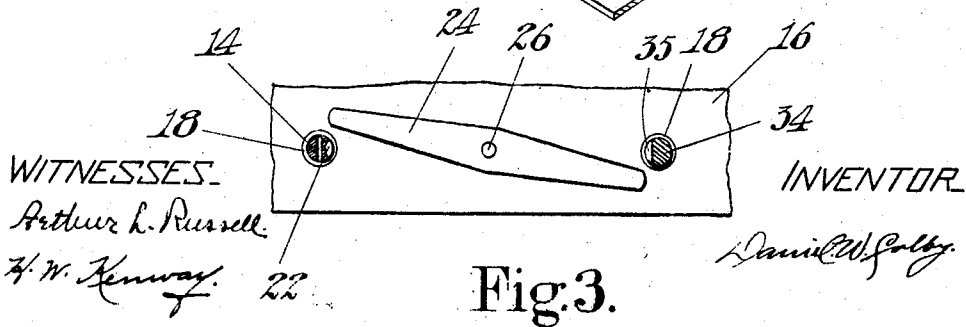
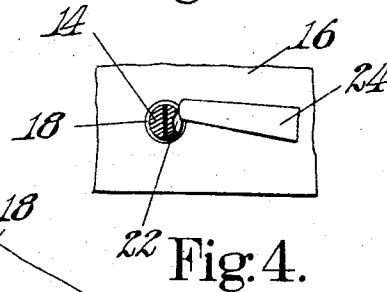
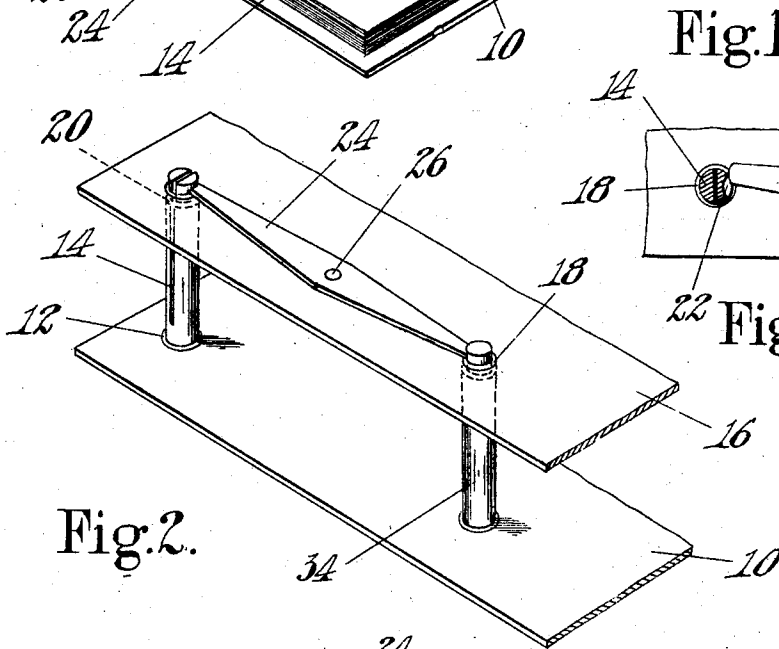
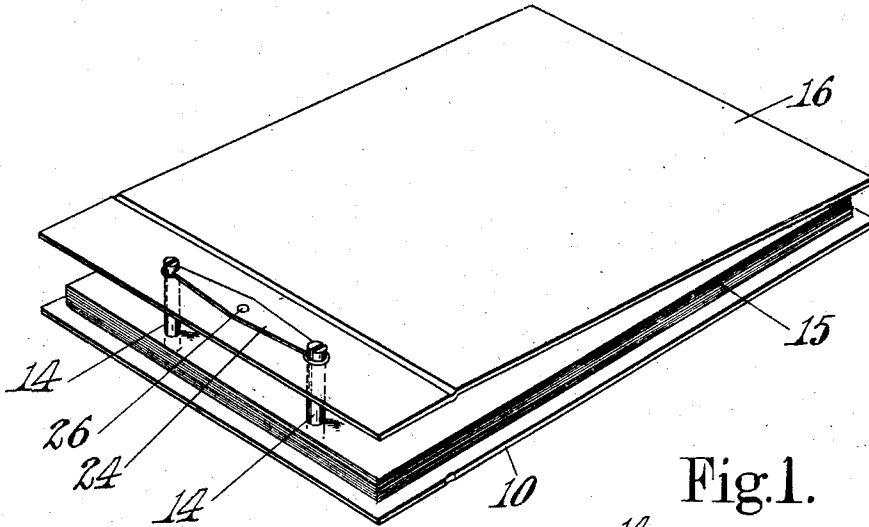


