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G. DELAFOSSE
BINDING MEANS FOR CONTAINERS

2,654,926

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FIG. 2.

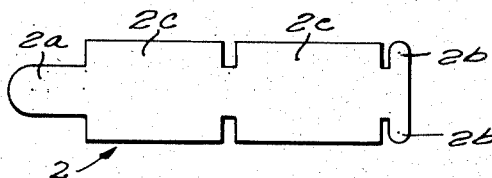
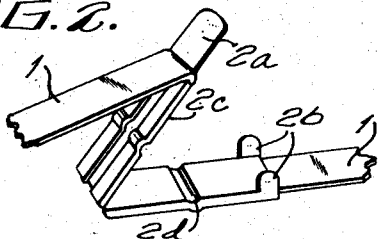


FIG. 1.

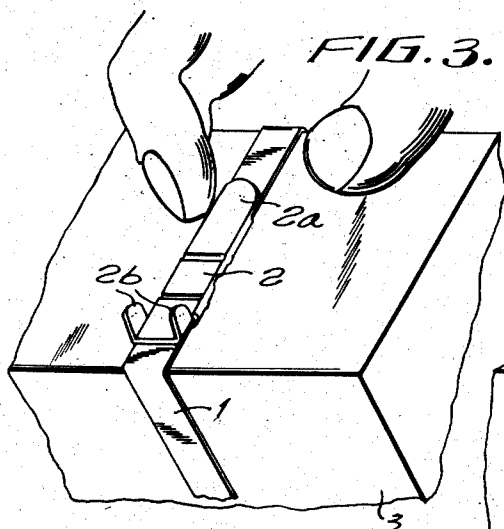


FIG. 3.

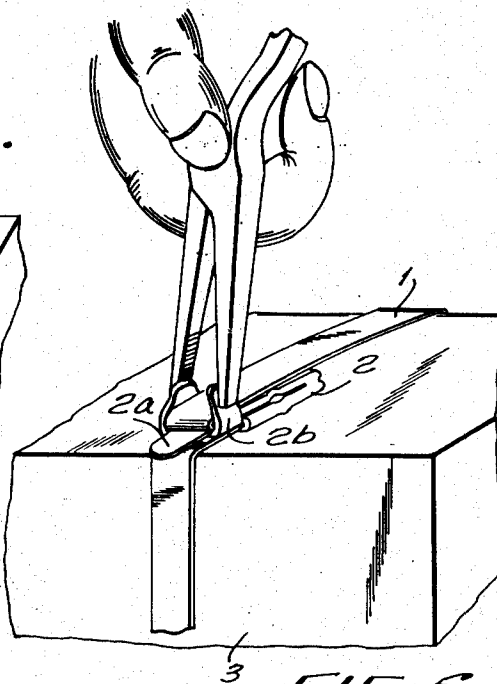


FIG. 5.

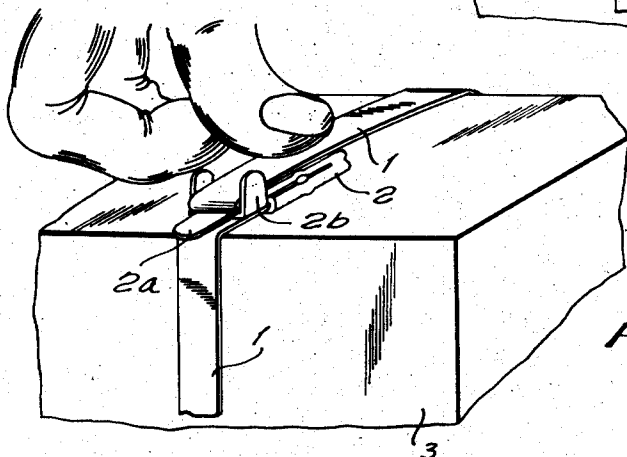


FIG. 4.

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BINDING MEANS FOR CONTAINERS

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4 Claims. (Cl. 24-16)

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This invention relates to the binding of containers, such as boxes, parcels, bags, bales, and the like.

An object of the invention is to provide improved binding means for such containers which are very simple and economical to make and use, and which will not tear or otherwise damage a fragile container such as a paper bag or the like.

A further object is to provide such binding means in the form of an endless band which may be formed from a strip of multi-ply paper.

A further object is to provide an improved toggle-like clamp adapted for use in connection with such an endless band.

With the above and further objects in view, my invention consists of the various combinations of means and operative steps to be hereinafter described by way of illustration rather than limitation and with reference to the accompanying drawings in which:

Fig. 1 shows a toggle-like clamp before it is folded onto an endless flexible band of the type used in the invention.

Fig. 2 is a perspective fragmentary view of the clamp joined to such a band.

