

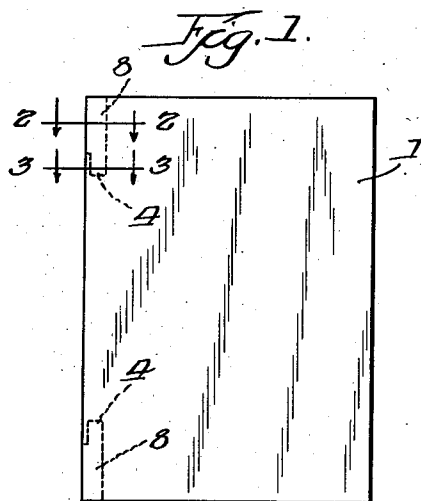
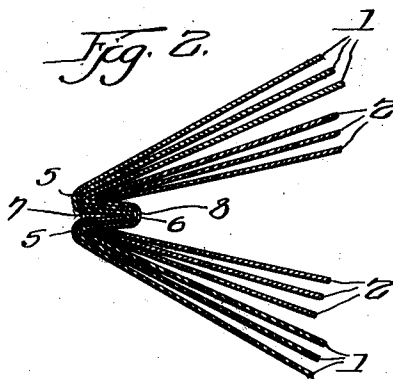
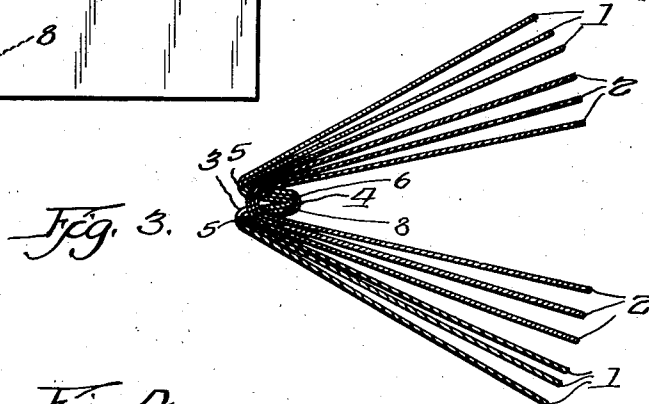
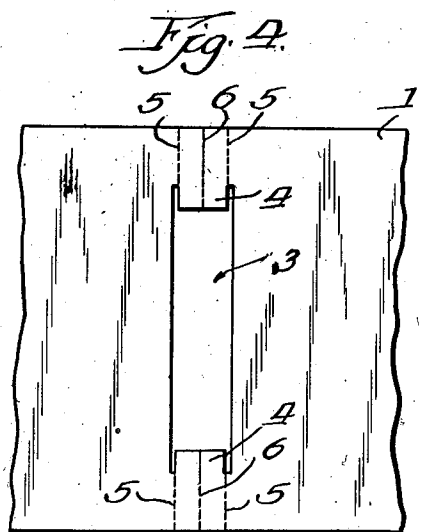
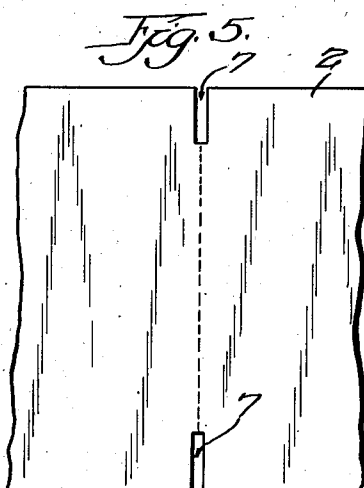
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2,355,037

BINDING DEVICE

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UNITED STATES PATENT OFFICE

2,355,037

BINDING DEVICE

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4 Claims. (Cl. 129—18)

This invention relates to improvements in binding devices for books, magazines, pamphlets, etc., and aims to provide a binding for such articles in which their leaves, pages or sheets are wholly self-binding or self-securing without the sacrifice of appearances, efficiency and durability; hence, insuring a minimum of elements or parts of the bound and finished work.

