Aug. 20, 1929. M. R. KONDOLF 1,725,527

PILFERPROOF BOX

Filed Feb. 3, 1925 2 Sheets-Sheet 1

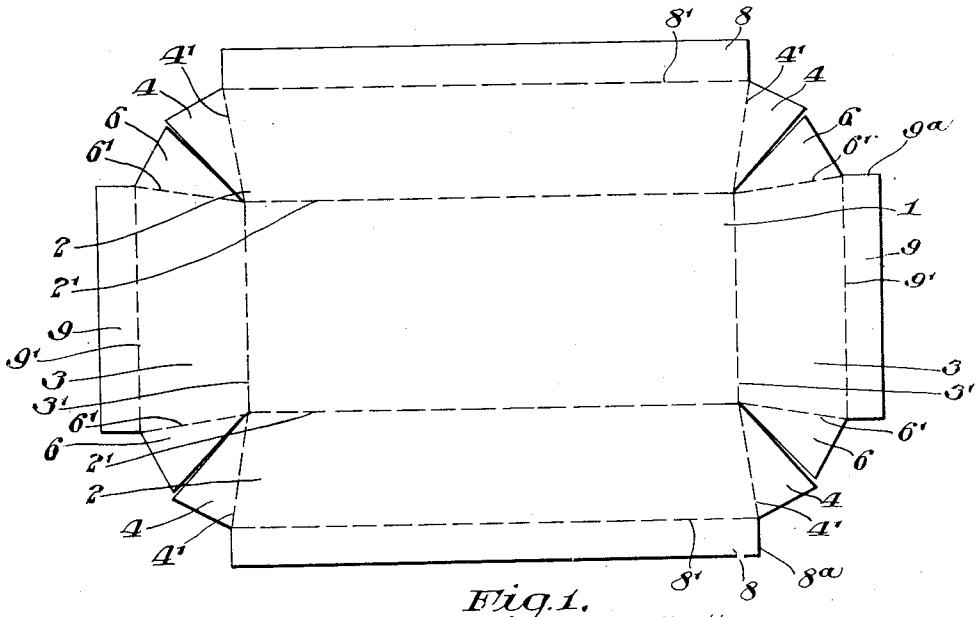


Fig. 1.

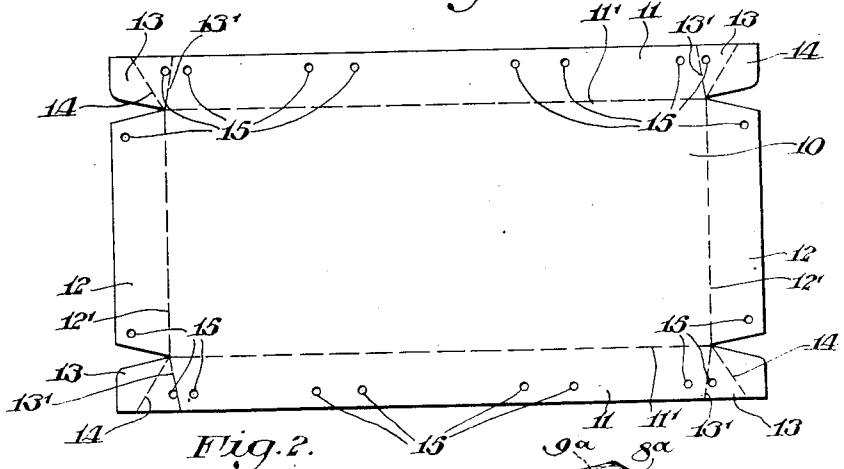


Fig. 2.

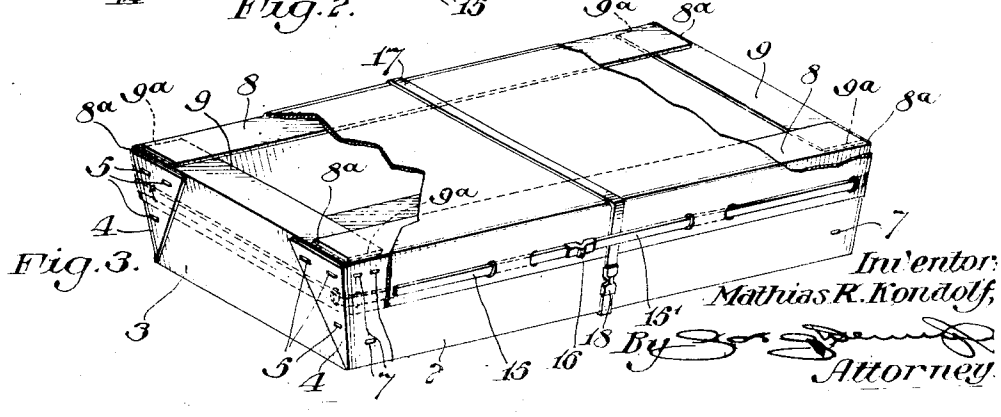


Fig. 3.

