H. G. HEPNER.

BOX LID FASTENING.

APPLICATION FILED MAY 5, 1913.

1,098,382.

Patented June 2, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

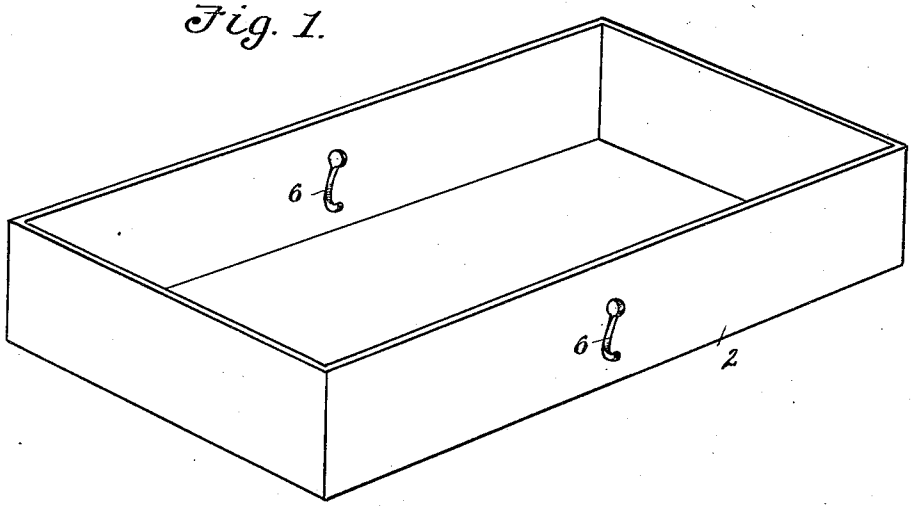
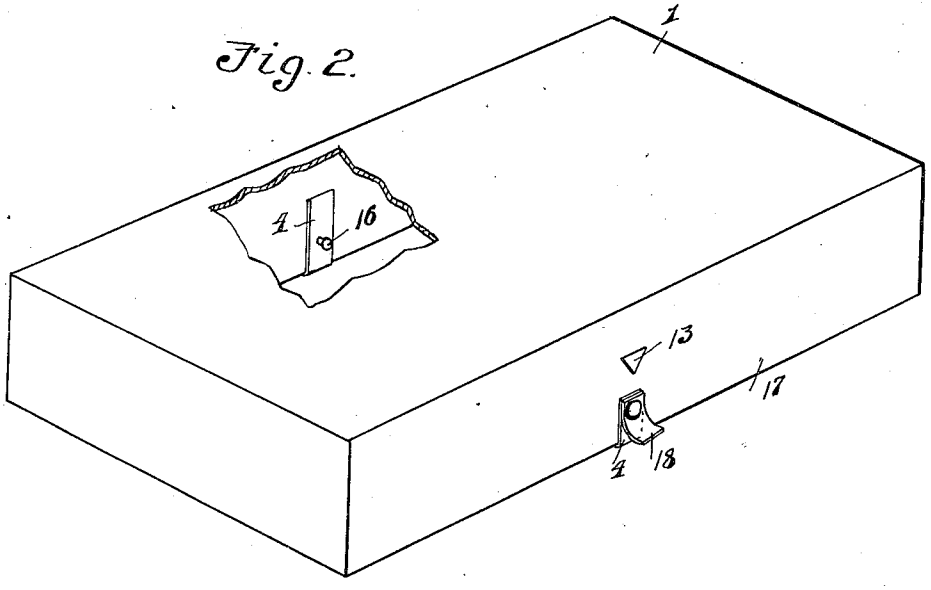


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

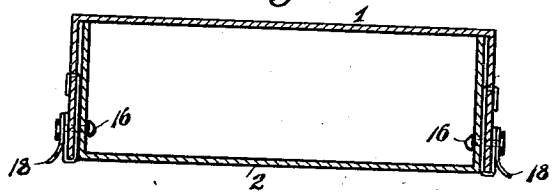


Fig. 5.

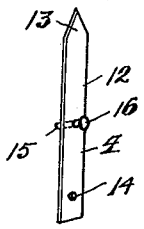


Fig. 4.

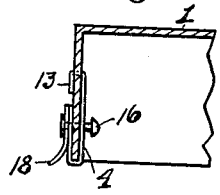


Fig. 6.

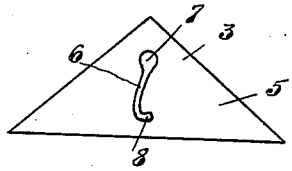
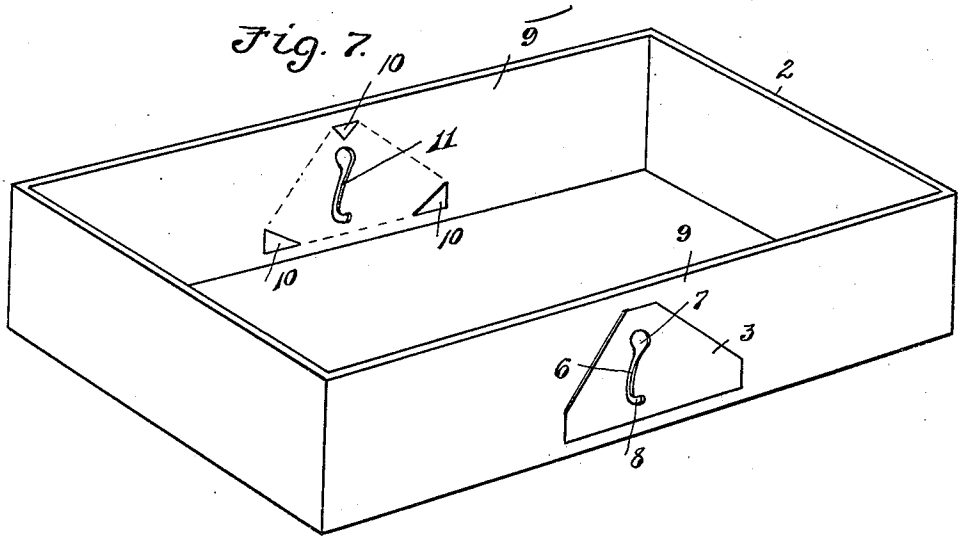


Fig. 7.



