Oct. 7, 1958 W. P. AULL 2,855,096

SHOE BOX HAVING SHOE WITHDRAWING MEANS

Filed April 6, 1956 2 Sheets-Sheet 1

Fig. 1.

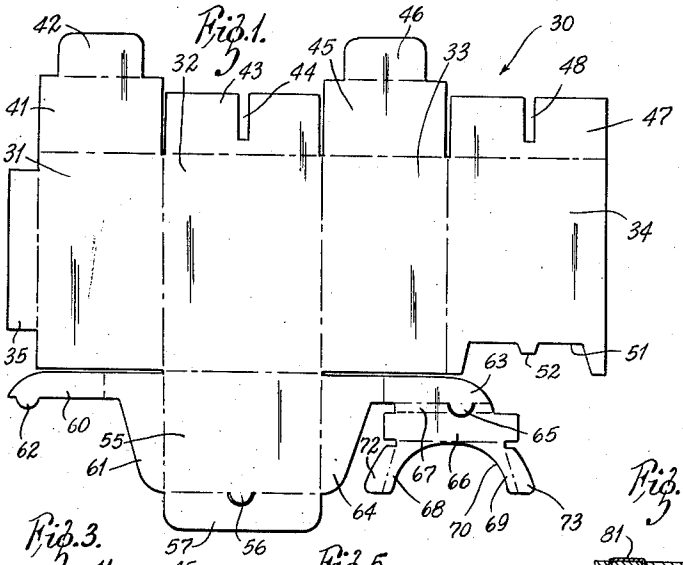


Fig. 2.

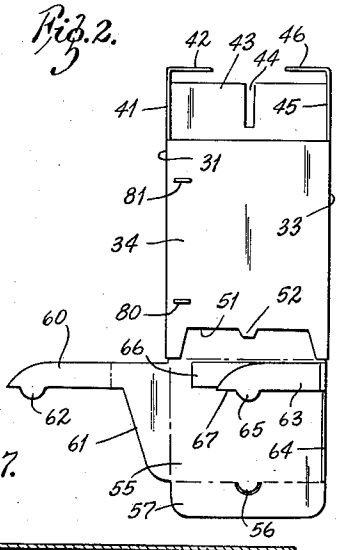


Fig. 3.

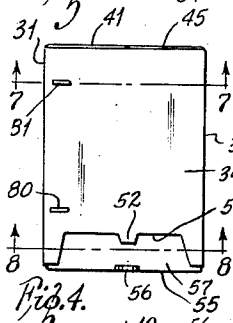


Fig. 5.

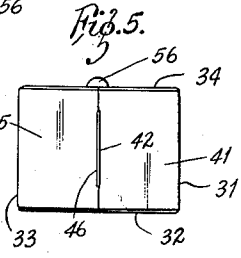


Fig. 7.

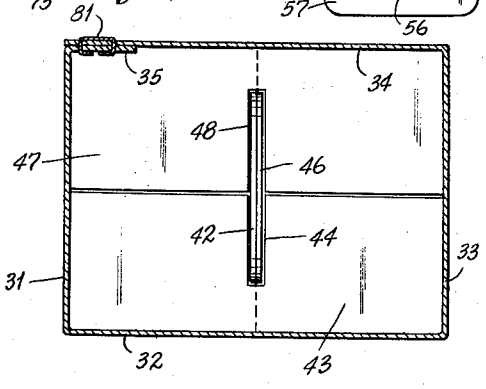


Fig. 4.

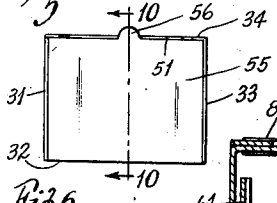


Fig. 8.

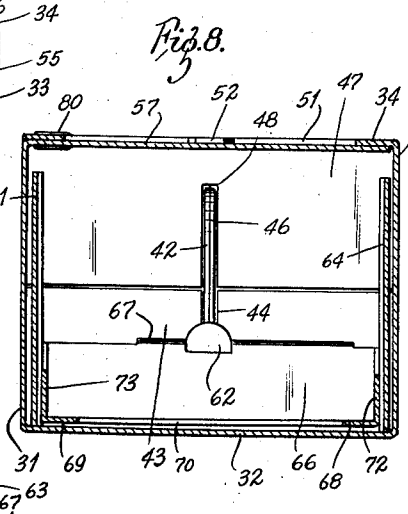


Fig. 9.

