F. L. MANNY.

LOOSE LEAF BINDER.

APPLICATION FILED FEB. 11, 1918.

1,327,624. Patented Jan. 13, 1920.

Fig. 1.

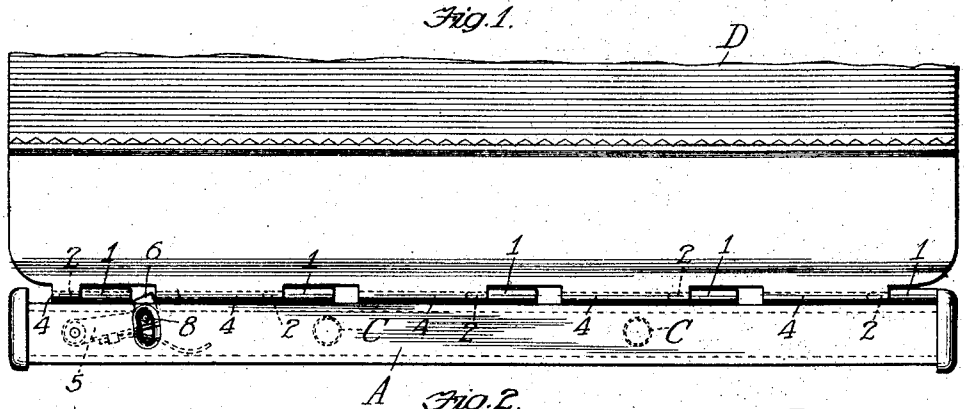


Fig. 2.

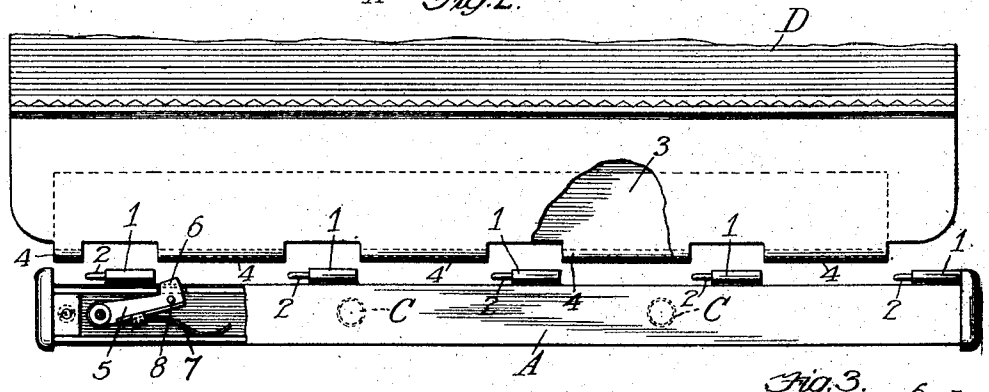
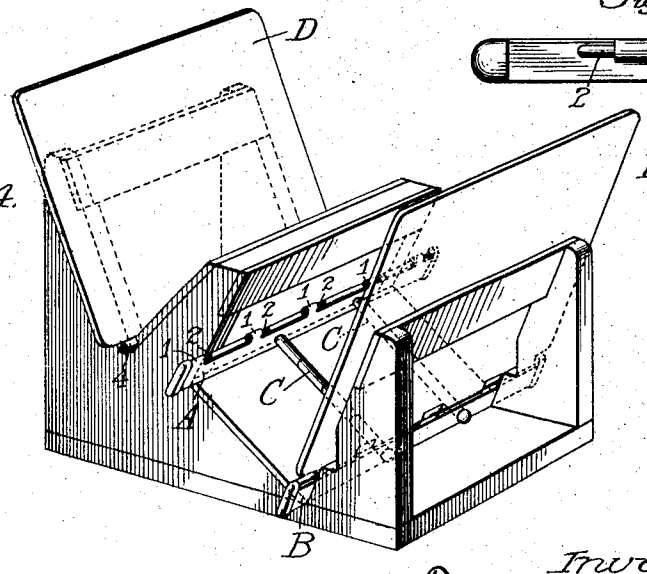


Fig. 3.



Fig. 4.



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UNITED STATES PATENT OFFICE.

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LOOSE-LEAF BINDER.

1,327,624. Specification of Letters Patent. Patented Jan. 13, 1920.

Application filed February 11, 1918. Serial No. 216,623.

To all whom it may concern:

Be it known that I, FRED L. MANNY, a citizen of the United States, residing at Benton Harbor, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

My invention relates to loose leaf binders which are now widely used in bookkeeping and accounting systems, and has for its object an improvement in the binder structure which adapts it for more convenient use in connection with a rack for holding the binder and the leaves of the same while entries are being made in the same. The rack itself forms no part of my invention, which relates only to the provision of means for making one of the covers of the binder detachable and removable. To the ends in view I have devised and invented the embodiment of my invention shown in the accompanying drawing and hereinafter described, the essential elements of the same being more particularly pointed out in the appended claims.

In the drawing Figure 1 is a side view of one side of a binder, showing the base portion of a cover which is detachable from the remainder of the binder structure according to my invention; Fig. 2 is a similar view but broken away to show the disengaging mechanism housed within the side plate of the binder back and also showing the cover detached; Fig. 3 is a detail showing in elevation the lefthand end of the side plate as shown in Fig. 2 and looking toward the back or lower edge of such plate; and Fig. 4 is a perspective view of a suitable rack for use in connection with a binder embodying my invention, showing a binder supported on the rack and with its removable cover detached and supported in position to support the sheets while entries are being made in the book.

