Feb. 27, 1940. E. C. MULNIX 2,191,723

BOX

Original Filed Dec. 12, 1936

Fig. 1

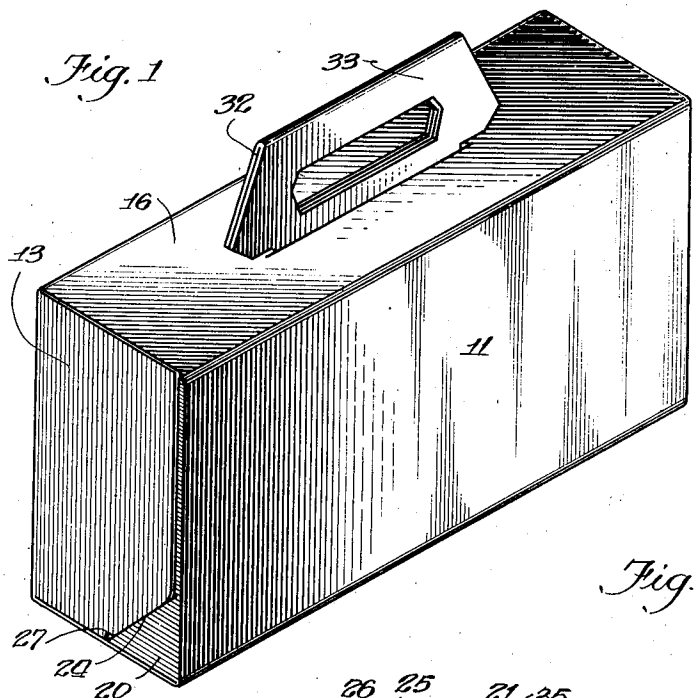


Fig. 3

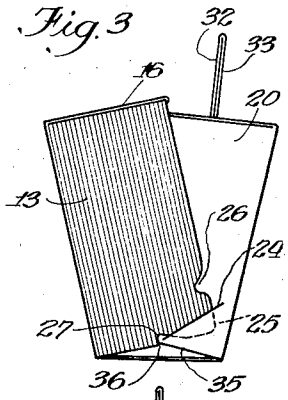
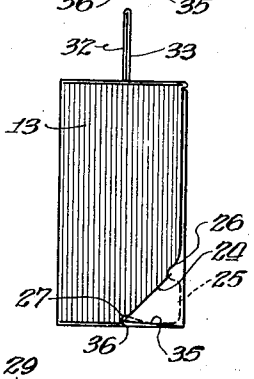


Fig. 4



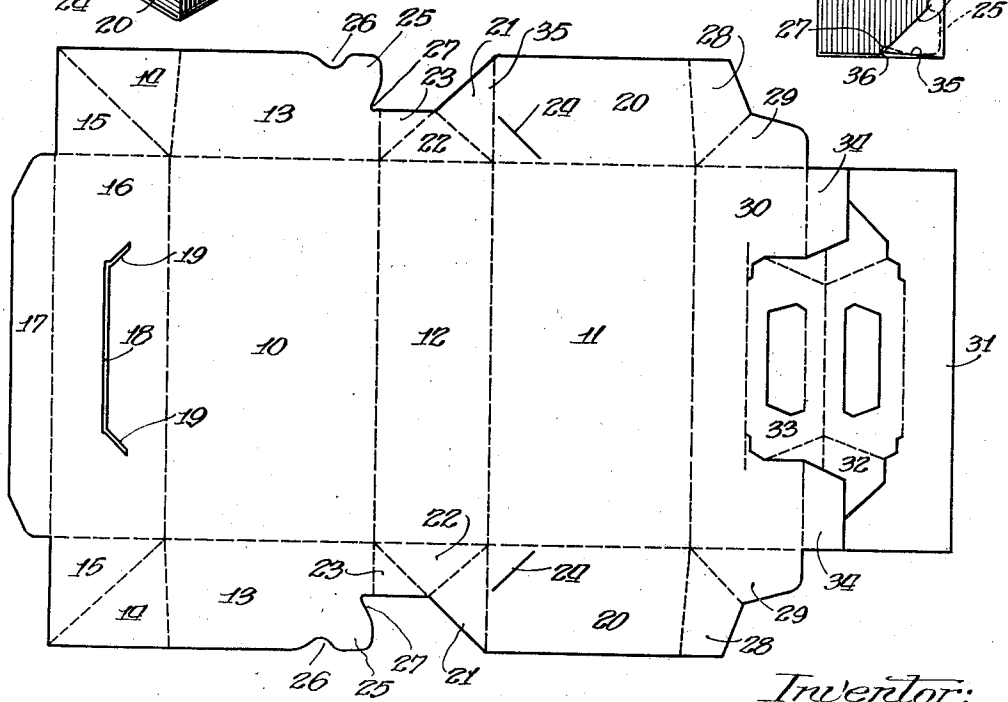


Fig. 2

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Patented Feb. 27, 1940 2,191,723

UNITED STATES PATENT OFFICE

2,191,723

BOX

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Original application December 12, 1936, Serial No. 115,551. Divided and this application April 1, 1938, Serial No. 199,416

2 Claims. (Cl. 229—31)

The invention relates to improvements in boxes made of flexible material such as boxboard, paper or the like comprising two box members swingingly connected together by a common wall so as to fold to cause one of said members to fit over the other, the primary object of the present invention being to so construct and arrange said parts as to cause snug and firm interfitting of the box parts, the present invention being, a division of my co-pending application filed December 12, 1936, Serial No. 115,551, Patent No. 2,115,782, May 3, 1938.

