plainly. Fig. 2 is a similar view of the box to be contained within the cover shown in Fig. 1. Fig. 3 is

a view in perspective of the blank from which the cover is made. Fig. 4 is a similar view of the blank for the box. Fig. 5 is a view in perspective of the box and cover folded and assembled, with the box withdrawn from the cover as far as is permitted by the strap 44. Fig. 6 is a view in perspective of a modified form of blank for the box hereinafter referred to. Fig. 7 is a view showing the box formed from the blank shown in Fig. 6.

The blanks from which the box and cover are made are cut from suitable folding box board, cut, creased, scored or wetted in the well known manner.

In the drawings and more particularly in Figs. 4 and 2 there will be seen the blank for the box before and after folding. The bottom of the box is numbered 11, and the sides 12 and 13. Each side is provided with end wings 14, 15, 16 and 17. When folded the end wings 14 and 15 lie between the outer end 18 and the inner end 19. The two tabs 20, 20, attached to the inner end 19 lie underneath a false bottom which will be later described. The end wings 16 and 17 lie against the end 21, and the top 22 is in the substantially horizontal position seen in Fig. 2 forming a permanent cover to a compartment of the box. The top 22 of the compartment is furnished with side wings 23 and 24 which in turn have attached to them the compartment wall wings 25 and 26. The compartment wall 27 is attached on one edge to the top 22 and on the other to the false bottom 28. The parts form a wall which separates the box into two compartments, one of which is closed at the top as seen in Fig. 2. A tab or pull 29 slips through the slit 30 (plainly seen in Fig. 5) and projecting beyond the end wall 19 forms a handle by means of which the box may be pulled out of the cover. The tab 29 in its position when the box is folded is shown in said Fig. 5. The tab 29 also serves the purpose of holding the false bottom 28 down upon the two tabs 20, 20 attached to outer end 19, so that all the parts forming the end of the box are all held securely in place.

A hole 31 is cut in the top 22 to permit the used needles to be introduced into the compartment at the left hand end of the box as seen in Fig. 2. The material partly surrounded by the cut 31 may be attached to the top, being bent downwardly as seen in



32 in Fig. 2 and forms a valve or cover which keeps the contents of the compartment from escaping.

The cover of the box is tubular in form, 5 being glued along the side seam as will now be described. (See Figs. 1 and 3). The bottom is seen at 311; the top at 312 and one side at 33. The other side is formed by the two parts 34 and 35 which overlap and are 10 glued. One end is closed by the end 36 and tuck 37 which slips under the body of the box. A thumb hole 38 is cut out of the edge of the top 312 and assists in pulling out the tuck 37 when it is desired to open the box.

15 The sides 33 and 34 are provided with wings 39 and 40 respectively which lie against the end 41. The bottom 311 is also provided with two tabs 43, 43, which lie against the inside of the wings 39 and 40 20 and serve to hold the bottom 311 and strengthen the end.

The proximate surfaces of the end 41, wings 39 and 40 and tabs 43, 43, are glued together so that the end of the box is very 25 strong and secure. This is important because the contents of the box are very heavy so that if the box is dropped the contents might burst it if it were not very strong.

30 The end 41 is provided with a strap 44 having a hook-shaped end. This strap passes between the end 41 and the bottom 311 at the point *a* (see Fig. 1) and the hooked end engages the slit 46 seen in Figs. 35 2 and 4. The strap 44 is only long enough to allow the box to be drawn a little more than half way out of the cover (see Fig. 5) but no farther, so that the box cannot be disengaged from the cover, but can be with- 40 drawn far enough to expose the hole 31 and allow the used articles to be dropped through the hole into the closed compartment.

In Fig. 6 I have shown a modification of 45 my invention by the employment of which the box proper is provided with an additional bottom and end portion. In this modification the tabs 20, 20, see Fig. 4, are replaced by an extension 50, see Fig. 6, of 50 the end 19 and the said portion 50 has at the end thereof a portion 51. The portions 50 and 51 form respectively the additional bottom and end of the box above referred to. The portion 50 is in length and width 55 equal to the bottom of the box and the portion 51 is of a size equal to the end of the box. When the end portions 18 and 19 are folded over the intumed flaps 14 and 15 the portion 50 will lie along the bottom portion

11 of the box and the portion 51 will extend 60 upwardly inside the intumed flaps 16 and 17 at the opposite end of the box. This additional bottom makes a very tight box and reduces the danger of very small arti- 65 cles like needles working through the box or the joints thereof and becoming misplaced or lost.

In the modification shown Figs. 6 and 7 the pull tab 29 is done away with and in place thereof the pull tab 52 is formed by 70 means of a semi-circular cut 53, see Figs. 6 and 7, in the outer end piece 18, as will be clear from said figures.

By the employment of my invention a folding box of two compartments, one an 75 open compartment and the other a closed compartment, may be obtained having all the advantages of a solid box and with a very considerable saving of expense as compared with the solid box. 80

What I claim is:

1. The combination with a tubular cover closed at one end by flaps and having a strap integral with one of said flaps, of a box slidably contained within said cover, said 85 strap engaging said box at its free end.

2. The combination with a tubular cover closed at one end by flaps and having a strap integral with one of said flaps, of a box slidably contained within said cover, said 90 strap having a hook-shaped free end engaging a slit in said box and permitting the partial withdrawal but preventing the complete withdrawal of the box from the cover.

3. A folding box provided with a tubular 95 cover and having an open and a closed compartment, the ends of said box being formed of three layers of material, the bottom of the closed compartment being formed of two layers of material and the bottom of the 100 open compartment of three layers of material.

4. A folding box having an open compartment and a compartment permanently closed except for a hole through the top, 105 said box being provided with a tubular cover and having a connection fast at one end to the box and at the other end to the cover, said connection being of a length less than that of the box but long enough to per- 110 mit the box to be withdrawn far enough to uncover the hole in the closed compartment.

In testimony whereof I affix my signature, in presence of two witnesses.

PETER R. WARREN.

Witnesses:

ALINE TARR,  
R. WALLACE.