

W. L. STEVENS.
FOLDING PAPER BOX.
APPLICATION FILED JULY 2, 1915.

1,156,444.

Patented Oct. 12, 1915.

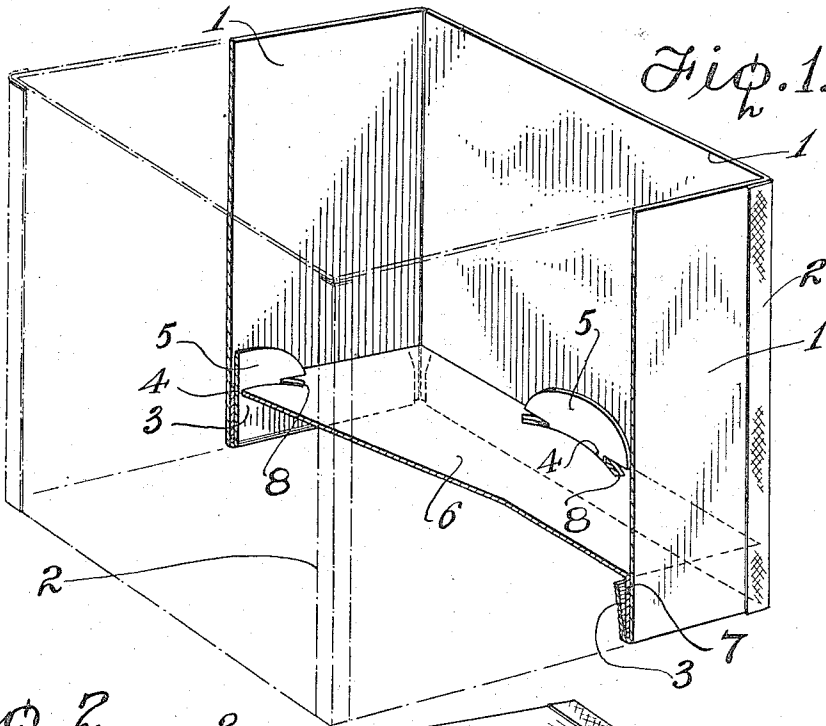


Fig. 2.

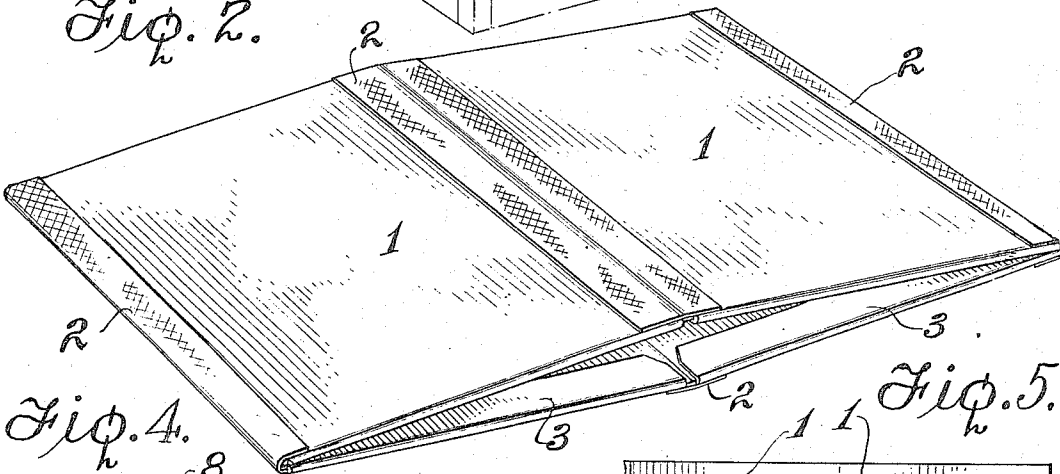
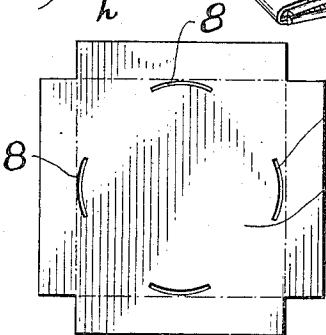


Fig. 4.



