

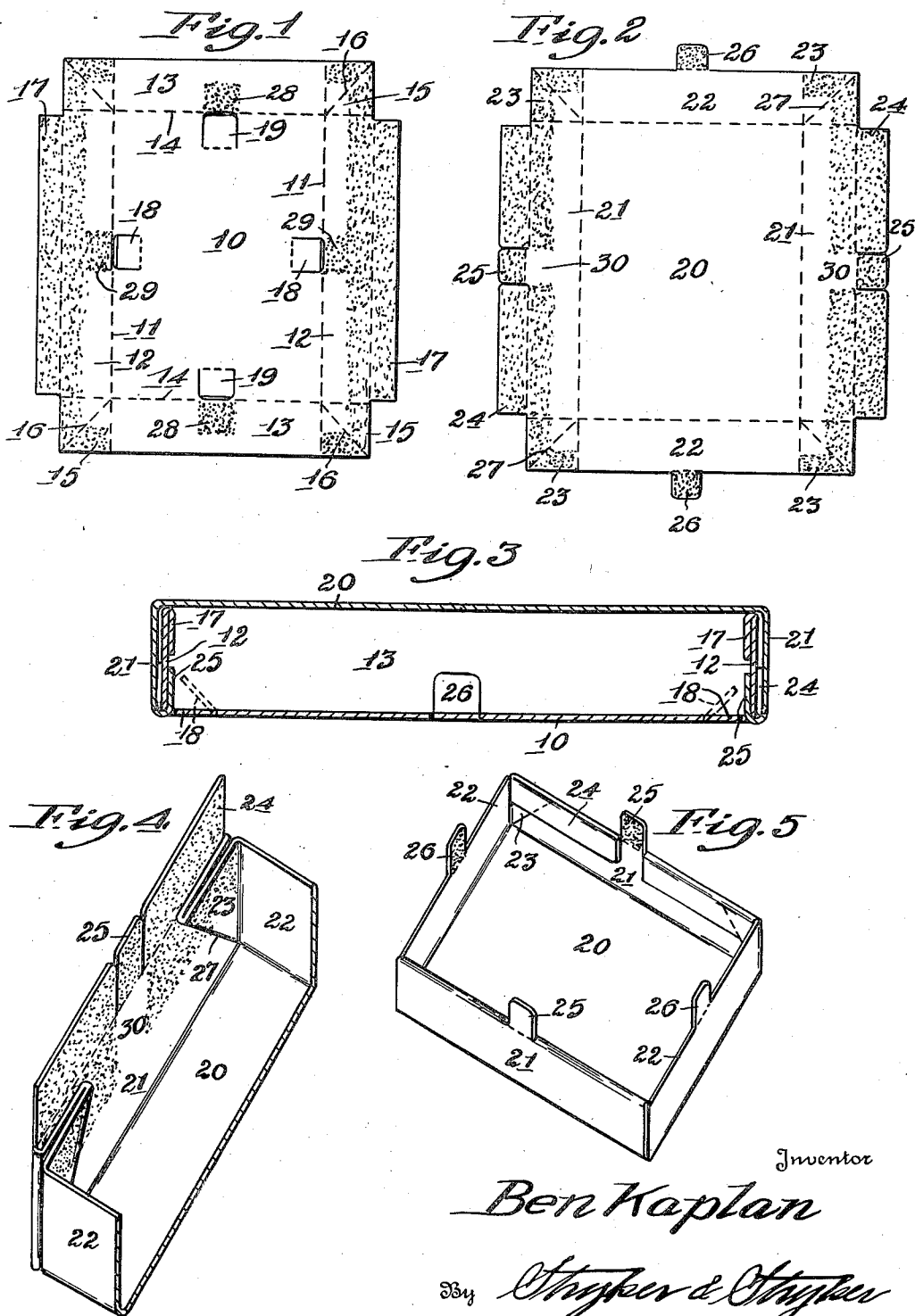
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FOLDING BOX CLOSURE AND FASTENER THEREFOR

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FOLDING BOX CLOSURE AND FASTENER
THEREFOR

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4 Claims. (Cl. 229—45)

It is an object of this invention to provide novel means for securely fastening the cover of a folding container in closed position.

A further object is to provide in a paperboard, fibreboard, cardboard or like box a novel arrangement of fastening members each coated with a dry, cohesive but non-adhesive substance whereby the box may be securely fastened in closed position merely by placing the coated surfaces one on the other and pressing them together.

The invention will be best understood by reference to the accompanying drawing in which

Figures 1 and 2 illustrate the blanks of sheet material for the body and cover respectively of a box of the telescoping type having my improved fastening means;

Fig. 3 is a cross-section through the closed and fastened box;

Fig. 4 is a fragmentary, isometric view illustrating the folding of the box cover; and

Fig. 5 is an isometric view of the cover or outer section of the box.

As shown in Fig. 1, the bottom or inner section of the box has a main bottom panel 10 to which is foldably joined, along crease lines 11, a pair of side walls 12. End walls 13 are joined to the panel 10 along crease lines 14. The crease lines 11 and 14 extend entirely across the blank and define corner portions 15 which are creased diagonally along lines 16. Integral with the side walls 12 are fastening flaps 17 adapted to fold inward upon the inner surfaces of the walls 12 and corner portions 15 when the blank is folded to box form. Extending along each of the crease lines 11 and 14 is a narrow opening or slot and adjoining these openings the panel 10 is cut to form integral tongues 18 near the walls 12 and similar tongues 19 near the walls 13.

The cover or outer section of the box of preferred construction is creased as indicated in Fig. 2 to form a main panel 20, side walls 21, end walls 22, corner portions 23 and fastening folds 24 integral with the walls 21. These fastening folds are cut transversely to form flaps 25. Similar flaps 26 project from the walls 22. Diagonal creases 27 facilitate the folding of the corner portions 23 to the triangular shape best shown in Fig. 4 when the blank is folded to box form.