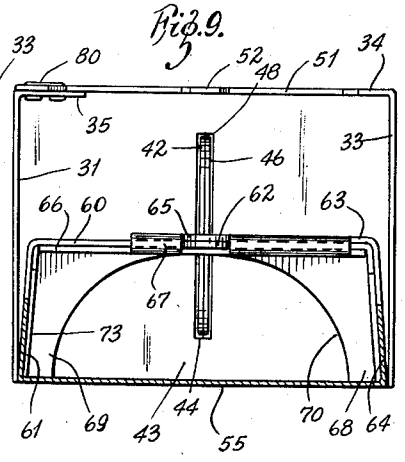
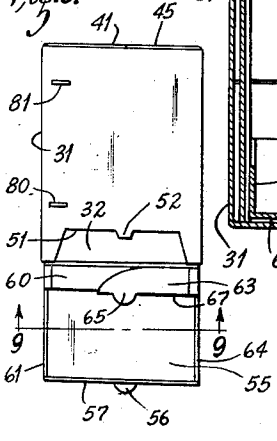


Fig. 6.



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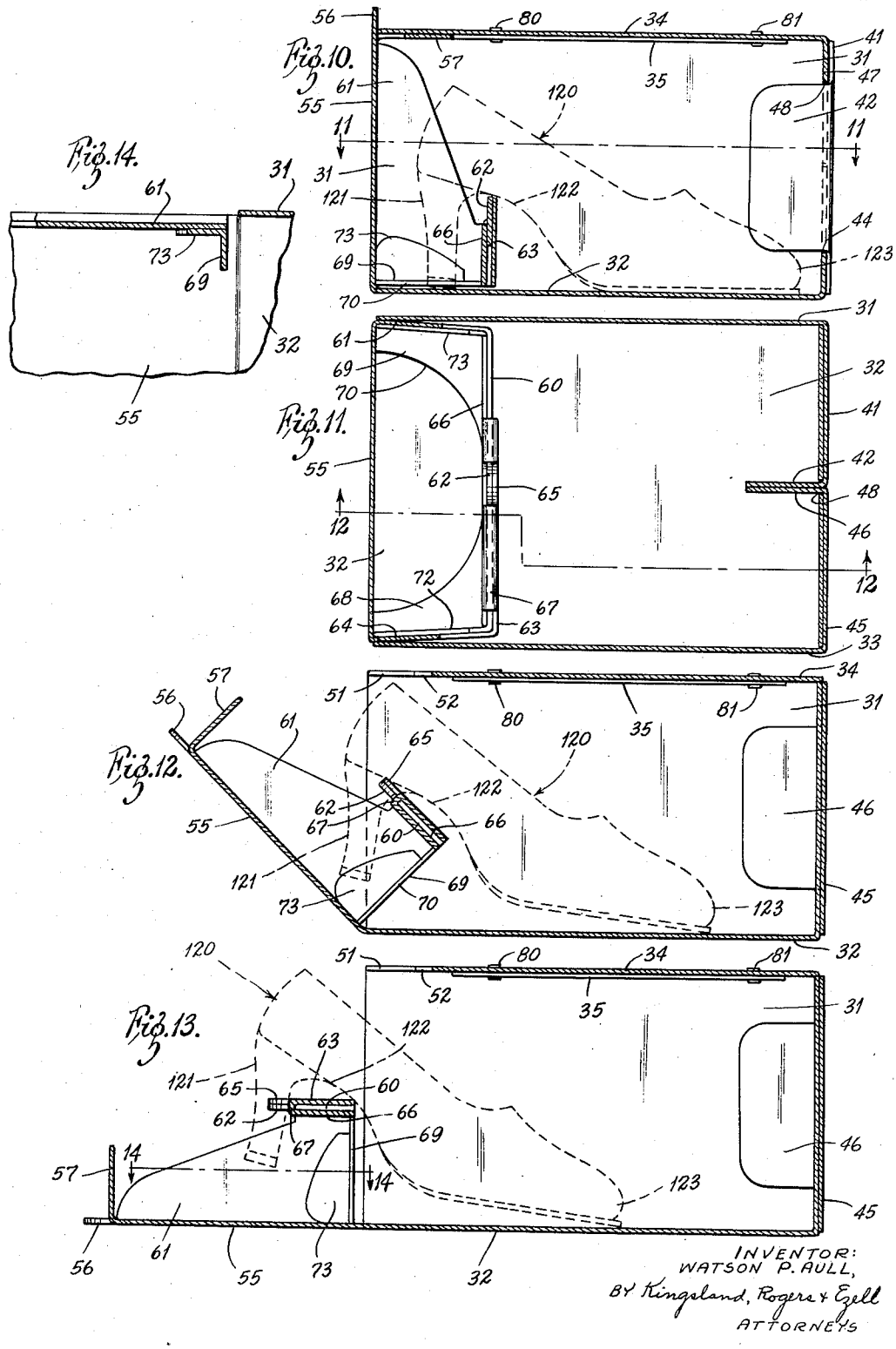
SHOE BOX HAVING SHOE WITHDRAWING MEANS

