July 8, 1952 J. J. DONATO ET AL 2,602,452

LOCK BINDER

Filed April 10, 1950

Fig. 1.

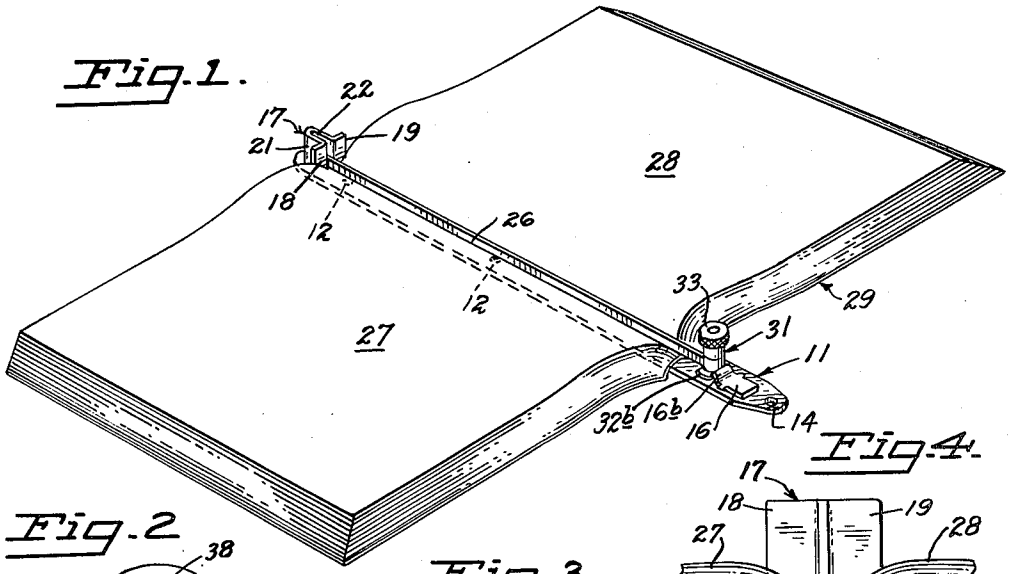


Fig. 2

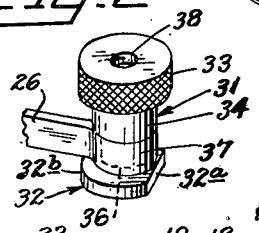


Fig. 3.

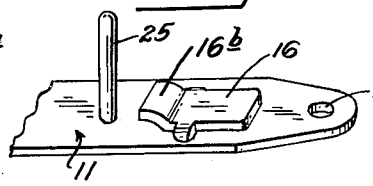
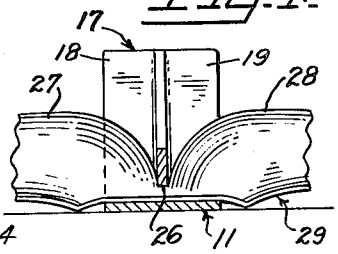


Fig. 4.



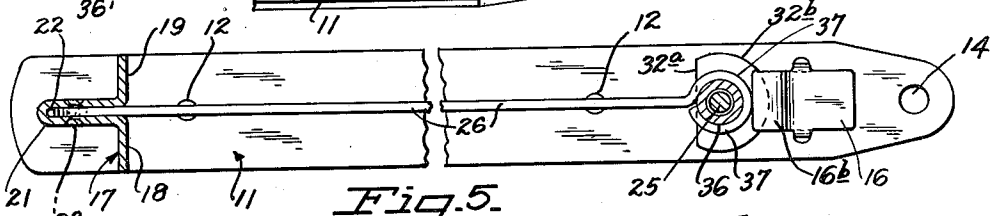
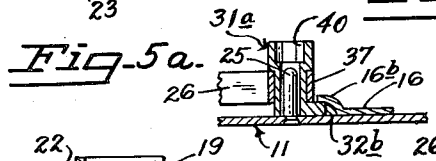


Fig. 5.

Fig. 5a.



