

S. E. BUTLER.
BOX.

APPLICATION FILED JULY 27, 1914.

1,146,307.

Patented July 13, 1915.

Fig. 1.

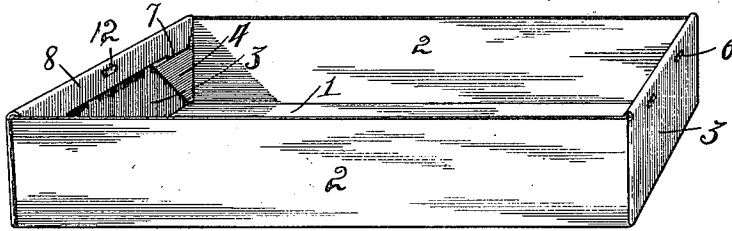


Fig. 2.

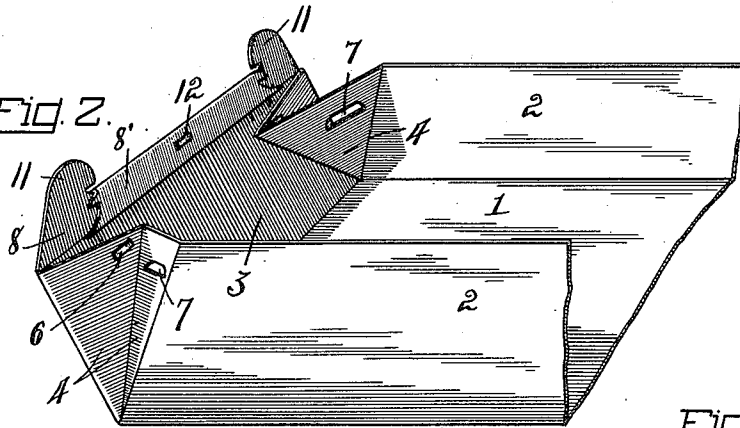
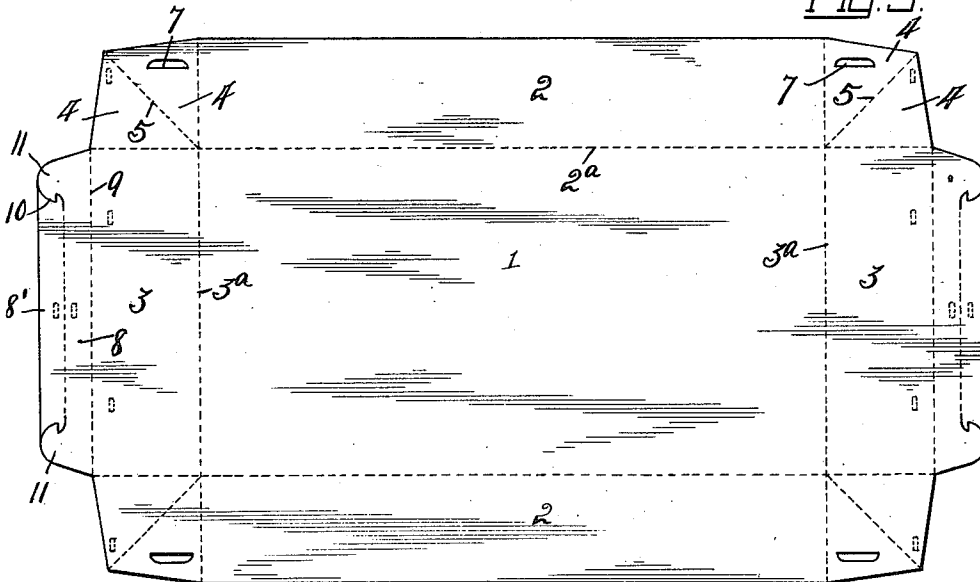


Fig. 3.



WITNESSES:-

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E. E. Thomas.

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UNITED STATES PATENT OFFICE.

SILAS EDSON BUTLER, OF TOLEDO, OHIO, ASSIGNOR TO THE NATIONAL PAPER BOX COMPANY, OF TOLEDO, OHIO, A CORPORATION OF OHIO.

BOX.

1,146,307.

Specification of Letters Patent.

Patented July 13, 1915.

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To all whom it may concern:

Be it known that I, SILAS EDSON BUTLER, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have invented a certain new and useful Box; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention relates to paper boxes or packing cases, and particularly to boxes of the collapsible paper board type, but is not restricted to such use, as it may be used in any connection for which it may be adapted or appropriate.