Another object of the invention is the provision of an improved box of the character indicated so constructed and arranged as to prevent tearing of the parts in closing the box.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing forming a part of this specification and in which:

Fig. 1 is a perspective view of a box embodying the invention;

Fig. 2 a plan view of the blank from which the box is formed;

Fig. 3 a detail end view showing the parts of the box in an intermediate stage of closing; and

Fig. 4 a similar view showing the box fully closed.

The embodiment of the invention illustrated in the drawing comprises an integral blank made of boxboard, paper or the like having one interior portion 10 set off by scoring or creases as shown to constitute the top or cover portion of an outer box member. The top portion 10 is connected as indicated with a corresponding bottom portion 11 by a common wall member 12 which serves as a swinging connection between the outer and inner box members. The top portion 10 is provided with side walls 13 connected by triangular flaps 14 and 15 with the end wall 16. In assembling the box, the side walls 13 are first folded inwardly onto the top portion 10 and the end wall 16. The end wall 16 is provided with a securing flap 17, which is folded inwardly onto the flap 15 and secured to the wall 16 by means of the usual central staple. The securing flap 17 thus constitutes an ordinary or well known securing flap cooperating with corner flaps 14 and 15 for securing that end of the outer box member in distended form, as will be readily understood. The end wall 16 is provided with a transverse slot 18 having downwardly and outwardly diverging ends 19 for a purpose to be presently described.

The bottom member 11 is provided with side walls 20 connected by triangular foldable flaps 21, 22 and 23 with the ends of the side walls 13, as best shown in Fig. 2. As shown, each flap 23 extends upwardly from the bottom about half the height of the wall 13 for a purpose to be presently described. The adjacent corners of the side walls 13 are formed into locking tongues 25 by means of notches 26 and 27, said locking tongues 25 are arranged to be inserted in the diagonal or inclined slits 24 in the end walls 20 when the triangular flaps 21, 22 and 23 are properly folded inwardly for the purpose thereby serving to secure this edge of each of the side walls 13 in place when the box is formed as indicated in Fig. 1. The notch 27 at the base of each of the tongues 25 is made sufficiently deep so as to avoid any contact between the tongues and the ends of the slits during the folding operation as indicated in Figs. 1, 3 and 4, thereby avoiding all danger of tearing the material of the box at these points.

The walls 20 are connected, as best indicated in Fig. 2, with the ends of the end wall 30 for the inner box member by folding the flaps 28 and 29 which serve the same function here as the flaps 14 and 15 but are cut off at their outer corners to facilitate the more complicated folding manipulation.

A handle flap 31 is formed at the top of the wall 30, the sides of said flap being freed from said wall as indicated. The inner central portion 32 of the flap 31 and the outer central portion 33 of the wall 30 are scored as indicated so that they may be doubled upon each other to form a handle member as shown. Securing flaps 34 are provided as shown at the outside top edges of the end wall 30 being folded inwardly and secured thereto by means of suitable wire stitches so as to cooperate with the flaps 28 and 29 in making up this portion of the inner box member, as will be readily understood. After the desired contents have been inserted in the box thus formed, the outer member is folded over the inner member with the handle portion 31—32 protruding through the slot 18—19, and the securing tongues 25 inserted in the slits 24, as shown in Figs. 1, 3 and 4, thus completing the box and providing a suitable reinforced handle for carrying the same.

By this arrangement a handled box is provided in which the handle is an integral part and parcel of the end wall; and in which a snug and tight fit is obtained between the inner corners and edges

of the box members without danger of tearing or injuring the parts. This desirable fit is obtained by virtue of the fact that the tongues **25** fit loosely in the slits **24** without any contact whatever between the edges of the tongues and the ends of the slits and the inner edges **35** of the side walls of the inner member engage and rub against the folds **36** between the inner edges of the side walls of the outer member and the corresponding flaps **23** to draw and hold said parts in place by a sort of cam action as best indicated in Figs. 3 and 4. The entry of the edges **35** of walls **20** into the folds between walls **13** and flaps **23** is permitted by terminating the flaps **23** below the tops of walls **13**.

While I have illustrated and described the preferred form of construction for carrying the invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I therefore do not wish to be limited to the precise details disclosed, but desire to avail myself of such variations and modifications as fall within the scope of the appended claims.

I claim:

1. A box comprising an outer and inner box member swingingly connected to each other by a common wall to fold to cause said outer member to fit over said inner member, the side walls of said members being provided with triangular flaps connected with opposite sides of a triangular flap on the corresponding end of said common wall to fold inwardly the connecting flaps on the outer side walls terminating below the tops of said outer side walls and the inner corners of the side walls of the outer member being formed into locking tongues, there being slits in the inner portions of the side walls of said inner member to receive said tongues, and the inner edges of the side walls of said inner member being arranged to engage within and rub against the folds between the inner edges of the side walls of the outer member and the corresponding connecting flaps to draw and hold said parts in place.

2. A box comprising an outer and inner box member swingingly connected to each other by a common wall to fold to cause said outer member to fit over said inner member, the side walls of said members being provided with triangular flaps connected with opposite sides of a triangular flap on the corresponding end of said common wall to fold inwardly the connecting flaps on the outer side walls terminating below the tops of said outer side walls and the inner corners of the side walls of the outer member being formed into locking tongues, there being inclined slits in the inner portions of the side walls of said inner member to receive said tongues loosely, and the inner edges of the side walls of said inner member being arranged to engage within and rub against the folds between the inner edges of the side walls of the outer member and the corresponding connecting flaps to draw and hold said parts in place.

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