Figs. 3, 4 and 5 are views of the band and clamp assembled on a box.

As shown in the drawings, a paper strip or the like folded lengthwise as many times as may be required to secure adequate strength is formed into an endless band or belt 1 of predetermined length. This band 1 is then used to bind and handle a box, parcel, bundle, bag, bale or the like in the following manner:

Where the invention is to be used merely for binding a parcel, the band 1 is formed with a perimeter at least equal to that of the parcel and the parcel is then inserted into the band. Where the parcel is box-shaped, desirably two bands such as 1 are used, which may be disposed in parallel planes or at right angles to each other.

As shown in Figs. 3-5, a band 1 provided with a clamp 2 of the type shown in Fig. 2 which will presently be described in fuller detail may be used to efficiently bind and seal a box 3. It is to be noted that the clamp 2 may, as will be explained, actually form part of the band 1, in which it may serve to join the opposite ends of a strip of the kind described above so as to form a closed or endless band therefrom. According to Figs. 3, 4 and 5, the band with its clamp 2 in extended condition, is passed around the box 3 (Fig. 3). Then the clamp is folded togglewise about its midpoint (Fig. 4)

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and finally retained in this closed condition. The box is then bound as efficiently and soundly and as attractively as with a steel strip binding means of conventional kind, without at the same time incurring the danger of cutting into or otherwise damaging the box, the length of the band having been so predetermined in relation to the perimeter of the box as to provide a final bond in which the tension is just sufficient without being excessive.

Now to describe in detail the previously-mentioned improved clamp 2 with reference to Fig. 2, this may be formed from a strip of metal, shown in Fig. 1, so cut and pressed to shape as to provide as shown side flanges 2c, a flat end-lug 2a and a pair of small side-lugs 2b at the end opposite from the end-lug 2a. The clamp may be placed upon a band already formed into an endless band, or alternatively it may be used to join the opposite ends of an open strip to form an endless band therefrom, as already mentioned. Lugs 2b are bent to the upstanding position shown in Fig. 2, and by means of a suitable tool, the flanges 2c are folded down over the band and at the same time the portion 2d is crimped so as to prevent any slippage upon folding the clamp in use. To tighten the bond, the clamp is folded togglewise at or near its mid-point so as to locate the end-lug 2a between the upstanding lugs 2b and then the latter are folded down to trap the lug 2a and thus retain the assembly in folded condition.

It will of course be understood that the invention is not to be considered as restricted to the particular details thereof illustrated and described herein, and that many modifications may be made therein without exceeding the scope of the invention as defined in the ensuing claims:

What I claim is:

1. Binding means, comprising, in combination, an elongated endless band of flexible material; and an elongated strip of sheet metal fixed along the length thereof to said band, having a pair of opposite lugs located on opposite sides and adjacent an end thereof, said lugs extending from one side of said band, and said strip having an opposite free end portion adapted to be located between said lugs when said strip is bent along a substantially central transverse line to shorten the length of said band, said lugs being foldable over said opposite free end portion of said strip to hold said free end portion between said lugs.

2. Binding means, comprising, in combination, an elongated, endless, paper band; and an elongated strip of sheet metal fixed along the length

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thereof to said band, having a pair of opposite lugs located on opposite sides and adjacent an end thereof, said lugs extending from one side of said band, and said strip having an opposite free end portion adapted to be located between said lugs when said strip is bent along a substantially central transverse line to shorten the length of said band, said lugs being foldable over said opposite free end portion of said strip to hold said free end portion between said lugs.

3. Binding means, comprising, in combination, an elongated, endless, multiple-ply, paper band; and an elongated strip of sheet metal fixed along the length thereof to said band, having a pair of opposite lugs located on opposite sides and adjacent an end thereof, said lugs extending from one side of said band, and said strip having an opposite free end portion adapted to be located between said lugs when said strip is bent along a substantially central transverse line to shorten the length of said band, said lugs being foldable over said opposite free end portion of said strip to hold said free end portion between said lugs.

4. Binding means, comprising, in combination, an endless band of flexible material; an elongated strip of sheet metal located with one side thereof against and extending along one side of said band, said strip of metal having opposite side edge portions bent around side edges of said band and engaging the latter on the side opposite said one side thereof to fasten said strip to said band, and said strip having at one end thereof a pair of upstanding opposite lugs lo-

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cated on opposite sides of said strip and being directed away from said opposite side of said band, said strip having a free end portion distant from said one end thereof, extending beyond said opposite side edge portions of said strip, and adapted to be located between said lugs when said strip is folded along a substantially central line extending transversely to the length thereof, so that said opposite lugs may be folded over said free end portion of said strip to hold said free end portion between said lugs.

GEORGES DELAFOSSE.

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