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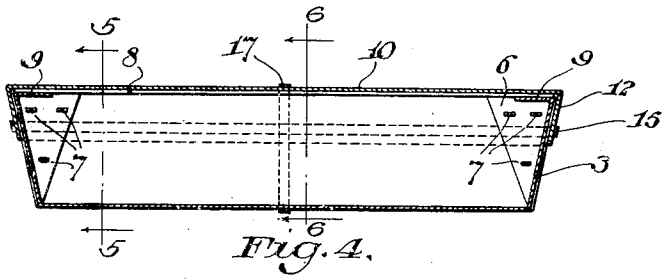



Fig. 4.

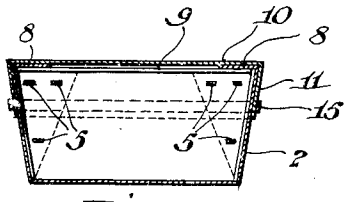



Fig. 5.

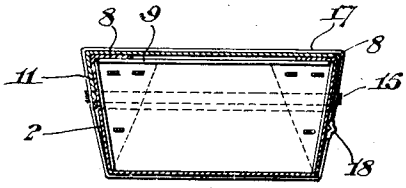



Fig. 6.

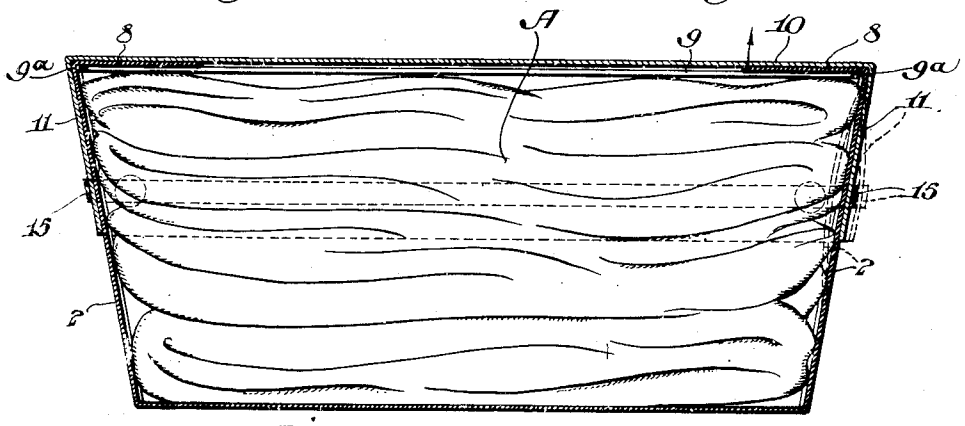



Fig. 7.

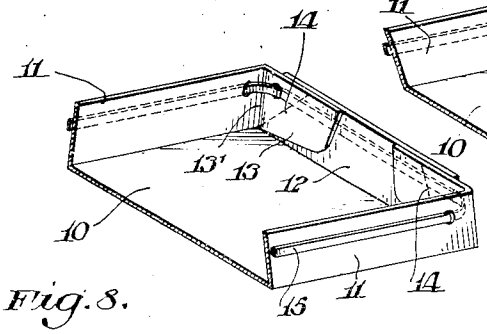



Fig. 8.

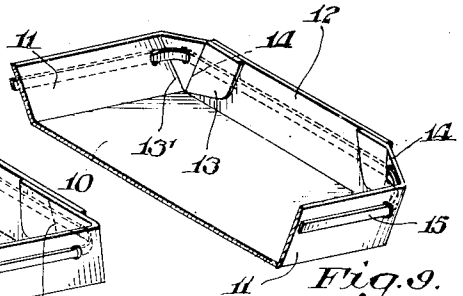



Fig. 9.

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Patented Aug. 20, 1929. 1,725,527

# UNITED STATES PATENT OFFICE.

MATHIAS R. KONDOLF, OF CYNWYD, PENNSYLVANIA.

## PILFERPROOF BOX.

Application filed February 3, 1925. Serial No. 6,606.