D. W. COLBY.
 LOOSE LEAF BINDER.
 APPLICATION FILED DEC. 3, 1909.

992,707.

Patented May 16, 1911.



WITNESSES:
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LOOSE-LEAF BINDER.

992,707.

Specification of Letters Patent.

Patented May 16, 1911.

Application filed December 3, 1909. Serial No. 531,143.

To all whom it may concern:

Be it known that I, DANIEL W. COLBY, a citizen of the United States, residing at South Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

This invention relates to improvements in loose leaf binders, and has for an object the provision of a device for temporarily binding together loose leaves or sheets in a convenient and secure manner.

It is a further object of the invention to provide a device for the purpose stated which may be operated easily and quickly either to release or secure the leaves or sheets, and which will be made of few and simple parts, and be practical and efficient in every particular.

Another object of the invention is to provide a simple and secure locking device for a binder of the class described which shall require no loose parts in its construction so as to obviate the possibility of such parts being lost or mislaid while securing leaves in the binder and which shall be automatic in action.

With these objects in view, my invention, in a preferred embodiment, may consist in a pair of covers, one of which has mounted thereon posts or stems which extend substantially at right angles thereto and through apertures formed in the other cover, upon which posts perforated leaves or sheets may be threaded, together with a latch pivoted to said second cover and constructed and arranged for locking engagement with one or both of said posts.

That feature of the invention which relates to the locking device consists in providing a yielding section in one or both posts in which section or sections there is formed a curved slot, the inner side of which is located slightly beyond the path of the pivoted latch bar which has ends curved on the same radius as the slot in the post, said radius being considerably less than the distance from the pivot of the latch bar to its ends.

My invention further consists in certain other novel features of construction, combination, and arrangement of parts as hereinafter set forth.

A preferred embodiment of the invention

is illustrated in the accompanying drawings, in which,

Figure 1 is a view in perspective. Fig. 2 is a fragmentary view in perspective on an enlarged scale of a modification. Fig. 3 is a fragmentary plan view of the device illustrated in Fig. 2. Fig. 4 is a similar view showing the latch bar in an intermediate position.

The binder illustrated comprises a cover or base plate 10 of any suitable material, and will take approximately the size and shape of the leaves or sheets it is desired to file. Tubular rivets or eyelets 12 are set in the cover 10 and rigidly mounted therein are the perpendicular posts or stems 14 on which the perforated loose leaves 15 may be threaded. The upper cover or binder plate 16 is provided with tubular rivets or eyelets 18 located similarly to those in the cover 10 and being of sufficient diameter to receive the reduced ends of the posts 14. The body portions of the posts 14 act as spacers between the covers and are shouldered, as indicated at 20 in Fig. 2, so as to support the upper cover 16. In order to lock the cover 16 in place upon the shoulders of the posts 14 the locking device now to be described is provided. A yielding section is formed in both of the posts 14, preferably by longitudinally slotting each of these members and in such yielding sections are formed curved slots or recesses 22, as clearly shown in Fig. 4. Coöperating therewith is a flat latch bar 24 pivoted to the cover 16 on a pin or rivet 26 at a point mid-way between the two posts. The ends of the latch bar 24 are curved on the same radius as the curvature of the slots and the arrangement is such that by turning the latch bar 24 upon its pivot the yielding sections of the posts 14 are sprung outwardly and allow the latch bar to snap into the curved slots 22 in which they are retained until the latch bar is turned with sufficient force again to displace the yielding sections of the posts and allow disengagement. This operation is well illustrated in Fig. 4 where the latch bar 24 is shown in an intermediate position, in which it displaces the yielding sections outwardly. It will be seen that the locking action takes place automatically when the latch bar 24 is turned into the proper relation with the posts.

