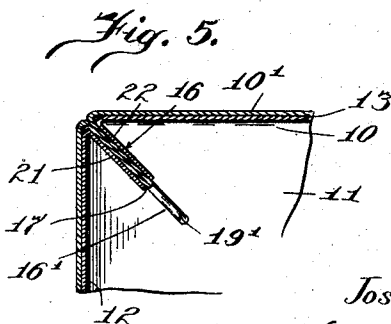
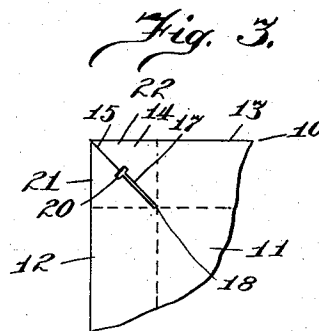
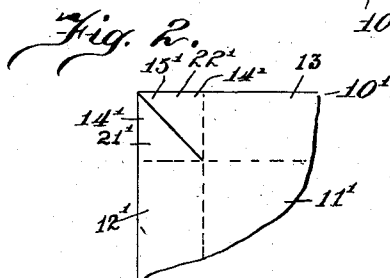
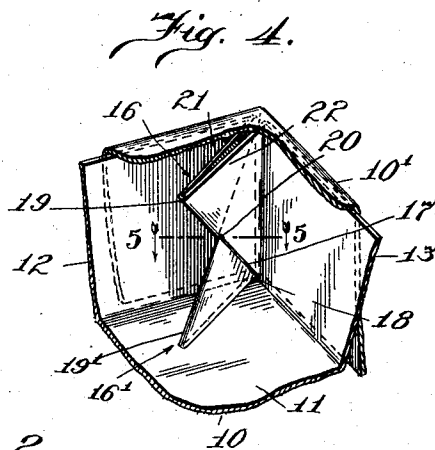
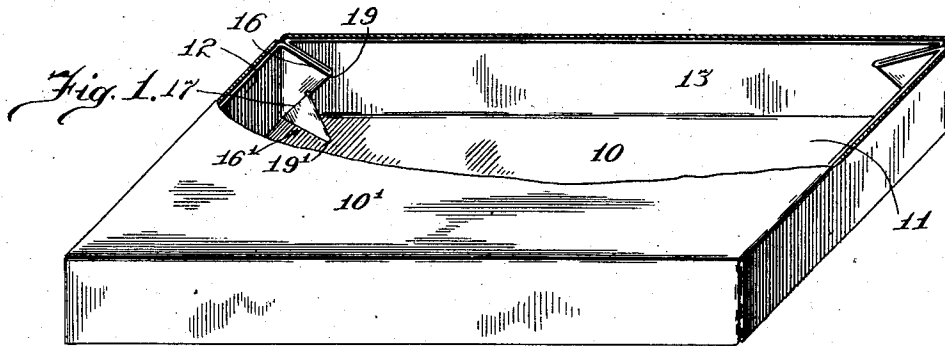


J. R. MYERS
PAPER BOX.
APPLICATION FILED MAR. 13, 1911.

992,683.

Patented May 16, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

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PAPER BOX.

992,683.

Specification of Letters Patent.

Patented May 16, 1911.

Continuation of application Serial No. 591,710, filed November 10, 1910. This application filed March 13, 1911. Serial No. 613,964.

To all whom it may concern:

Be it known that I, JOSEPH R. MYERS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Paper Boxes, of which the following is a specification, this application being a continuation of my prior application, Serial No. 591,710, filed November 10, 1910.

My invention relates to improvements in paper boxes, and more particularly to such boxes wherein the top and bottom sections cooperate for mutual self-maintenance in assembled position without the aid of extraneous fastening devices of any kind.

One of the objects of my invention is to provide a box involving top and bottom sections no part of which extends beyond the rectangle necessary to form the planar portion and side walls of the section, said sections providing intumed corner folds, and the corresponding corner folds of the two sections being so relatively constructed that one thereof may pass through a slit in the other in a novel manner.

Other objects of my invention will become apparent from the following description taken in conjunction with the accompanying drawing, wherein—

Figure 1 is an isometric view, with parts broken away, of a box constructed in accordance with my invention; Figs. 2 and 3 are plan views of blanks adapted for use in constructing a box in accordance with my invention; Fig. 4 is an isometric view of corner fragments of the two sections in assembled position; and Fig. 5 is a section on line 5—5 of Fig. 4.

In the drawing, 10 and 10' represent respectively the bottom and top sections of the box, each formed of a blank of rectangular shape suitably scored or otherwise prepared to be folded easily, and when so folded or "set up" providing a planar portion or body, 11—11', end walls 12—12', side walls, 13—13', and, between the proximate edges of the side and end walls, integral square webs, 14—14', each infolded on its axial diagonal, 15, 15', to constitute an intumed triangular corner fold, 16—16', of double thickness.

