Nov. 13, 1928. 1,691,537

W. J. WRIGHT ET AL

FLAT FOLD BINDER DEVICE

Filed Feb. 7, 1927

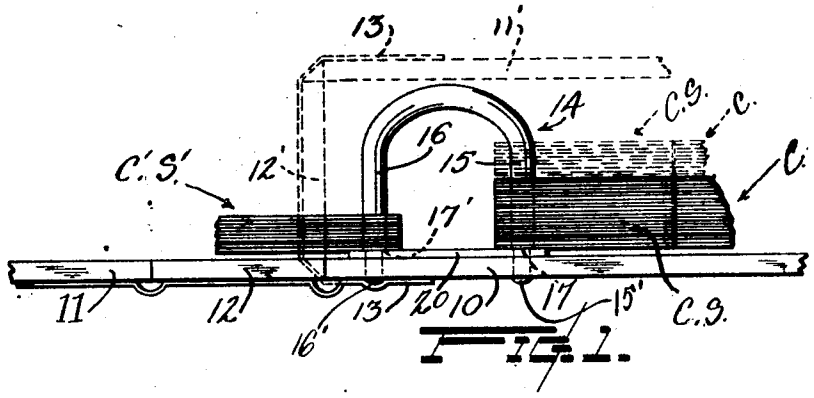


FIG. 1.

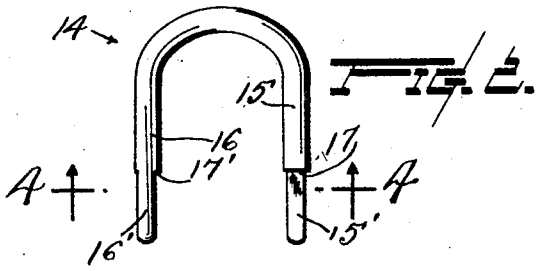


FIG. 2.

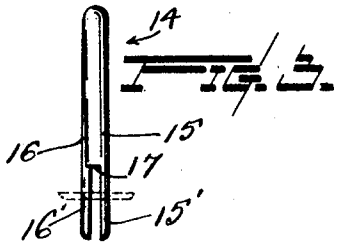


FIG. 3.

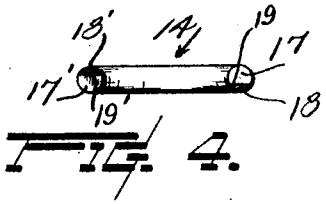


FIG. 4.

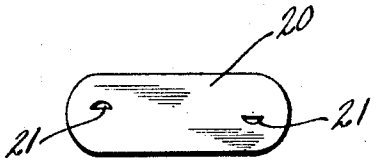


FIG. 5.

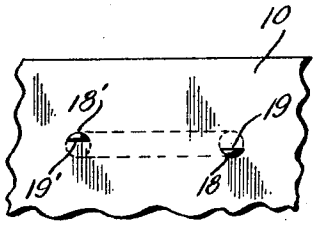


FIG. 6.

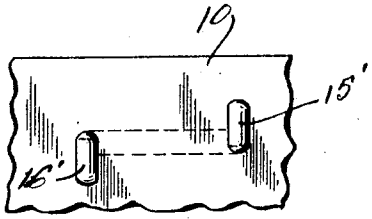


FIG. 7.

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UNITED STATES PATENT OFFICE.

WILLIAM J. WRIGHT AND ARTHUR S. WHITEHEAD, OF SEATTLE, WASHINGTON.

FLAT-FOLD BINDER DEVICE.

Application filed February 7, 1927. Serial No. 166,331.

Our invention relates to leaf-attaching clips for flat-fold bindings, and has for an object, the provision of clips adapted to be rigidly secured to the back cover member of a binding, and which will be of simple and economical construction, and readily applied.

A further object of our invention is to provide a clip for a flat-fold binder which is better adapted for permanently securing the leaves in place than are other clips known to us.

More specific objects and advantages of our invention will appear in the following specification. The invention is illustrated in the accompanying drawing, wherein,—

Figure 1 is a side elevation of a portion of a leaf binding with a clip embodying out invention applied thereto, the binding being shown by full lines in its open position and in its closed position by dotted lines.

Fig. 2 is a side elevation of one of the clips, shown detached; Fig. 3 is an end elevation of Fig. 2; and Fig. 4 is a horizontal sectional view on the line 4—4 of Fig. 2. Fig. 5 is a plan view of the washer member shown in Fig. 1. Fig. 6 is a fragmentary underside plan view of a binder board with clip applied thereto in its unsecured relation; and Fig. 7 is a view of the parts shown in Fig. 6, but illustrating the clip as secured to the binder board.

The binder proper may be of any known or suitable construction and as shown comprises a bottom board 10, a top board 11, and, preferably, a backing board 12 which are hingedly connected together as by means of a piece of fabric 13, or an equivalent, which is glued or otherwise secured to the respective board members. Such flexible binding permits the board members to be laid—as represented by full lines in Fig. 1—in a plane, or flatwise, upon a table; or to be arranged in a folded condition, as indicated by full lines 10, and dotted lines 11^1 and 12^1 in the referred to view.