Filed April 6, 1956 2 Sheets-Sheet 2



United States Patent Office

2,855,096

Patented Oct. 7, 1958

2,855,096

SHOE BOX HAVING SHOE WITHDRAWING MEANS

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Application April 6, 1956, Serial No. 576,599

7 Claims. (Cl. 206—7)

This invention relates to improvements in boxes having article withdrawing means. In particular, it relates to a box which may be used for withdrawing shoes for use or display purposes, although the use of the box is not limited to shoes.

In the shoe box of this invention, there has been provided a means for storing shoes with means for opening the front flap of the box, and by so doing, withdrawing one or more pairs of shoes partially for observation or for entire removal and use. This is of great advantage in that there is no need to take the box down from the shelf and open the lid as is the usual case. Through this invention, a box may be kept upon a shelf and stocked upon other boxes, and all that need be done for withdrawal or display is to merely open the front flap. The salesman in a store and the prospective customer can then view the shoes which are partially withdrawn from the box and are fully visible. Also the shoe may then be removed from the box for closer inspection and handling without moving the box itself.

Accordingly, it is an object of this invention to provide a box having means for partially withdrawing an article from the interior of the box by an opening of a hinged front flap.

It is a further object of this invention to provide a box having a hinged front flap and, associated therewith, means in the interior of the box for withdrawing an article therefrom in a vertical plane.

Still another object of this invention is to provide a box for the storage of shoes and the like, having a hinged front flap together with a shoe withdrawing means which is adapted to fit or catch underneath the shoe between the heel and the sole and which is pivoted when the front flap is opened to withdraw the shoes.

Still another object of this invention is to provide a box for the storage of shoes and the like having a hinged front flap and withdrawing means attached to the hinged flap which pivots when the flap is opened and which permits the proper spacing of the shoe within the box and causes the shoe to pivot upwardly within the box and withdraw outwardly therefrom.

Still another object of this invention is to provide boxes of the type described which can be easily and simply constructed from paper board blanks using a minimum of material and which are rugged and serviceable and easily operable. In most cases the withdrawing means will be made from the usually unused part of the rectangular blank lying at side edges of the front flap.

Further objects of this invention will be apparent to those skilled in the art and will further appear in the detailed description which follows.

In the drawings, there is portrayed a preferred embodiment of this invention which is for the purpose of example only. It is to be understood that these drawings are for the purpose of illustrating the invention only, and that the invention is not limited thereto.

In the drawings:

Figure 1 is a plan view of a shoe box blank provided with shoe withdrawing means;

Figure 2 is a top plan view of the box in a partially assembled stage;

Figure 3 is a top plan view of the assembled shoe box;

Figure 4 is a view in front elevation of the shoe box;

Figure 5 is a view in rear elevation of the shoe box;

Figure 6 is a top plan view of the shoe box with the front flap in the open position;

Figure 7 is a view in section taken on the line 7—7 showing the interior of the shoe box and shoe separating means;

Figure 8 is a view in section taken on the line 8—8 of Figure 3 showing the interior of the shoe box and the structure of the shoe withdrawing means;

Figure 9 is a view in section taken on the line 9—9 of Figure 6 further portraying the interior of the shoe box and the article withdrawing means;

Figure 10 is a view in longitudinal section through the middle of the shoe box showing the positioning of a shoe in dotted lines;

Figure 11 is a view in section taken on the line 11—11 of Figure 10 showing the structure of the interior of the box and the article withdrawing means;

Figure 12 is a view similar to Figure 11 but showing the front flap partially open and an intermediate stage of withdrawal of the shoe;

Figure 13 is a view similar to Figures 11 and 12, but showing the final stage of the shoe withdrawal and the front flap fully opened; and

Figure 14 is a view in section taken on the line 14—14 of Figure 13 showing the structure of the shoe withdrawing means.