Witnesses:
J. H. Hankins

Fig. 3.

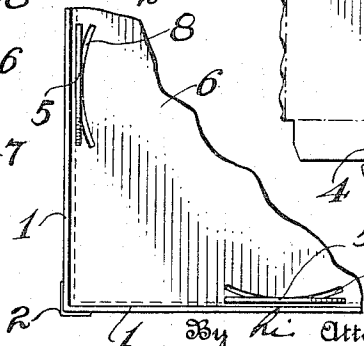
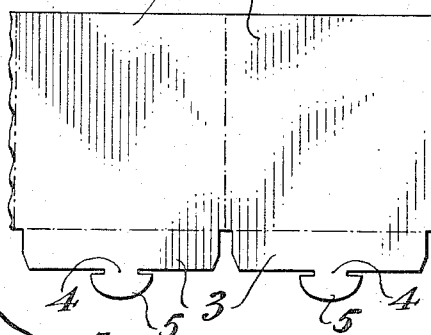


Fig. 5.



Inventor

W. L. Stevens

A. E. Kinsman

By his Attorney

UNITED STATES PATENT OFFICE.

WALTER L. STEVENS, OF NEW YORK, N. Y.

FOLDING PAPER BOX.

1,156,444.

Specification of Letters Patent.

Patented Oct. 12, 1915.

Application filed July 2, 1915. Serial No. 37,628.

To all whom it may concern:

Be it known that I, WALTER L. STEVENS, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented the following described Improvements in Folding Paper Boxes.

My invention is concerned more particularly with collapsible paper boxes which are relatively deep as compared to their lateral dimensions, such, for example, as hat boxes, and the purpose is to provide a paper- or straw-board hat box which can be quickly folded up out of a prepared flat or collapsed blank and in which the bottom wall can be readily set in place and when so set will be held securely against displacement inwardly as well as outwardly.

Folding boxes as heretofore constructed and unless constituted with very elaborate fastening devices, have been unserviceable, especially for use with ladies' hats, because of the insecurity of their bottoms and the liability of the latter to be pushed up in transportation, to the injury of the contained hat. By the present invention, the attachment means of the box bottom is especially simple and very secure, being made out of the strawboard itself in such manner as to snap automatically into permanent interlocking relation and so as to secure the bottom firmly against displacement in any direction, although leaving it capable of removal by special manipulation when desired, and such attachment means is so combined with the bottom and body walls of the box as to enable each part to reinforce and brace the other.

The new construction is characterized by its simplicity of structure and its low cost of manufacture, as well as by the exceptional security with which the bottom is retained in place.

The preferred form of the invention is shown in the accompanying drawing, wherein—

Figure 1 is a partial perspective view of the box with the bottom in place; Fig. 2 the box body collapsed; Fig. 3 a partial plan of a corner of the box; Fig. 4 the bottom blank; and Fig. 5, two sections of the body blank.

That portion of the box which is herein termed the box body, is composed of four walls 1, folded up out of a flat blank of paper-board, as indicated in Fig. 5, the op-

posite ends of the blank being united by a gummed paper strip 2, which for appearance and added security may also be applied to the other folded corners as indicated. As thus constructed, the box body may collapse diagonally into the flat form represented in Fig. 2, in which condition it can be conveniently and compactly shipped to the user. Each of the four side walls 1 is provided at its lower end with a flange 3, turned inwardly and upwardly with reference to the body of the box and adapted to constitute a stop or abutment on which the removable box bottom may rest. These flanges 3 can be folded into the interior of the box body flat against the body walls, as indicated in Fig. 2, so that they will be held creased by the collapsed body during shipment. Each flange has formed at its edge a headed goose-neck or tab consisting of an integral part of the flange constituting the relatively slender neck 4 of the tab and an enlargement 5 forming the head thereof. These tabs being of the same stock as the flanges and side walls, normally retain the same flat plane as the latter and project upwardly within the box body when the latter has been expanded to its open condition.