My invention is designed to provide means for preventing the clandestine removal of merchandise from shipping containers of simple and inexpensive character. Pilferage effected through the joints of paper board containers heretofore commonly used and particularly through the joint between the body and closure leaves no externally visible trace of its perpetration, so that it is impossible to fasten responsibility upon any one where several custodians have had possession of the package, and the untraceable and unpunished losses suffered by shippers and transportation agencies have been very heavy. In my improved container, the lapped surfaces between the box or body wall and the lid or closure rim are held together throughout their contacting lengths by a constricting band or strap and the joint between the cover and box further sealed by a flange extending angularly to the box wall. Preferably the container body or box tapers outwardly from its bottom toward its mouth, and the joint-guarding means comprises overlapping flanges hinged to the edge of the mouth and forming reenforcing struts to aid in sustaining the crushing effect of the constricting band, which has a threaded connection with the cover rim and extends circumferentially around the peripheral wall of the container between the upper and lower edges thereof. By this construction, an angular joint is provided around which it is impossible to reach without marring the package, and pressure on the box wall to permit ingress between it and the lid rim rocks the sealing flange and causes it to press firmly against the lid and effectually prevents access to the contents of the container.

The characteristic features and advantages of my improvements will more fully appear from the following description and the accompanying drawings illustrating a preferred embodiment of my invention.

In the drawings, Fig. 1 is a plan view of the scored and cut blank from which the box is formed; Fig. 2 is a plan view of the scored, cut and apertured blank from which the lid or closure is formed; Fig. 3 is a perspective view of the assembled container with its members secured together, parts being broken away for better illustration; Fig. 4 is a longitudinal sectional view of the assembled container; Fig. 5 is a transverse sectional view on the line 5—5 of Fig. 4; Fig. 6 is a transverse sectional view on the line 6—6 of Fig. 4; Fig. 7 is an enlarged transverse sectional view diagrammatically illustrating the effect of an attempt to pilfer; Fig. 8 is a fragmentary view of the end of a lid with its rim members converging toward their edges, as when fastened on a box; and Fig. 9 is a fragmentary view of the end of a box with its rim members flaring or diverging toward their edges, as when nested for shipment.

As illustrated in the drawings, the box or receptacle portion of my container is formed from a blank of fibre or pulp board comprising a base or median portion 1 having side and end walls 2 and 3 hinged thereto along score lines 2′ and 3′ and diverging upwardly from the base. The side walls 2 have triangular wings or flaps 4 hinged thereto along diagonal score lines 4′, overlapping the exteriors of the end walls 3 and fastened thereto by wire stitches 5; and the end walls 3 have triangular wings or flaps 6 hinged thereto along diverging diagonal score lines 6′, overlapping the interiors of the side walls 2 and fastened thereto by wire stitches 7.

Flanges 8 and 9 are hinged to the free edges of the respective side and end walls along the score lines 8′ and 9′. The flanges 8 and 9 extend substantially parallel with the base or bottom 1 and overlap one another at their ends.

The erected box is closed by a lid formed from a fibre or pulp board blank comprising a median portion 10 having rim sections or flanges 11 and 12 hinged thereto along score lines 11′, 12′. Each rim section 12 has its free end edges converging toward one another. The rim sections 11 each have wings or flaps 13 hinged thereto along converging score lines 13′. Score lines 14 are formed in the flaps 13 and extend outwardly from the intersection of the score lines 11′ and 12′ on an angle conforming with the end edges of the rim sections 12 of a superimposed lid when such lids are nested for shipment.

Apertures 15 are punched in the rim sections and their end flaps, preferably near the edges thereof, the apertures in the flaps 13 substantially registering with the adjacent apertures in the rim sections 12 when the parts are bent to proper position.

A band or strap 16 is threaded through the apertures 15 for drawing the rim sections inward against the box walls.

When merchandise A has been packed in the erected box and the guard members 8 and 9 have been bent over substantially at right angles with the box walls, the cover is placed on the box and the constricting member 15 is drawn tight and its ends secured, as by a fastener or seal 16. The engagement of the end edges $8^a$ of the struts 8 against the flanges 12 and the engagement of the end edges $9^a$ of the struts 9 against the inner surfaces of the walls 2 beneath struts 8, together with the reenforcement afforded by the tabs 6, 8 and 13, provides a corner construction of great strength and rigidity for resisting the crushing effect of the high degree of tension imposed upon the tie 15, and further prevents the caving in of the corners by knocks incident to transportation or by pressure applied thereto by a pilferer in attempting to slip the lid and tie member off the box.