The blank for the shoe box is generally indicated at 30 in Figure 1. This blank comprises four major panels which for the purpose of identification are called left side panel 31, bottom panel 32, right side panel 33 and top panel 34. These panels are connected together by fold lines and, in addition, left side panel 31 is provided with a fastening stitch flap 35.

The back end fastening structure of the blank includes a left side end tab 41 provided with a tuck and shoe spacing tab 42. The bottom panel 32 is provided with an end flap 43 having a recess 44 for receiving the tuck tab. The right side panel 33 similarly to the left side panel, is provided with an end flap 45 and a tuck and shoe spacing tab 46. The top panel 34 has an end flap 47 and a recess 48 for receiving the spacing tabs in a similar manner to the bottom panel.

The front portion of the top panel 34 is provided with an inwardly cut recess 51 and a protruding spacing tab 52 which permits a partial raising of shoes outside the top of the box as they are withdrawn by the withdrawing means as will later appear. The tab 52 provides for spacing of the shoes in the withdrawing operation.

The shoe withdrawing structure comprises various panels and tabs which are attached to the bottom panel 32. Thus, a front flap 55 is connected to the bottom panel 32 by fold line. A finger tab for opening the front panel is provided at 56 and is cut out from a tuck flap 57 connected to the front flap 55 by a fold line.

At the left side of the front flap 55, as shown in Figure 1, a shoe withdrawing member 60 is shown, which is connected to the front flap 55 by a supporting wing panel 61. The panel 61 extends along the entire side of the front flap to give strength and rigidity to the withdrawing structure. The withdrawing member 60 is provided with a locking and shoe spacing tab 62. Similarly, at the right side of the front flap 55, another shoe withdrawing member 63 is shown which is connected to the front flap by a supporting wing panel 64. Also, a locking and shoe spacing tab 65 is provided upon the member 63.

In order to fasten the withdrawing members **60** and **63** together and hold them in position when the box is assembled, a fastening structure including an underlying and supporting shoe withdrawing member **66** is provided. This underlying member is connected to the withdrawing member **63** by a spacing panel **67**. Depending from the underlying withdrawing member **66** are two bracing legs **68** and **69**. These legs define an internal recess or opening **70** which is adapted to receive the shoe heels, as will further appear. Folding tabs **72** and **73** are connected to the legs **68** and **69** respectively, to provide rigidity and further support for the withdrawing structure and to prevent side to side sway.

In assembling the blank **30**, the bottom panel is maintained in flat position while the left side panel **31** and the right side panel **33** are both bent upwardly with the connecting tab **35** then being bent inwardly to overlie the bottom panel. Subsequently, the top panel **34** is then bent over as shown in Figure 2 to overlie the bottom panel and is connected to the connecting tab **35** by the staples **80** and **81**, although other conventional connecting means such as glue, tape, etc. may be employed. It is to be understood that the method of assembling may vary somewhat in the sequence of operations but one manner of assembly will be for the purpose of illustration.

Next, as shown in Figure 2, to close the back end of the box, the spacing tabs **42** and **46** are bent inwardly toward one another and when the end panels **43** and **47** are folded to close the box, the spacing tabs **42** and **46** are tucked into the recesses **44** and **48**. This final assembled position of the end portion of the box is best shown in Figures 3, 5 and 7.