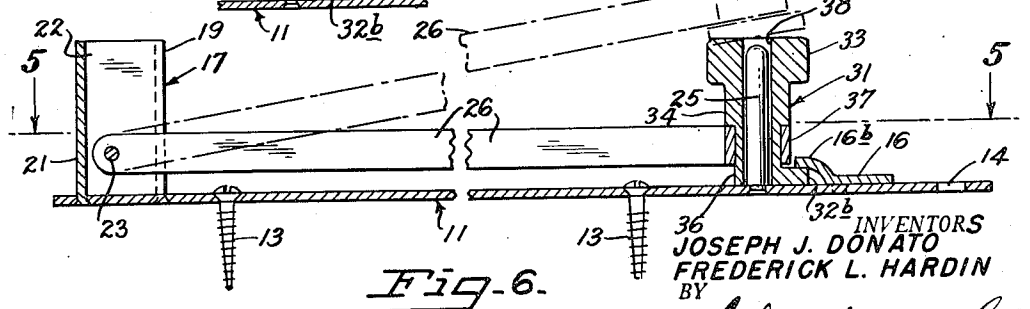


Fig. 6.

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LOCK BINDER

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1 Claim. (Cl. 129—38)

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The invention, in general, relates to devices for the retention and safe-keeping of magazines, newspapers and the like yet permitting ready access to the pages thereof for perusal while under retention. More particularly, the invention relates to a lock binder for works of the indicated character and constitutes an improvement on the Book Lock Binder, described and claimed in Letters Patent No. 2,323,123, granted to us on June 29, 1943.

A primary object of the present improvement is to provide a lock binder for the above mentioned works which is of relatively simple construction affording manufacture thereof at a minimum of cost and which is usable by the unskilled as readily as any skilled person.

Another important object of our present invention is to provide an improved lock binder of the indicated nature which is additionally characterized by its latching and unlatching simplicity.

A still further object of the improvement is to provide a lock binder of the aforementioned character having a construction and mode of operation wherein milled parts are obviated and assembly and installation times are reduced to a minimum.

Other objects of the invention, together with some of the advantageous features thereof, will appear from the following description of a preferred embodiment of our present improvement. It is to be understood, however, that we are not to be limited to the precise embodiment shown, nor to the precise arrangement of the various parts thereof, as our invention, as defined in the appended claim, can be embodied in a plurality and variety of forms.

Referring to the drawings:

Fig. 1 is a perspective view, partly in dotted lines showing, of a preferred embodiment of the present improvement in operative position retaining a book or other work with ready access to the pages thereof.

Fig. 2 is a detail of the latching element and a fragmentary showing of the clamping bar of the preferred embodiment of the present improvement.

Fig. 3 is a fragmentary perspective view of a portion of the base of the preferred embodiment of the invention with integral complementary latching element and holder for one of the latching elements of the preferred embodiment.

Fig. 4 is a sectional, end elevational view of the preferred embodiment of the present improvement in operative position, this view showing in fragmentary view a portion of the retained work.

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Fig. 5 is a broken plan view of the preferred embodiment of the invention, this view being taken on the line 5—5 of Fig. 6.

Fig. 5a is a sectional elevational view of a modified latching element, together with a fragmentary showing of the clamping bar, of the present improvement.

Fig. 6 is a longitudinal, sectional elevational view in fragmentary showing, of a preferred embodiment of the invention, this view showing in full lines the position of the clamping bar when in operative position and in dotted lines the position of the clamping bar when the device is unlocked and the clamp is removed from the work so that the work can be removed from the binder.

In its preferred form, the lock binder of our present improvement preferably comprises a base removably attached to a book cover or the like, a clamping bar pivotally supported on said base, a first latching element on said base, together with a second latching element retained on said clamping bar and operatively associated with said first latching element for locking a newspaper, a book or the like on the binder for retention thereon.

