

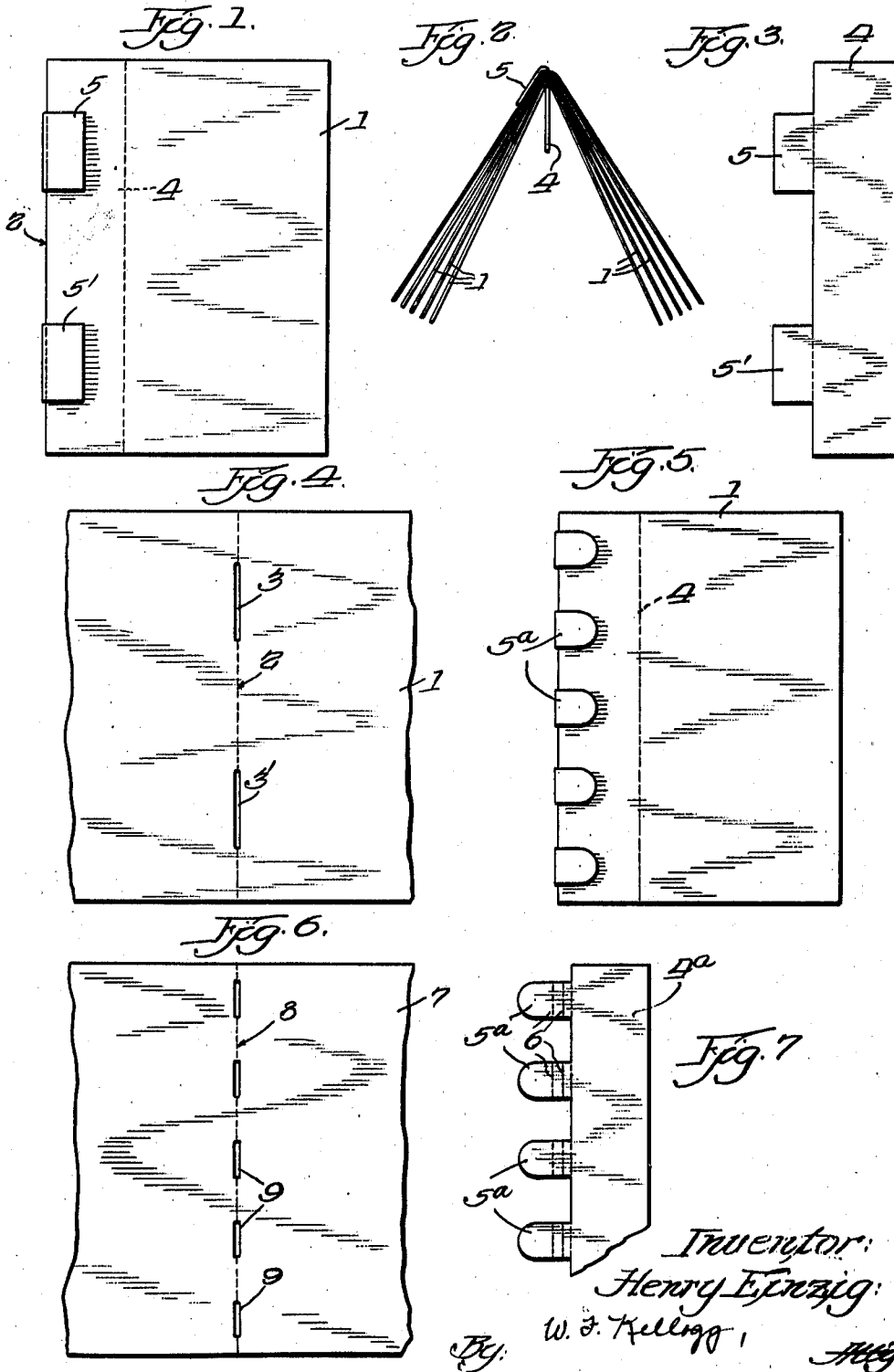
May 30, 1944.