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UNITED STATES PATENT OFFICE.

HARRY G. HEPNER, OF SOUTH BEND, INDIANA, ASSIGNOR OF ONE-HALF TO G. FRED BENZ, OF SOUTH BEND, INDIANA.

BOX-LID FASTENING.

1,098,382. Specification of Letters Patent. Patented June 2, 1914.

Application filed May 5, 1913. Serial No. 765,501.

To all whom it may concern:

Be it known that I, HARRY G. HEPNER, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Box-Lid Fastenings, of which the following is a specification.

The invention relates to an improvement in box fasteners, of that type designed particularly for boxes of comparatively light material, in which the top has a telescopic fitting relation with the box proper.

The main object of the present invention is the provision of a box fastener in which the coöperating numbers, secured respectively to the top and to the box proper, are constructed to induce a slight distortion of the top and box during their locking cooperation, the return of the slightly distorted parts to normal position serving to induce a relatively lateral movement of the members to cause such interlocking thereof as to prevent their casual separation.

The invention in its preferred form of details will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a perspective view of the box proper, the fastening member coöperating therewith being omitted. Fig. 2 is a similar view of the cover, partly broken out, the fastening members coöperating therewith being shown in place. Fig. 3 is a transverse section through the box, the parts being in fastened relation. Fig. 4 is a broken transverse section through the cover illustrating the fastening means in applied position. Fig. 5 is a perspective view of the cover fastening member. Fig. 6 is a perspective view of the box fastening member. Fig. 7 is a perspective view of the box, with the fastening members in applied position.

Referring particularly to the accompanying drawings, the improved fastener is designed particularly for use in connection with boxes of that type in which the cover 1 is practically a somewhat larger duplicate of the box 2 and adapted to telescopically fit the latter when in coöperative relation thereto.

The improved fastening is made up of distinct coöperating members 3 and 4, the former being used in duplicate on the sides of the box, and the latter in duplicate on the sides of the cover. The fastening member 3 for the box comprises a plate 5 preferably of triangular shape in which about centrally thereof is formed a slot 6 having an enlarged opening 7 at the upper end and communicating therewith. From the opening the slot extends at a slight inclination to the vertical and terminates in a lateral section 8, extending practically in parallelism with what may be termed the base line of the plate.

The box fastening members are secured to the outer surfaces of the side walls 9 of the box, preferably by bending the points of the triangular plate, forcing them through the box, and clamping them on the inner surfaces of the sides, as shown as 10, Fig. 7. An opening 11 is formed in the side walls of the box, similar in size and shape, and arranged in registry with the opening 6 in the plate. As thus applied the fastening members for the box proper are alined transverse the box and have their slots 6 extending on a general line at right angles to the bottom of the box.

The fastening members 4 for the cover, comprise comparatively elongated metallic strip 12, formed at the upper end to provide a point 13 and adjacent the lower end with an opening 14. At an appropriate point in the length of the strip the latter is provided with a pin 15 having a terminal head 16 at one end, in spaced relation to the adjacent surface of the strip, and of a size to pass through the opening 7 of the slot 6, but having a diameter exceeding the width of the slot proper.

The fastening members for the cover are secured in place by passing the pointed end 13 of the strips, after suitable bending thereof, through the side walls 17 of the cover 1 and clamping said projected ends against the outer surface of the side. This disposes the headed terminals of the pins 15 on the inner surfaces of the side, and that portion of the strip below the lower or free edge of the cover is bent around the said edge and upwardly against the outer surface of the side, the hole 14 passing over the outer terminal of the pin 15, after which the pin is riveted or headed, thus securing the cover fastening members in place. If desired, and

as preferred a pulling tab 18 of flexible material is secured on the pin prior to the heading operation.

In the application of the cover to the box proper the headed terminals 16 of the pins 15 will enter the openings 7 in the box fastening members 3, said pins, in the further downward movement of the cover riding in the slot 6. As the slots are inclined slightly from the vertical this movement causes a slight distortion of the cover, or cover and box, which, when the pins 15 reach the lateral sections 8 of the slot, will tend to force said pins laterally to the ends of the sections. The cover is thus locked in place against casual separation from the box, though it may be readily removed in an obvious manner by a pull upon the tabs 18.

The improved fastening while designed particularly for boxes of comparatively light material, as in suit cases, clothing boxes, and the like, is nevertheless applicable to other types of receptacles, and it is to be understood that I contemplate such use, varying the proportions of the parts and the material used as may be found necessary in the particular instance.

What is claimed is:—

In combination with a box consisting of a box part and a telescoping cover part, a fastener therefor including a fastening member for the box proper formed with a slot slightly inclined from the vertical and terminating in a lateral section, the wall of the box being formed with a slot to register with the member slot and a fastening member for the cover having a headed pin to engage said slots, the movement of the pin in the inclined portion of the slots distorting the box parts for forcing the pin in the lateral section of the slots in the relief of such distortion.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY G. HEPNER.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."