As illustrated particularly in Figs. 5 and 6 of the annexed drawings, we provide in our improved lock binder a relatively long, flat base 11 which conveniently can be formed with a series of spaced holes 12 therethrough to accommodate suitable screws 13, see Fig. 6 of the drawings, for removably attaching the binder to the back of a book cover, not shown. In addition, we preferably form the base 11 of our improved lock binder with a relatively large opening 14 therethrough, adjacent to one extremity thereof so that the binder, with a retained book, magazine or the like, may be suspended from a wall hook or nail or the like, not shown. While any suitable material can be employed for fabricating the base 11, we preferably manufacture the base from a suitable, light-weight metal, such as aluminum or a nickel-alloy of aluminum. The base 11 also is provided with not only a first latching element 16 but also with a bracket 17 on which a clamping bar 26 is pivotally mounted, as well as a holder or post 25 for a second latching element 31 which is retained on the outer extremity of the clamping bar 26. Preferably, the first latching element 16, the bracket 17, with the exception of the holes for a pivot pin on which clamping bar 26 is pivotally mounted, and the holder or post 25 are formed integral with the base 11, by means of a shaped die and a punch press, although the various parts just mentioned can be separately secured to the base 11. For example, the first latching element

16 can be welded to the base 11 at its proper operative position, as shown adjacent to the large opening 14 in base 11, the element 16 including an off-set portion 16b which is elevated from the base 11 to afford a space between the base and such off-set portion 16b, as shown in Fig. 5 of the amended drawings. The bracket 17 can be secured by means of welding or other securing means, to the base 11 at its proper operative position adjacent to the opposite extremity of the base. As particularly illustrated in Figs. 1 and 5 of the annexed drawings, the bracket 17 preferably is formed with oppositely directed wings 18 and 19 serving as seats for a work suspended and retained on the binder, which are directly welded or otherwise secured to the base 11 and which merge with a central, bifurcated portion 21 defining a space 22 for accommodating not only the mounting of the clamping bar, hereinafter referred to, but also for the swing of such clamping bar from a closed to an open position. The bifurcated portion 21 of bracket 17 serves as a mounting for a pivot pin 23 which preferably is riveted in position on the bifurcated portion 21 of the bracket and which pierces the clamping bar adjacent to one extremity thereof.

In accordance with our present invention, we provide a resilient clamping bar 26 for clamping the improved lock binder in operative position between the pages 27 and 28, see Fig. 1, of a book 29 in such manner that the pages 27 and 28 as well as additional pages of the book 29 may be turned and be readily accessible to a reader of the book. As above indicated, one end of the clamping bar 26 is pivotally mounted upon the pivot pin 23 mounted in the bracket 17 at one end of the base 11 and about which pivot pin the clamping bar 26 is swingable. With particular reference to Fig. 6 of the annexed drawings, the closed, operative position of the clamping bar 26 is shown in full lines while the open position of the clamping bar 26 is illustrated in dotted lines. The extremity of clamping bar 26 opposite to the pivoted extremity thereof supports a second latching element 31 which is complementary to the fixed latching element 16 on base 11. While the second latching element 31 can take any desired shape or construction, we preferably employ a construction of this second or complementary latching element 31 which affords rotation thereof relative to the clamping bar 26 upon which it is mounted. To this end, the second or complementary latching element 31 preferably is constructed from cylindrical stock with an enlarged segmental base 32 and an enlarged knurled top 33 to facilitate rotation thereof relative to the clamping bar as well as relative to the fixed latching element 16 on base 11. Intermediate the segmental base 32 and a cylindrical portion 34 of the complementary latching element 31 is a reduced portion 36 about which the outer extremity 37 of the clamping bar 26 is trained. The fact that the complementary latching element 31 is so provided with a reduced portion 36 affords a seat for the clamping bar extremity 37 between the upper surface of the base 32 of the latching element 31 and the generally cylindrical portion 34 thereof and thus the latching element 31 is retained on the clamping bar 26 but, in addition, is rotatably mounted thereon. In addition, the second or complementary latching element 31 is formed with a longitudinally extending bore 38 therethrough for passing the standard or post 25 extending normally from the base 11 and preferably press-fitted thereinto. In operation, to place

the clamping bar 26 in operative position and the entire binder locked to a book, catalogue, magazine or the like, the operator only has to swing the clamping bar 26 downwardly on its pivot pin 23 with the standard or post 25 of base 11 passing through the bore 38 of the complementary latching element 31 and brought to rest with the base 32 of the latching element 31 seated on the upper surface of the base 11.