It is also an object of the invention to provide improvements in book and like article bindings by means of which the leaves, pages or sheets thereof can be positively secured or bound in assembled relation and, at will, so adjusted or actuated as to permit convenient removal of one or more thereof, then re-engaged with the remaining leaves, pages or sheets of the assembly to positively secure them in their original relationship.

Furthermore, it is an object of the invention to provide a binding device of the herein stated character which, by reason of its construction, will afford considerable economies through the elimination of and, hence, conservation of metals and certain other materials now being utilized in the production of binding devices and in the binding of books, catalogs, magazines, pamphlets and similar articles.

Other objects of the invention will be in part obvious and in part pointed out hereinafter.

In order that the invention and its mode of operation may be readily understood by those skilled in the art to which it appertains, I have in the accompanying drawing and the detailed description based thereupon, set out several embodiments of my invention.

In the drawing:

Figure 1 is a side elevation of a book, magazine, pamphlet or like article bound in accordance with my invention.

Figure 2 is an enlarged fragmentary transverse section taken on the line 2—2 of Figure 1, looking in the direction in which the arrows point.

Figure 3 is a similar section taken on the line 3—3 of Figure 1, looking in the direction in which the arrows point.

Figure 4 is a fragmentary elevation of one of a group of foldable or double sheets of the invention.

Figure 5 is a similar view of another or a second group of double of foldable sheets of the invention.

Referring to the drawing, in connection with which like characters of reference will designate corresponding parts throughout, the improved

self-bound book, magazine, pamphlet, or like article comprises a plurality of double leaves, pages, etc., certain of which are designated by the numeral 1, and others by the numeral 2. All of these double leaves consist of sheets of material each having intermediately arranged and longitudinally disposed fold lines adapted to be folded as indicated in Figures 2 and 3 in relatively collated or nested arrangement, as is also shown in said Figures 2 and 3. The foldable sheets 1 are each formed with a longitudinally disposed slot or way 3 along and longitudinally of their respective fold lines. Said slots or ways 3 each terminate in inwardly spaced relation to the adjacent transversal edges of their respective sheets, as illustrated in Figure 4, and each are formed with fingers or lips 4 projecting for distances into and longitudinally of their respective slots or ways 3. Longitudinally disposed fold lines 5 and 6 are formed or provided upon those portions of the foldable sheets 1 outwardly of their respective slots 3; it being noted that the fold lines 5 longitudinally coincide with the opposite sides of the fingers 4 and that the fold lines 6, parallel to the fold lines 5, are medially arranged with respect to said fingers 4 and extend to the adjacent marginal edges of said sheets 1.

The foldable sheets 2 are formed with longitudinally opposed ways 7 along their respective fold lines, which, as will be noted upon reference to Figure 5, open onto the opposite transversal marginal portions of the sheets 2 and extend inwardly with respect to such sheets for distances approximately corresponding to the distances occurring between the opposite ends of the slots or ways 3 of the sheets 1 to their particular transversal marginal portions.

To effect binding of the sheets 1 and 2 into book, magazine or similar article formation, these sheets are collated or assembled in relatively overlying or nested relationship, as shown in Figures 2 and 3. The longitudinally opposed and intermediate portions of the sheets 1 are folded inwardly along the fold lines 5 and, obviously, reversely folded along the fold lines 6 and hence, providing each of said sheets with inwardly extending cross-sectionally V-shaped portions now designated for convenience by the numeral 8. The inwardly disposed portions 8 of the sheets 1 are engaged through the adjacent ways 7 of the sheets 2, and it will be here noted that the respective widths of said ways 7 are such that with folding of said portions 8, as shown in Figures 2 and 3 of the accompanying

drawing, they will be rather snugly received through their adjacent ways 7. With the portions 8 thus engaged in or through the ways 7 of the sheets 2, it will be observed, upon reference to Figure 1 of the drawing, that the inwardly extending finger portions 4 thereof will overlappingly engage with adjacent portions of the sheets 2 along or in proximity to their respective fold lines. To facilitate such overlapping engagement of the fingers 4 of the portions 8 with respect to the sheets 2, the latter may be outwardly flexed sufficiently to allow said fingers 4 to be slipped or moved thereover into said overlapping arrangement or, if desired, the fingers 4 themselves may be bent or flexed so as to facilitate their passage through the aligned ways 7 of the sheets 2 and then extended over or overlappingly engaged with the adjacent and inner portions of the sheets 2.