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2,349,947

BINDING DEVICES

Filed Oct. 26, 1942



UNITED STATES PATENT OFFICE

2,349,947

BINDING DEVICE

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Application October 26, 1942, Serial No. 463,428

2 Claims. (Cl. 281—21)

This invention relates to improvements in binding devices for books, magazines, pamphlets and the like, having for an object to provide a device engageable with the leaves or sheets of such an article whereby the same will be permanently retained in assembled bound relation.

It is also an object of the invention to provide a binding device of such formation as to be readily engageable with the leaves or sheets of an article to be bound thereby without detrimentally affecting the utility, services or other physical characteristics of such leaves or sheets.

Moreover, it is an object of the invention to provide a device of the stated character, which, when operatively engaged with the leaves or sheets of a book, etc., will, in addition to serving as a binder therefor, afford additional body or stiffening to such articles, and a novel form of insert leaf.

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 two embodiments of my invention.

In the drawing:

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

Figure 2 is an end elevation of the same.

Figure 3 is a detail in side elevation of the improved binding device.

Figure 4 is a fragmentary elevation of a folded sheet constructed in a manner for usage in the practicing of my invention.

Figure 5 is a side elevation of a slightly modified form of the invention, wherein a greater number of foldable binding fingers are utilized.

Figure 6 is a fragmentary elevation of that particular type of longitudinally folded sheet adapted for use in connection with the form of invention illustrated in Figure 5; and

Figure 7 is a fragmentary elevation of a modified form of binding device for usage in connection with the form of invention disclosed in Figures 5 and 6.

Having more particular reference to the drawing, in connection with which like characters of reference will designate corresponding parts throughout, a sheet constituted article bound in accordance with my invention is herein illustrated and consists of a plurality of relatively

juxtaposed or assembled longitudinally folded sheets of paper or other suitable or similar material, generally designated by the reference character 1, said sheets, as illustrated in Figure 4, being preferably longitudinally folded along the dotted line indicated at 2. Each of the sheets 1 is formed with relatively spaced longitudinally disposed slits 3 and 3' extending along their respective longitudinal folds 2, and it will be noted, in this connection, that the slits 3 and 3' of each said sheets are adapted to be brought into registering relationship with juxtapositioning or assembling of said sheets in the manner shown in Figure 2.

With a view toward providing the juxtaposed or assembled sheets 1 with effectual means whereby they will be bound or locked in their thus collated formation, I provide a sheet-like body or element 4, preferably constructed or made from material having greater body or more rigidity than that possessed by said sheets 1. Flexible, foldable fingers 5 and 5' are provided adjacent one longitudinal side or edge of the body 4. If desired, these fingers may be formed integral with the body 4, insofar as their arrangement or positioning upon such body is substantially that as illustrated in Figure 3 of the accompanying drawing. Said fingers 5 and 5' are so relatively spaced as to coincide with the spacing between the slits 3 and 3' in the longitudinally folded sheets 1; moreover, they are formed in lengths quite sufficient to permit their passage through and the extension of material portions thereof beyond the outermost of said sheets 1, as indicated in Figures 1 and 2 of the drawing. Thus, to bind the assembled longitudinally folded sheets 1, the body or element 4 is right angularly positioned adjacent the longitudinal fold of the innermost of said sheets 1; these fingers 5 and 5' are aligned with the relatively spaced slits 3 and 3' in said sheets 1, whereupon the body or element 4 is thrust or moved in a direction to cause entrance of the fingers 5 and 5' into and their passage through their respective or adjacent slits 3 and 3' in the longitudinally folded sheets 1. With such positioning of the body 4 and the engagement of its fingers 5 and 5' through said slits 3 and 3' of the sheets 1, the outer or extended portions of the fingers 5 and 5' are then longitudinally flexed or folded in a manner to bring said fingers into flush or substantially flat contacting relationship to adjacent portions of the outer side of the outermost sheet 1, as is clearly illustrated in Figure 2,

whereupon an adhesive may be applied to the inner sides or faces of said extended portions of the fingers 5 and 5' whereby they may be fastened or adhered thereto and thus be prevented from becoming displaced or permitting the body of the binding device or element from becoming dislodged or displaced with respect to the thus interconnected or bound longitudinally folded sheets 1.