The guard members 8 and 9 normally lie substantially parallel with the median section 10 of the lid and may be lightly pressed against the inner surface of the lid by the inherent resiliency of the boxboard. When, however, an instrument or the fingers of a pilferer are inserted between the lid rim and the box wall, the inward deflection of the latter exerts a thrust or rocking action upon the flange hinged thereto and presses it firmly against the lid, thereby interposing an effective bar to ingress.

Where the contents of a box are heavy, it is sometimes desirable to additionally strap it with a band 17 having its ends fixed together by a seal 18. This band passes around the box transversely to the band 15 and passes through loops 15′ formed by the latter; the removal of the band 17 by slipping it off the end of the box being thereby prevented.

Both the boxes and lids comprised in my improved container may be compactly nested when empty for shipment or storage. For nesting boxes together, their members 8 and 9 are turned to or allowed to remain in the planes of the box walls; the taper of such walls permitting the stacking of the boxes one within the other.

For nesting lids together, the rim members thereof are spread, as illustrated in Fig. 9, without unthreading the bands 15, and the tabs 13 bent along the scores 14 substantially coincident with the end edges of the flange 12 of a superimposed lid.

Having described my invention, I claim:

1. The combination of a box of flexible sheet material and a cover, the joint between said members being closed by flanges along the edges of both members, and non-expansible means encircling the cover flanges adjacent to the edges thereof for drawing the flange of one member against the other member, said box flange being deflected against said cover by the bulging of said flexible material resulting from the insertion of an object between said material and means.

2. A container comprising a bottom having a tapering wall of flexible sheet material connected therewith, a member substantially parallel with said bottom projecting inwardly from the top of said wall, a lid overlapping said members and having a rim overlapping said wall, and non-expansible means extending longitudinally of said rim and engaging the rim and wall together, said member being pressed against said lid by the bending of said wall resulting from the insertion of an object between it and a section of said rim adjacent said means.

3. A container of flexible sheet material having a greater cross sectional area at its top than at its bottom and a flange along its top edge, and a cover overlapping said flange and having connected therewith non-expansible means for pressing it against said container below the top thereof, said flange being pressed against said cover by the bending of the top of said container resulting from the insertion of an object between it and the overlapping of said cover pressed by said means.

4. A container of flexible sheet material having means extending inwardly from the top thereof, a cover overlapping said means and having means extending downwardly from the top of said container, and a member comprising a non-expansible metallic band having ends sealed together disposed between the top and bottom of said container and engaging said container and cover together, said means first named being deflected against said cover by the bending of said sheet material resulting from the insertion of an object between it and said member.

5. A container of flexible sheet material having flanges hinged along its mouth, a cover closing the mouth of said container and having flanges extending from the mouth toward the base of the container, and non-expansible fastening means disposed between the mouth and base of said container and engaging said container and cover together, said flanges being rocked against said cover by the insertion of an object between said flexible material and fastening means.

6. The combination of a box and a cover provided with a rim overlapping the sides of said box, means normally parallel with said cover and rocked against said cover by lateral pressure on a side of said box, and non-expansible means around said box causing the bending of said side and the rocking of said means upon the insertion of an object between said non-expansible means and said side.

7. The combination with a container hav-

ing a mouth and a closure covering said mouth and having a rim overlapping said container, of bracing means comprising overlapping members extending along the edge of the container mouth, one of said members having a free edge engaging said rim and free to move independently of the other members and another of said members having a free edge engaging the container wall, and non-expansible means for securing said container and closure together, said freely movable member being deflected against said cover by the bending of said container resulting from the insertion of an object between said container and means last named.

8. A container closure comprising a body section having flaps hinged thereto, a flap aforesaid having extensions hinged to the ends thereof and overlapping adjacent flaps, each of said flap extensions having therein a diagonal score and means comprising a non-expansible band for drawing and holding said flaps in inclined position.

9. The combination of a tapered container having a mouth with angularly disposed edges, inwardly projecting flaps hinged along edges aforesaid and having overlapping ends, a closure having a body section lying substantially parallel with said flaps and having hinged thereto rim members adapted to conform with the taper of said container, and a strap having a threaded connection with said rim members.

10. The combination with a container having inturned flaps along the edges thereof lying substantially parallel with the bottom of said container, a closure having a body section substantially parallel with and overlapping said flaps, said closure having rim members lapping the sides of said container, a non-expansible strap having a threaded connection with rim members and forming a loop intermediate the ends of said container, and a strap passing through said loop and around said container and closure.

In testimony whereof I have hereunto set my name this 2nd day of February, 1925.

MATHIAS R. KONDOLF.