In the drawing, like numerals indicate corresponding parts in the bottom and top

sections, those referring to the top section being distinguished by the exponent prime (').

In each corner fold of at least one of the sections of the box, I cut a slit 17 along the axial diagonal 15, extending from the inner end or heel, 18, to or slightly beyond the center of the diagonal fold and leaving the point, 19, of the fold intact, and preferably, at the point where the slit 17 ends near the center of the web, I provide a small cross slit or notch, 20, cut transversely to the slit 17, so that the separation of the side edges of the slit 17, either by accident or incidentally to use as hereafter described, may not tend to tear the fold at 15 beyond the middle point of the web. Thus, when a section above described is folded to bring the side and end walls at right angles to the planar portion 11 of the section, there is formed at each corner of the box a triangular intumed corner fold having its folded edge 15 at an angle of substantially 45° to the side, end, and planar portions, and providing two legs 21 and 22 respectively adjacent the end and side walls, such legs beyond the middle of the folded edge 15 being integrally connected and within the middle of the folded edge 15 being disconnected to provide between such legs an opening for engagement of the corner fold of the other box section in a manner to be described.

In the formation of a box from blanks constituted as above described, my invention contemplates the insertion of the points 19 (or 19') of the corner folds 16 of one section between the legs and through the slits 17 of corresponding corner folds of the opposing section. When so assembled, the free edges of the legs 21 and 22 of each section rest in contact with the planar portion 11 of the other section. Assemblage in this position may be attained by any convenient manipulation of the two folded sections, as, for instance, by bringing end walls 12 and 12' together with the adjacent corner folds of the outer section 10' partially inserted in the slits of the corresponding corner folds of the inner section and thereafter swinging the opposite end walls of the two sections into proximity so that the remaining corner folds of the outer section 10' may be tucked into the slits of the opposing corner folds of section 10,

when the two sections may be worked together to bring the corner folds of section 10' well into engagement in slits of section 10, the folded edge 15 of each corner fold of section 10' therefore engaging in the end of the coacting slit. Obviously, the outer section may be slitted as shown in Fig. 3, or may be left solid throughout, as shown in Fig. 2, either form acting with equal effectiveness.

It will be apparent that a box constructed as above described is entirely formed of blanks no part of which extends beyond the rectangle necessary to form the planar and wall portions of the box and no part of which need be cut off in effecting the intended cooperation between the sections, so that there is no waste of material incident to manufacture. Further, it will be noted that the box requires the provision of no extraneous devices of any sort to hold the parts together, but that the box is self-maintained in assembled position by a novel co-action between the opposing corner folds. The interlocking engagement of the folded edge 15 of the outer section within the slit 17 in the opposing corner fold strongly resists the vertical displacement of the sections under bursting strain applied against the planar portions 11 and 11', but intentional separation of the sections may, of course, readily be had by working apart the corner folds adjacent one end of the box after which unlocking of the remaining corner folds involves simply the separation of the contacting end walls 12 and 12'. When the box is assembled, crushing strains upon the corners are strongly resisted by the corner folds, each planar surface 11 and 11' receiving support from the free edges of the corner folds of the opposing section.

While I have herein described an embodiment of my invention for purposes of full disclosure, it will be apparent that changes

may be made in the details of construction without departure from the spirit of the invention and within the scope of the appended claims.

What I claim is:

1. A paper box consisting of a top section and a bottom section each providing in an integral structure a body, an end wall, a side wall, and a corner web inturned to constitute a corner fold having its folded edge lying in the axial diagonal of the web, the webs of one of said sections being slitted along said folded edge from the middle point to the heel thereof, and the corner folds of the other section lying between the legs of said slitted corner folds and having their points passed through and engaging in said slits.

2. A paper box consisting of top and bottom sections, each providing in an integral structure a body, an end wall, a side wall, and a corner web inturned to constitute a corner fold having its folded edge lying in the axial diagonal of the web, the web of one of the sections being slitted along the half of said folded edge adjacent the body and the fold of the other section lying with its diagonal fold and its free edges engaging respectively in the outer and inner ends of the coacting slit.

3. A paper box consisting of top and bottom sections each providing in an integral structure a body, end walls, side walls, and square corner webs, each inturned to constitute a corner fold, the corner webs of one of said sections being slitted and having passed therethrough portions of the coacting corner fold of the other section.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

JOSEPH R. MYERS.

In the presence of—
GEO. T. MAX, Jr.,
W. LINN ALLEN.