Whereas I have described with some degree of particularity, the fingers 5 and 5' as being joined by an adhesive to adjacent portions of the outermost sheets 1, it of course will be understood and appreciated that various other forms of connecting or securing means or methods may be utilized, such as are well known in the art.

In Figures 5, 6 and 7, I have illustrated a somewhat modified form of my invention. In this particular form of the invention, a greater number of flexible or foldable binding fingers, such as indicated by the numerals 5 and 5' in the fingers 1, 2 and 3, are utilized. A binding device or element body 4^a, substantially corresponding to that described in the preceding embodiment of my invention, is employed. This body 4^a is provided adjacent one of its longitudinal edges or sides with a plurality of laterally and outwardly extending flexible or foldable binding fingers 5^a, which fingers may be joined to said body 4^a or may be integral therewith. Each of said binding fingers 5^a is preferably transversely scored or weakened, as indicated at 6, whereby to better facilitate their transverse folding or flexing for that purpose heretofore described and to be hereinafter additionally described. The type of sheets to be bound in book, magazine, pamphlet or similar form, herein described by the numeral 7, are each longitudinally folded, as indicated at 8. Each of said sheets is provided complementally arranged and relatively spaced longitudinally disposed slits or openings 9, whose respective lengths are such as to substantially correspond to the widths of each said binding fingers 5^a. Sheets to be bound according to this particular modified form of my invention are folded along their respective fold lines 8. They are thus arranged in substantially juxtaposed or assembled relationship. Thereupon, the binding fingers 5^a carried upon the body 4^a of the binding device are passed outwardly through the relatively registering and spaced slits 9 so as to bring the adjacent longitudinal edge or side of said body 4^a into abutting or adjacent relationship to the

intermediate portions of the innermost of said sheets 7. At this time, the binding fingers 5^a are flexed or folded along their weakened or scored portion 6 and are then joined by an adhesive or other securing means to adjacent portions of the outermost of said assembled sheets 7, in the same fashion as are the binding fingers 5 and 5' of the body 4 of the binding device disclosed in Figure 3, brought into engagement with the outermost sheet 1 disclosed in Figure 2. When so engaged, the thus interconnected sheets will be securely and durably retained in bound booklet, magazine, pamphlet or like formation or relationship.

Manifestly, the construction shown is capable of still further modification, and such modification as is within the scope of my claims, I consider within the spirit of my invention.

I claim:

1. In combination, a plurality of relatively nested longitudinally folded sheets, each having spaced and registering openings formed therein adjacent to their longitudinal folds, a sheet-like and comparatively stiffer body arranged adjacent and along the fold of the innermost of said nested sheets, and flexible fingers carried by and extending beyond one side of said sheet-like body engaging through the registering openings in said folded sheets and having their extended free portions flexed into binding and clamping engagement with respect to the outermost of said folded sheets and their remaining portions fixedly connected to adjacent portions of the outer side of one portion of said outermost folded sheet.

2. In combination, a plurality of relatively nested longitudinally folded sheets, each having spaced and registering substantially rectangularly shaped openings formed therein adjacent to and parallel with their longitudinal folds, a sheet-like and comparatively stiffer body arranged adjacent and along the fold of the innermost of said nested sheets, and flexible fingers carried by and extending beyond one side of said sheet-like body snugly engaging through the registering openings in said folded sheets and having their extended outer portions bent into binding and clamping engagement with the outermost of said folded sheets and their remaining portions fixedly connected to adjacent portions of the outer side of one portion of said outermost sheet.

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