As suggested by Figs 2 and 3, the con-

110

struction may be simplified without departing from the spirit of the invention by substituting for one of the slotted posts, a solid post 34 having a straight slot or recess 35.

5 In this construction, of course, the locking action takes place at one end only of the latch bar, the other end being held within the slot 35 and so preventing displacement of the cover.

10 It will be apparent that in using a binder constructed in accordance with my invention, the number of leaves held in the binder has no effect on the locking device, the covers being held at a definite and unvarying distance apart.

15 When it is desired to remove any of the leaves, it is necessary merely to disengage the latch bar from the slots in the posts and remove the upper cover thus leaving the leaves free for removal from the posts.

20 It is evident from the foregoing description that my invention may be embodied in various forms and proportions ranging from small memorandum slips to large sheets for account books.

25 Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to enumerate all the forms in which it may be made or all the uses to which it may be put, I claim—

1. A locking device of the class described comprising, a post having a yielding section therein and a transverse slot in said section, in combination with a supporting member, a latch bar pivotally mounted thereon, said latch bar having its end shaped to enter the slot in said yielding section of the post and become automatically locked therein.

2. A loose leaf binder of the class described, having in combination, a cover, a post mounted thereon having a yielding section therein and a recess formed in said section, a second cover or binder plate and a latch pivoted thereto and arranged for locking engagement with said recess.

3. A loose leaf binder of the class described, having in combination, a cover, a post mounted thereon having a yielding section therein and a curved recess formed in said section, a second cover or binder plate and a latch pivoted thereto and arranged for yielding locking engagement with said recess.

4. A loose leaf binder of the class described, having in combination, a cover, a post mounted thereon having a yielding sec-

tion therein and a curved recess formed in said section, a second cover and a flat latch bar pivoted thereto having an end curved on the same radius as said recess, said latch being pivoted at a point beyond the center of curvature of the end thereof.

5. A loose leaf binder of the class described, having in combination, a cover, slotted posts mounted thereon and having shoulders, a second cover supported on said shoulders and a latch bar pivoted thereto and arranged to simultaneously displace one half of each slotted post to become yieldingly interlocked therewith.

6. A loose leaf binder of the class described, having in combination, a cover posts mounted thereon, a second cover, a latch bar pivoted to said second cover and arranged for movement into engagement with the posts for automatic locking there-against pivotal movement in either direction.

7. A loose leaf binder of the class described, having in combination, a cover, slotted posts mounted thereon, a second cover, a latch bar pivoted thereto and having its ends shaped to enter the slots in said posts and become automatically locked therein.

8. A binder of the class described, having in combination, a cover, a latch-carrying member, posts mounted in fixed relation with said cover and having means thereon for supporting the latch-carrying member, and a pivoted latch on said member arranged for automatic locking engagement with both of said posts simultaneously.

9. A binder of the class described, having in combination, a cover, a latch-carrying member, slotted posts mounted in fixed relation with said cover, a latch bar pivoted on said latch-carrying member and having its ends shaped to enter the slots in said posts and become automatically locked therein.

10. A binder of the class described, having, in combination, a cover, transversely and longitudinally slotted posts mounted thereon, a second cover, and a latch bar pivoted thereto having a continuous, unbroken contour and ends shaped to enter the transverse slots in said posts and become automatically locked therein.

In testimony whereof I affix my signature in presence of two witnesses.

DANIEL W. COLBY.

Witnesses:

H. W. KENWAY,
ARTHUR L. RUSSELL.