The assembled sheets 1 and 2, interconnected, as above described, are now flatly folded into book, pamphlet or magazine arrangement or formation.

Should it be desired to remove certain of the sheets 1 or 2 from the self-bound article, as above, the fingers 4 of the inwardly disposed portions 8 may be disengaged from over the adjacent portions of the sheets 2 and in this way, said sheets 1 and 2 will be disconnected upon withdrawal of the portions 8 from the adjacent ways 7 of the sheets 2. Thereupon, the particularly desired sheets 1 or 2 may be removed from the assembly, whereupon the remaining sheets will be re-assembled and reconnected or bound, in the manner hereinbefore described. By the same token, it will be understood that additional sheets 1 or 2 may be added to a previously constituted bound book, pamphlet, magazine or like article. That is to say, such additional sheets will be in the form of either the sheets 1 or 2 of the original assembly and will be accordingly included and bound or interconnected in the article assembly.

I claim:

1. An article of the character described, comprising longitudinally folded sheets, certain of which have ways formed therein along their fold lines terminating in spaced relation to the transversal edges of said sheets, relatively opposed inwardly extending fingers on said sheets adjacent their fold lines extending into the opposite ends of said ways, said fingers and adjacent outer portions of their respective sheets being folded inwardly into substantially cross-sectionally V-shaped formations, and others of the sheets having relatively spaced and opposed ways therein opening onto their transversal edge portions and extending inwardly along their respective fold lines to points in proximity to the opposite ends

of the ways in said first mentioned sheets, the inwardly disposed V-shaped folded fingers and the portions adjacent thereto being received through the ways of the second sheets and having portions engaged over adjacent portions of the latter along their fold lines.

2. An article of the character described, comprising longitudinally folded sheets, relatively spaced inwardly disposed longitudinally folded portions on certain of said sheets substantially parallel with and in proximity to their fold lines, each of said portions having an inwardly disposed longitudinally folded finger thereon, and others of said sheets having relatively spaced ways formed therein opening onto their transversal edge portions and extending inwardly for predetermined distances along their respective fold lines, said inwardly disposed portions and fingers being received through the ways of the second mentioned sheets and the fingers thereon engaged over adjacent portions of the latter along their fold lines.

3. An article of the character described, comprising longitudinally folded sheets having relatively spaced ways formed therein opening onto their transversal edge portions and extending inwardly for predetermined distances along their respective fold lines, other longitudinally folded sheets adjacent said first sheets and arranged outwardly with respect thereto, and relatively opposed and spaced inwardly disposed portions on the inner marginal portions of each said second mentioned sheets, each of said portions having an inwardly extending finger thereon, and said inwardly disposed portions and their respective fingers being received through the ways of the first mentioned sheets and having the fingers thereon engaged over and along adjacent portions of the latter along their fold lines.

4. An article of the character described, comprising juxtaposed longitudinally folded sheets, certain of said sheets having relatively spaced ways formed therein opening onto their transversal edge portions and extending inwardly for predetermined distances along their respective fold lines, others of said sheets, outwardly of said first mentioned sheets, having relatively opposed and spaced inwardly folded substantially cross-sectionally V-shaped portions thereon substantially parallel with and in proximity to their respective fold lines, each of said V-shaped portions having a lateral inwardly extending finger on its inner extremity, and said V-shaped portions and fingers being received through the ways of the first mentioned sheets and having the fingers thereon engaged over and along adjacent portions of the latter along their respective fold lines.

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