In assembling the shoe withdrawing structure, the underlying withdrawing member **66**, shown in Figure 1, is first bent to overlie the member **63**. Next, the legs **68** and **69** are bent so as to stand up vertically and the supporting tabs **72** and **73** are bent to the front to lie in a plane parallel with the side walls. After this has been accomplished, the partially assembled withdrawing structure is folded to overlie the bottom flap **55**, as shown in Figure 2. When this has been done, the supporting flap **72** will lie flush against the supporting panel **64**. In the next stage, the withdrawing member **62** and its supporting panel **61** are bent upwardly and vertically with respect to the front flap **55** and then the supporting member **62** is bent still further at right angles so as to lie in the same plane as the bottom and top panels. It is then inserted in between the underlying member **66** with the lock tab **62** being positioned underneath the lock tab **65** and through an opening in the spacing panel **67** in locking position. This finally assembled position is shown in Figure 6. The box may then be closed in conventional fashion by closing the front flap and inserting the tuck flap **57** underneath the top panel **34**, as shown in Figure 3.

In the assembled structure the withdrawing means is fastened to the front flap in a very rigid relation. This prevents swaying and the box may therefore be repeatedly opened and closed without the withdrawing means hitting against the side panels of the box when the front flap is closed.

Use

The shoe box with the article withdrawing means of this invention is best shown in use in Figures 1–14. By referring to Figure 13, showing for the purpose of example, a lady's shoe in dotted lines, the shoe is inserted into the box with the toe resting upon the bottom and the arch overlying the withdrawing means. In this position, the shoe generally indicated at **120** has the heel **121** bearing against the withdrawing members **60**, **63** and **66** with the arch **122** of the shoe overlying the same.

To place the shoe in the box and close it, the front flap is raised upwardly to the position shown in Figure 12 which slides the toe **123** of the shoe forwardly through

the pushing action of the withdrawing means. On the inside surface of the bottom, the open space **51** at the top panel and the spacing tab **52**, provides for the raising of the shoe so that no contact with the top of the box is attained if a fairly high shoe taller than that shown in Figure 12 is employed.

In the final stage, the box is closed by closing the front flap as shown in Figure 10, and in the continuing pivoting action the members **60**, **63** and **66** of the withdrawing means push against the arch of the shoe and cause it to be propelled toward the rear of the box. The spacing tabs **42** and **46** between the shoes inserted in the box provide for proper spacing, as do also the spacing tabs **65** and **62**.

The withdrawal of the shoe is accomplished in a direct reverse order of the steps above-described. Thus, the withdrawing tab **56** of the front panel is merely grasped and the front panel is then drawn downwardly as shown in Figures 12 and 13. This causes the shoes to be dragged out of the box by the contact of the withdrawing members against the heel **121**. In this manner, the shoes may be very simply and easily withdrawn for removal and the box need not be moved in any manner other than to open and close the front panel.

Although the box of Figures 1–14 have been particularly described with respect to women's shoes, it should be understood that it may also be used for men's shoes, by merely changing the dimensions of the shoe withdrawing means and shortening them to a lesser height than that shown in Figure 10. Also, other articles may be employed where pivotal withdrawing action is desired through the use of the withdrawing means fastened to the hinged front panel. Still further, as another example in which this invention may be changed without departing from the teaching thereof, the legs **68** and **69** defining the opening **70**, may be changed to provide a continuous flat base. This opening **70** is of advantage where long spiked heels used in ladies' shoes are employed, since it allows the arch to rest upon the withdrawing members. However, this opening may be dispensed with for other uses.

Various changes and modifications may be made in the embodiments of this invention as described above, as will be apparent to those skilled in the art. Such changes and modifications will be within the scope of the invention and will be further apparent to those skilled in the art.

What is claimed is:

1. A shoe box having two sides, a top and bottom, an end and a front flap hinged to the bottom, said box being adapted to receive a pair of shoes therein supported by the bottom of the box, and shoe withdrawing means operable upon a pair of shoes when placed within the box extending from the front flap into the box, said withdrawing means forming with the front flap a rigid member spaced from the front flap and being supported at the lower side edges of said flap, said member fitting in the arch of each shoe between the heel and the sole, said member being enclosed within the box when the front flap is closed, and said member being rotated outside the box when the front flap is opened.

2. A shoe box having two sides, a top and bottom, an end and a front flap hinged to the bottom, said box being adapted to receive a pair of shoes therein supported by the bottom of the box, and shoe withdrawing means operable upon a pair of shoes when placed within the box extending fhom the front flap into the box, said withdrawing means forming with the front flap a rigid member spaced from the front flap and being supported at the lower side edges of said flap, said member fitting in the arch of each shoe between the heel and the sole, said member being enclosed within the box when the front flap is closed, and said member being rotated outside the box when the front flap is opened and means for separating the shoes within the box.