The box bottom 6 is formed of a flat blank, as shown in Fig. 4, which may or may not be of the same stock as the side wall, and integral with it, if desired. This blank is provided in the present case with four downturned flanges 7, each adapted to enter the spaces between the flanges 3 of the box body and their adjacent side walls, in the manner indicated in Fig. 1, and whereby the flanged box bottom serves to reinforce and preserve the form of the body, being itself held from downward displacement by the engagement of the up-turned and down-turned flanges on the respective parts. The box bottom is provided with a series of tab slots 8, adapted to receive the headed portions of the tabs on the box body but of a shape differing substantially from the normal cross-sectional shape of the tab heads. In the present case the tab slots 8 are curved so as to be concaved toward the center of the box and the normal section of the tab heads is flat, as already stated, the arrangement being such that when the box bottom is placed in the body and pushed downward therein, each of the tab heads may be caused to enter its respective slot by slightly distorting it from

its normal shape and then on continuing the downward pressure, the heads 5 will snap over the surface of the box bottom and thereby automatically lock it in place. Upward displacement of the bottom will thereafter be resisted by the enlarged tab heads 5, as will be evident.

It is preferred to form the box body complete, as indicated in Fig. 2, and to ship the same with the box bottom slipped inside of it, although it will be evident that the box body can be folded up by the user out of its original flat blank if desired.

I have not herein illustrated the cover of the box body, since it may be formed in the same manner as the body itself, or otherwise, as desired.

It will be obvious from the foregoing description that the number of headed tabs and tab slots is immaterial to my broad invention, so long as the box bottom is thereby held against displacement in the manner indicated, and it will be further evident that the shape of the tab slots relatively to that of the tab heads may be varied, as desired, so long as the one interlocks with the other for the purposes stated, and it will also be apparent that various other modifications and changes may be made in the form illustrated in the drawings without departing from the spirit and scope of my invention.

I claim:

1. A collapsible paper box comprising united collapsible side walls having inturned flange portions constituting stop members for the box bottom and provided also with headed tabs, in combination with a box bottom having tab slots differing in shape from the permanent cross-section of the tab heads, whereby the latter automatically interlock with the box bottom when pushed through said slots and the said bottom is secured against upward as well as downward displacement.

2. A collapsible paper box comprising side walls folded up from a single blank, with inturned flanges forming a stop for the

box bottom and having headed tabs projecting from the edges of the flanges, in combination with a box bottom having tab slots therein to receive the tabs and to interlock automatically therewith to prevent upward displacement of the box bottom.

3. A collapsible paper box comprising united collapsible side walls having a series of inturned headed tabs on its lower edge, one or more of said tabs having relatively slender necks and wide heads, combined with a box bottom having tab slots differing in shape from the normal cross-sectional shape of the tab heads and adapted to interlock therewith when said heads are pushed through said slots.

4. A collapsible box body comprising side walls with upturned tabs having slender necks and relatively large heads, combined with a box bottom having downturned flanges on three or more sides and with tab slots formed therein inward of and adjacent to the said downturned flanges, the said slots differing in shape from the normal cross-section of the tab heads whereby they lock automatically therewith to hold the box bottom against upward and downturned displacement.

5. A collapsible paper box comprising side walls having inturned flanges, each of said flanges having a headed tab thereon with relatively slender neck portions, in combination with a box bottom having downturned flanges and tab slots formed therein inward of and adjacent to said flanges, the said slots differing in shape from the normal cross-section of the tab heads and adapted to interlock automatically therewith to hold the bottom against displacement with relation to the side walls.

In testimony whereof, I have signed this specification in the presence of two witnesses.

WALTER L. STEVENS.

Witnesses:

K. L. TRAUT,
G. A. TAYLOR.