The same reference characters indicate the same parts in all the figures of the drawing.

For purposes of illustration and description my invention will be described as applied to a simple form of binder, similar to that shown in my pending application No. 194,349, filed October 2, 1917, although, as will be apparent, it is capable of application generally to binders having covers which at their base are hinged to a binder mechanism for gripping and retaining the sheets of the book in assembled form. Briefly describing the construction of the particular binder shown, it comprises a pair of composite numbers A and B in the form of hollow sheet metal shells, which may be termed side-bars. A series of binder posts C are secured to the bar A, these posts being made sectional, so that they may be built up to any desired length. The bar B is orificed to engage the posts C, and a key-operated clamping mechanism, which need not here be described, is arranged on the inside of the bar B to clamp such bar firmly on the posts in any position of adjustment; the bars, posts and clamping means providing a binder mechanism for holding a body of slotted leaves or sheets interposed between the bars. The covers D and E of the binder are hinged to the bars A and B respectively, the cover D being detachably hinged to the bar A in a manner which will now be described.

The sheet metal member which forms the inner side of the bar A is formed with a series of lugs 1, which are curved to surround and support a corresponding series of pivots 2 which are rigidly secured, by brazing or in other suitable manner, in the sockets thus formed. Secured to the cover D along its lower edge is a sheet metal hinge plate 3, the edge of which is cut and bent to form a series of sockets or bearings 4 adapted to engage the pivots 2 when the cover A is in registration with the opposite cover B. The proportions and arrangement of the lugs 1 and pivots 2 with respect to the bearings 4 are such that by shifting the cover A to the left the hinge elements will be disengaged, as will readily be understood by reference to Figs. 1 and 2 of the drawing. The pivots 2 may, of course, be transposed to the members 4 and secured therein, and the lugs 1 formed as bearings if desired. In order to retain the cover in engaged position, I have provided a retaining catch or detent 5, pivoted within the bar A and formed with a projecting nose 6 which through the spring 7 is urged to a position of engagement with the lefthand end of one of the sockets, or bearings 4 of the cover. These sockets, it may be here explained, are extended beyond the point of actual engage-

ment with the pivots, which are relatively short, and the sockets, as well as the whole lower portion of the cover, are covered with a facing of leather, in order that the binder may present a sightly and attractive appearance. The detent 5 is equipped with a stud 8 which projects through a slot in the outer member of the bar A in position to be manipulated by the user of the binder. Preferably the metal is slightly countersunk around the slot so as to permit ready manipulation by means of the thumb-nail.

It is obvious that when the detent 5 is disengaged by means of the stud 8 from engagement with the shoulder of the hinged element 4, the cover D may be slipped axially of the pivots to a point where it will be disengaged and may be removed; and that in replacing the cover, when it is moved from the position shown in Fig. 2 to a position of axial alinement of the pivots and their bearings, the nose 6 of the detent will be depressed under spring tension and as soon as the cover is moved to the position shown in Fig. 1 the detent will spring into engaging position back of the socket shoulder with which it coöperates, thus securing the parts against disengagement.

In doing the work which my invention is particularly intended to facilitate, the bars A and B are spread apart to disengage the interposed entry sheets. The cover D is then disengaged and placed in the position shown on the upper portion of the rack, and the sheets (or any desired portion of them) removed from the binder structure and placed in the same division of the rack upon the cover. During the process of posting, the sheets are taken from this position, entries made thereon, and the sheets then returned to the binder in the lower compartment of the rack.

I claim:

1. In a loose leaf binder having an extensible back and opposite covers hinged thereto, the hinge members of one cover being disengageable from the coöperating hinge members of the back, a spring detent for locking said hinge members in coöperative relation, and a manually-operable member for shifting said detent to inoperative position.

2. In a binder structure having covers and a pair of opposite side bars, means for hinging a cover to one side bar including a series of pivots carried by one of said last-mentioned two members, a series of bearings carried by the other member, said pivots and bearings being arranged to be disengaged by relative movement in an axial direction, a detent arranged to prevent such relative axial movement when the pivots and bearings are in engaged position, and means for shifting said detent to inoperative position.

3. In a loose leaf binder having an extensible back, a cover hinged thereto, either said back or said cover being equipped with a series of pivots and the other of said members with a series of bearings and said pivots and bearings being arranged to be disengaged by relative movement in an axial direction, and a spring detent arranged to prevent such relative axial movement when the pivots and bearings are in engaged position.

4. A loose leaf binder structure according to claim 3 in which the spring detent is housed in the binder back and provided with an operating stud projecting therefrom in position for manual operation.

5. A loose leaf binder structure according to claim 3 in which the spring detent is pivoted upon the binder back and formed with a nose arranged to coöperate with a hinge member on the cover.

6. A loose leaf binder structure according to claim 3 in which the spring detent is arranged to be displaced during the initial relative axial movement of the cover and binder back from disengaged to engaged position and then dog into engagement as such movement is completed.

7. A loose leaf binder according to claim 6 in which the spring detent is a pivoted member housed within the binder back and formed with a projecting nose arranged to be displaced by a shouldered member on the cover.

FRED L. MANNY.