Secured to the bottom board in spaced apart relation transversely thereof is a plurality of clips such as 14. These clips are each made from wire, preferably circular in cross section, and is bent or otherwise formed, to substantially the shape of an inverted capital letter U, thereby providing two parallel side legs 15 and 16. Said legs have their lower ends 15^1 and 16^1, or "prongs" as hereinafter termed, of less thickness than the diameter of the material in the upper or body portion of a clip.

Said legs are formed by cutting away or pressing the respective legs to produce the prongs below shoulders 17 and 17^1 which is disposed intermediate the height of the clip and in a plane at right angles to the axes of the respective legs. As shown, the prongs are in transverse section of a segmental shape, each having a circular arcuate surface 18 and 18^1 (see Fig. 4) and plane chord surfaces 19 and 19^1.

These prongs are, moreover, disposed oppositely one with the other—that is to say, the arcuate side of one prong is at one side and the arcuate side of the other prong is at the other side of the clip.

Cooperating with said clip is a washer or bearing plate 20 of an oblong shape (see Fig. 5) with apertures 21 therein having cross sectional areas and shapes corresponding to that of the prongs 15^1 and 16^1 and suitably located to accommodate the latter.

In practice, the invention is usually employed for securing bank checks, as C, Fig. 1, through the medium of the attached check stubs C S to and within a binder.

For which purpose, one leg of each clip is first threaded through apertures provided in the check stubs C S and which upon being thus seized, are coupled to the bottom board 10 of the binding by passing both prongs of the several clips through the bearing plates, as 20, and the bottom board 10 successively, and, finally, bending the prongs 15^1 and 16^1 into clenching relation against the under surface of the board 10.

In regulating a clip with respect to the associated bearing plate 20, care should be taken to have the shoulders 17, 17^1 bear against the plate whereby the turning over or clenching of the prongs against the board 10 as explained above will serve to draw the plate and board into clamping relation therewith and rigidly support the clip in vertical position. It is to be noted that by positioning the shoulders 17, 17^1 at opposite sides of the legs, permits the prongs to be turned in opposite directions so that the plane surfaces 19, 19^1 of both prongs may be juxtaposed with the bottom of the board 10 whereby a firm conection is had between a clip and a binder board, with a rounded protruding portion of the prongs below the binder—which allows the binder to be in close

proximity to a table or other support besides obviating danger of the prongs catching against any object when the binder is slidably moved upon the support.

In Fig. 1 we illustrate the manner of using a binder equipped with our invention for holding bank checks.

With the binder boards spread out upon the table, the checks C with their stubs C S are placed upon the lower board 10, until they have been properly filled out with the exception perhaps, of the drawer's signature and the application of protective marks which are done after the checks have been removed. When the checks are removed the stubs may be swung over upon the inverted back board 12 as represented by C^1 S^1 at the left hand side of Fig. 1. The binding remaining flat while these operations are being performed.

The invention and the manner of applying and using the same will be understood from the foregoing specification.

While we have illustrated and described the invention in its form now preferred by us we do not wish to be understood as confining ourselves specifically therewith except as limited by the scope of the appended claims.

What we claim, is—

1. In a binding for leaves, leaf attaching means comprising a plurality of clips of an inverted U-shape, each of said clips being formed to provide legs with shoulders disposed intermediate their lengths, each of said legs below the respective shoulder constituting a prong adapted to penetrate a binder board, said prongs being of greater length than the thickness of the board to afford protruding ends adapted for bending to bear against the under surface of the board to cooperate with said shoulder to clamp the board therebetween.

2. In a binder as defined in claim 1 wherein the shoulder of one of the clip legs is disposed diametrically opposite to the shoulder of the other leg.

3. A leaf attaching clip of an inverted U-shaped form having a shoulder intermediate the length of each of its legs, the bearing surfaces of each of said shoulders being on the underside thereof, the prong portions of the legs below the plane of said shoulders being of substantially oblong shapes in horizontal section to facilitate the bending of the prongs about axes corresponding with the major axes of the respective prong sections.

4. Leaf attaching means for a binder, comprising in combination, a bearing plate having spaced apart holes therein, and a clip of substantially the shape of an inverted letter-U, the lower portions of the clip legs being adapted to extend through the holes of said plate and below the latter for a limited distance, the clip leg portions below the plate being adapted to extend through a binding board and be bent against the latter, the bent parts of the legs cooperating with the plate for clamping a binding board therebetween.

5. Leaf attaching devices for a binder board, comprising in combination, a clip of an inverted U-shape having parallel legs having shoulders to afford below the latter prong elements of lengths exceeding the thickness of the board, and means provided with apertures to receive the respective prongs and adapted to serve as seats for the respective shoulders whereby said means serve as stops adapted to be employed cooperatively with the prongs to clamp the binding board therebetween.

6. A leaf attaching clip of an inverted U-shape having each of its legs formed to provide intermediate the length thereof a shoulder and a reduced portion below the plane of the respective shoulder, each of said reduced portions being of a substantially oblong shape in horizontal section to facilitate the bending of the respective reduced portions of the legs in a direction at right angles to the plane of the clip.

Signed at Seattle, Washington, this 20th day of December, 1926.

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