The object of my invention is the provision of an improved box of this character, which is simple and inexpensive in its construction and has its ends reinforced by material which is integral with the box material and would otherwise be wasted, whereby to strengthen the box without increasing the cost of production thereof.

Further objects and advantages of the invention will be apparent from the following detailed description thereof.

The invention is fully described in the following specification, and while, in its broader aspect, it is capable of embodiment in numerous forms, a preferred embodiment thereof is illustrated in the accompanying drawings, in which,—

Figure 1 is a perspective view of the body or bottom portion of a box in set-up form embodying my invention. Fig. 2 is an enlarged perspective view of an end portion thereof partially collapsed from set-up position, and Fig. 3 is a plan of the box blank in completely unfolded position.

Referring to the drawings, 1 designates the rectangular bottom panel of the box body, which panel is bounded at the sides and ends thereof by the rectangular side and end walls 2 and 3, respectively, which hingedly connect to the respective edges of the bottom panel 1 along weakened or scored lines 2^a and 3^a. Corner gussets 4, 4 are provided between the adjacent ends of the sides and ends 2, 3, such gussets being hingedly connected to the end edges of the respec-

tive walls 2, 3, along weakened or scored lines, which are extensions of the lines 2^a and 3^a. The gussets of each pair are hingedly connected by a diagonal weakened line 5. The pairs of gussets 4, 4 are intended to fold inwardly when the side and end walls are placed in upright relation to the center panel 1. To facilitate such folding action the gussets 4, which are adjacent to the ends 3, are permanently secured in flat folded relation against the respective end walls by stapling or stitching, as indicated at 6, (Fig. 2), the other, or free gusset of each pair being provided, adjacent to its outer or top edge, with a tongue receiving slot 7, for the purpose hereinafter described.

Each end wall 3, has an extension flap 8, hingedly connected to the outer edge thereof along a weakened fold line 9, such flap being substantially co-extensive in length with the length of the end wall. The end edges of the flaps 8 are preferably tapered to gradually restrict the lengths of the flaps outward from their inner edges. Each flap 8 is also slit or cut near each end thereof as at 10, to provide a notched tongue 11, at each end of the flap for insertion into the registering gusset slot 7 when the box is in set-up form, as shown in Fig. 1, the hook of notched edge of the tongue interlocking with the end wall of the slot to prevent an easy withdrawal of the tongue from within the slot. The material 8' which is disposed between the slits 10 of a flap is substantially equal in width to one-half the width of the flap and is folded inwardly against the inner half of the flap 8, as shown in Fig. 2, being secured thereto by stitching or stapling, as at 12. When the sides and ends have been placed in upright or perpendicular relation to the panel 1, the gussets 4 of each pair will stand in flat, abutting relation and the reinforced flap 8 can then be folded inwardly and downwardly over the top edges of the gussets and against the inner gussets, and the tongues 11 inserted into the registering slots 7, as shown in Fig. 1, thus firmly securing the box in set-up form and providing a twofold reinforcement for each end. It will be noted that the outer edges of the gussets are cut on a slight taper so that such edges, when the gussets are in folded relation to the side and end walls, will stand below the top edges of such walls to facilitate a fold-

ing of the reinforced flaps 8 over the gussets. It is evident that the reinforcing of the box ends in this manner materially strengthens the end portions of the box and
5 forms a projection and cover for the top edges of the gussets in addition to providing the ends with a finished edge appearance. It is also evident that I have provided a simple, strong and efficient means
10 for securing the box in set-up form.

I wish it understood that my invention is not limited to any specific construction, arrangement or form of the parts as it is capable of numerous embodiments without departing from the spirit thereof.
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Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is,—

A box of the class described having upright side and end walls, a pair of inwardly folding gussets connecting said walls at each corner, one gusset of each pair being fixed to the end wall against which it folds and the other gusset having a slot which
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extends longitudinally of the adjacent end wall when the box is set up, a flap hingedly connected to the free edge of each end wall, said flap being transversely slit near each end to form transversely projecting end tongues having hooked portions at their inner edges and to form an intermediate reinforcing portion the end edges of which correspond to the hooked inner edges of said tongues, said reinforcing portion being turned inward against the body portion of the flap and secured thereto, and said flap being foldable inward over the adjacent gussets when in folded relation, and said tongues being capable of insertion into the registering slots of said gussets transversely
25 30 35 40 of the end.

In testimony whereof, I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

SILAS EDSON BUTLER.

Witnesses:

E. E. THOMAS,
M. H. MAYERS.