The surfaces of the blank indicated by stippling are coated with a gum or like substance of cohesive but non-adhesive character. A suitable gum for this purpose has as its principal ingredient a crude concentrated rubber latex. A

preservative, for example ammonia, is commonly employed in a latex dispersion which I prefer to dilute so that, when applied, it contains about 80% of water and preservative and about 20% by weight of rubber. A small quantity of rosin or other ingredient for hastening the drying and coagulation of the latex is also added. Such a dispersion is preferably sprayed onto the designated portions of the blanks which are then passed through a drying chamber in which the moisture and ammonia are rapidly evaporated and the latex coagulated leaving the coating in a dry, non-sticky condition.

As illustrated in Figs. 1 and 2, a coating of the type described is applied to the inner surfaces of the folds 17 and 24 and flaps 25 and 26 as well as on the normally upper half of the walls 12 and 21 and corner portions 15 and 23. A small spot or area 28 of the gum is also placed on each of the walls 13 near the tongues 19 and similar coated areas 29 are provided on the walls 12 near the tongues 18. Small areas 30 adjacent to the flaps 25 (Figs. 2 and 4) of the walls 21 are preferably left dry or uncoated so that the flaps 25 will not inadvertently be secured to the walls 21 in folding the blanks as hereinafter described.

The box illustrated in Figs. 3 and 5 may be quickly and easily formed by folding the blanks illustrated in Figs. 1 and 2 along the crease or score lines and the several walls are secured in proper rectangular position relative to the main top and bottom panels by folding the corner portions 15 and 23, as indicated in Fig. 4, and then turning down the folds 17 and 24 and pressing them upon the inner surfaces of the triangular corner portions and walls 12 and 21. No moistening is required and the mere pressing of the gummed surfaces together forms a secure bond. The cover or outer section of the box has the flaps 25 and 26 projecting as illustrated in Fig. 5. When the box is to be closed the top or outer section is placed in telescoping relation to the bottom section with the walls of the former upon the exterior of the walls of the latter. Finally the box is secured in the closed position illustrated in Fig. 3 by merely folding the flaps 25 and 26 inward and upward into the inner section while pressing the tongues 18 and 19 out of the way. These tongues allow the gummed flaps 25 and 26 on the cover section to fold upward to overlap the gummed areas 28 and 29 and upon pressing the gummed surfaces together the tongues 25 and 26 firmly adhere to the inner surfaces of the walls 12 and 13 to thereby secure

the box in closed position. The tongues 18 and 19 spring back into their normal position in the plane of the bottom 10 and a sufficient opening is provided at the free outer ends of these
5 tongues to allow the tongues 25 and 26 to pass.

It is to be understood that my characterization of the coating or gum as cohesive but non-adhesive refers to the condition of the composition after it has been caused to penetrate and
10 adhere to the surfaces of the blanks and has been dried. In this condition two coated members may be firmly bonded together by merely pressing the coated surfaces one on the other, but the coating is non-adherent in that the blanks
15 can be handled or packed in stacks front to back, one upon the other, without adherence to each other or to other objects with which the blanks normally come in contact.

My improved containers may be used as mailing boxes and wherever great strength and secure sealing of the box in closed position is desirable or necessary. It has further advantages for department store use as a merchandise, dress or suit box and has many other
20 uses which will be obvious. For most uses, one pair of the flaps 25 or 26 are sufficient to retain the box in closed position with ample strength and either pair of these flaps may be omitted. Obviously, no cord or other binding member is
25 required and much time and labor is saved by my device. The cost of the box is also reduced as compared with other boxes of equal strength known to me.

The blanks preferably have the coating on one
35 surface only of each, as shown in Figs. 1 and 2, so that they may be stacked for shipping and storage front to back without danger of their adhering to each other.

The improvements described and claimed
40 herein are not dependent on securing the side and end walls of the box together by the gum described herein.

Having described my invention, what I claim as new and desire to protect by Letters Patent
45 is:

1. In a box constructed from foldable sheet material and having telescoping sections, a flap

formed on one of said sections to be folded in overlapping relation to the other section, an opening being formed in the last-mentioned section to receive said flap and a cohesive but non-adhesive coating on the overlapping surfaces
5 of said flap and section whereby said sections may be secured in closed position by inserting said flap into said opening and pressing the coated surfaces one upon the other.

2. In a box having telescoping outer and inner
10 sections, a flap formed on said outer section to be folded into engagement with an interior surface of said inner section, an opening being formed in the inner section to receive said flap, and a dry, cohesive but non-adhesive coating on the
15 overlapping surfaces of said flap and inner section whereby said sections may be secured in closed position by pressing said flap on said coated interior surface of the inner section of
20 the box.

3. The combination in a box having telescoping outer and inner sections, each having walls, of flaps formed on opposite walls of said outer section to be folded into engagement with inner
25 surfaces of the inner section, openings being formed in the inner section to receive said flaps and coatings of a cohesive but non-adhesive substance on the surfaces of said flaps and inner surfaces of said inner section overlapped thereby
30 to retain said sections in telescoping, closed position.

4. In a box having telescoping outer and inner sections, each having a main panel and four walls, flaps formed on opposite walls of said
35 outer section to be folded into engagement with the inner surfaces of the overlapping walls of the inner section, openings being formed in the main panel of said inner section to permit folding of said flaps upon said inner surfaces, closures integral with said main panel and adapted
40 to resiliently close said openings, and coatings of cohesive but non-adhesive substance on the surfaces of said flaps and inner surfaces of said inner section overlapped thereby to retain said
45 sections in telescoping, closed position.

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