In this connection, it is to be observed that the segmental base 32 is formed to a substantially flat disc with a major portion of its periphery in generally circular or arcuate form but containing a straight portion 32a, see Fig. 5 of the drawings. Moreover, the flat disc 32 is arranged in off-set relation with respect to the axis of the latching element 31. In bringing the clamping bar 26 to its clamping position, care must be observed in having the straight portion 32a of the base 32 of latching element 31 facing the latching element 16 of the base 11. In thus positioning the base 32 of latching element 31, the base 32 will pass the fixed latching element 16 in order to seat the base 32 of the latching element 31 on the upper surface of base 11. After this preliminary operation, the operator merely rotates the latching element 31, by grasping the knurled top 33 thereof to bring the arcuate portion 32b of the base 32 of latching element 31 underneath the raised portion 16b of the fixed latching element 16 on base 11. This latching or locked position of the clamping bar in operative position is illustrated by the dotted line showing of the arcuate portion 32b of base 32 of latching element 31 in Fig. 5 of the drawings and in the sectional view thereof in Fig. 6 of the drawings. To unlock the binder and release the clamping bar from the base 11, and enable removal of the entire binder from a book, magazine, or the like, it is only necessary to grasp the knurled top 33 of the latching element 31 and rotate the same to bring the straight edge 32a of the base 32 of such latching element adjacent to and in parallel relationship with the outer edge of the portion 16b of the fixed latching element 16 and then lift the clamping bar off the standard or post 25 of the base 11 and pivot the clamping bar about its pivot pin 23. The lock binder of our present improvement, therefore, not only can be readily installed in a book or magazine and locked in position but as readily can be unlocked and removed therefrom.

In Fig. 5a of the annexed drawings, we have illustrated a modified latching element 31a which is so formed as to provide in the top portion thereof a hexagonal socket 40. A suitable key, not shown, may be inserted in the hexagonal socket 40 for giving the latching element 31a a slight final turn to lock the circular portion 32b of the disc 32 underneath the raised portion 16b of the fixed latching element 16. The provision of the hexagonal socket 40 in the modified latching element 31a prevents inadvertent turning of the latching element by "doodlers" when reading or inspecting the publication or other work retained in the holder, and thus loosening of the work in the holder. Moreover, the locking of the latching elements together by turning the latching element 31a prevents appropriation of the work by careless readers of the work held in the lock binder. An attendant may be provided with the key, not shown, for unlatching or unlocking the latching element 31a to replace the retained work with some other work.

It is clear from the foregoing that the construction of our present lock binder not only af-

fords the production thereof at a cost far lower than the production costs of the book lock binder disclosed and claimed in our aforementioned Letters Patent but also affords a lock binder which can be more readily manipulated as to installation, locking, releasing and removal with respect to any work in connection with which it is employed. In addition to the elimination of millwork required in the production of the slitted casings 3 of our former binder, we have eliminated the necessity of assembly of relatively small parts which frequently are lost or misplaced. Moreover, in our present lock binder, the majority of the elements constitute stampings which are relatively inexpensive to manufacture and assemble in operative position.

It is to be understood that the appended claim is to be accorded a range of equivalence commensurate in scope with the advance made over the prior art.

We claim:

A lock binder comprising a base, a fixed latching element on said base; said fixed element including a portion elevated from said base and presenting a straight outer edge, a standard on said base in proximity to said fixed latching element, a clamping bar pivotally mounted on said base, and a second latching element rotatably mounted on said bar and rotatable relative to said standard as well as relative to said fixed latching element; said second latching element having a bore therethrough for passing said standard upon pivoting said bar to adjacent said base, a segmental base on said second latching element including a straight portion and an arcuate portion; said segmental base being off-set with respect to the axis of said second latching element, rotation of said second latching element to one position causing placement of said arcuate portion of said segmental base of said second latching element in underlying relationship to said elevated portion of said fixed latching element to lock the binder in relation to a work, and rotation of said second latching element to a second position causing placement of the straight portion adjacent to and in parallel relationship with the straight edge of said elevated portion of said fixed latching element whereby the clamping bar can be pivoted away from said base to enable release of the binder from the work.

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