3. A shoe box having two sides, a top and bottom, an end and a front flap hinged to the bottom, said box

being adapted to receive a pair of shoes therein largely supported by the bottom of the box, and shoe withdrawing means operable upon a pair of shoes when placed within the box extending from the front flap into the box, said withdrawing means forming with the front flap a rigid member spaced from the front flap and being supported at the lower side edges of said flap, said member fitting in the arch of each shoe between the heel and the sole, said member being enclosed within the box when the front flap is closed, and said member being rotated outside the box when the front flap is opened, and means at the top of the box for the passage of shoes therethrough as they are raised by rotating action of the withdrawing means upon the opening and closing of the front flap, said means comprising a recessed wall portion at the front of the top.

4. A shoe box having two sides, a top and bottom, an end and a front flap hinged to the bottom, said box being adapted to receive a pair of shoes therein supported by the bottom of the box, and shoe withdrawing means operable upon a pair of shoes when placed within the box extending from the front flap into the box, said withdrawing means forming with the front flap a rigid member spaced from the front flap and being supported at the lower side edges of said flap, said member fitting in the arch of each shoe between the heel and the sole, said member being enclosed within the box when the front flap is closed, and said member being rotated outside the box when the front flap is opened and means for maintaining the separation of the shoes as they are moved inwardly and outwardly of the box by the opening and closing of the front flap.

5. A shoe box having two sides, a top and bottom, an end and a front flap hinged to the bottom, said box being adapted to receive a pair of shoes therein supported by the bottom of the box, and shoe withdrawing means operable upon a pair of shoes when placed within the box extending from the front flap into the box, said withdrawing means forming with the front flap a rigid member spaced from the front flap and being supported at the lower side edges of said flap, said member fitting in the arch of each shoe between the heel and the sole, said member being enclosed within the box when the front flap is closed, and said member being rotated outside the box when the front flap is opened, said means being comprised of separate support panels connected to opposite sides edges of the front flap and extending away therefrom, and said withdrawing member including elements connected to each of the support panels and cooperating with one another to form the withdrawing means, the withdrawing member being adapted to fit in the arch of each shoe between the heel and the sole, said withdrawing member being enclosed within the box when the front flap is closed, and being rotated outside the box when the front flap is opened.

6. A shoe box having two sides, a top and bottom, an end and a front flap hinged to the bottom, said box being adapted to receive a pair of shoes therein supported by the bottom of the box, and shoe withdrawing means operable upon a pair of shoes when placed within the box extending from the front flap into the box, said withdrawing means forming with the front flap a rigid member spaced from the front flap and being supported at the lower side edges of said flap, said member fitting in the arch of each shoe between the heel and the sole, said member being enclosed within the box when the front flap is closed, and said member being rotated outside the box when the front flap is opened, said means being comprised of separate support panels connected to opposite side edges of the front flap and extending away therefrom, and said withdrawing member including elements connected to each of the support panels and cooperating with one another to form the withdrawing means, the withdrawing member being adapted to fit in the arch of each shoe between the heel and the sole, said member being enclosed within the box when the front flap is closed, and being rotated outside the box when the front flap is opened and means for locking the withdrawing elements together to form a structure rigid with the front flap.

7. A shoe box having two sides, a top and bottom, an end and a front flap hinged to the bottom, said box being adapted to receive a pair of shoes therein supported by the bottom of the box, and shoe withdrawing means operable upon a pair of shoes when placed within the box extending from the front flap into the box, said withdrawing means forming with the front flap a rigid member spaced from the front flap and being supported at the lower side edges of said flap, said member fitting in the arch of each shoe between the heel and the sole, said member being enclosed within the box when the front flap is closed, and said member being rotated outside the box when the front flap is opened, said means being comprised of separate support panels connected to opposite side edges of the front flap and extending away therefrom, and said withdrawing member comprising elements connected to each of the support panels and cooperating with one another to form the withdrawing means, the withdrawing member being adapted to fit in the arch of each shoe between the heel and the sole, said member being enclosed within the box when the front flap is closed, and being rotated outside the box when the front flap is opened and means for locking the withdrawing elements together to form a structure rigid with the front flap, said last named means including shoe separation means.

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