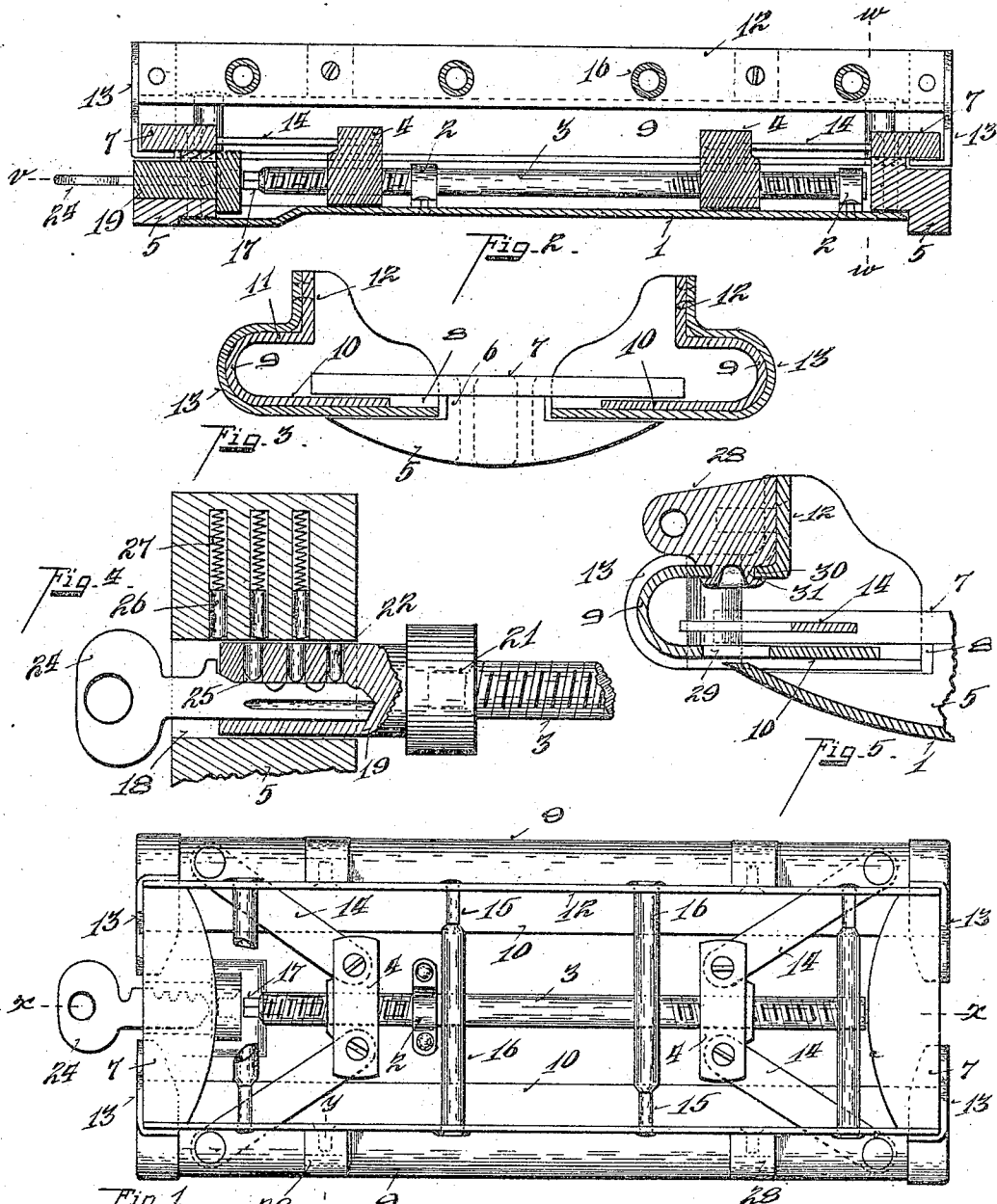


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LEDGER BINDER.

APPLICATION FILED JULY 6, 1909.

948,578.

Patented Feb. 8, 1910.



Witnesses

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Fig. 6.

By

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UNITED STATES PATENT OFFICE.

WALTER S. MENDENHALL, OF CINCINNATI, OHIO, AND CHARLES E. STEBBINS, OF COVINGTON, KENTUCKY, ASSIGNORS TO THE SAMUEL C. TATUM COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

LEDGER-BINDER.

948,578.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed July 6, 1909. Serial No. 506,077.

To all whom it may concern:

Be it known that we, WALTER S. MENDENHALL, a citizen of the United States, residing at Cincinnati, in the county of Hamilton, State of Ohio, and CHARLES E. STEBBINS, a citizen of the United States, residing at Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Ledger-Binders, of which the following is a specification.

Our invention relates to a binding mechanism for loose-leaf ledgers.

The object of our invention is to produce a simple and efficient mechanism, neat, compact, and ornamental in appearance, with convenient means for manipulating and locking the movable parts.

The features of the invention are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which:—

Figure 1 is an inside plan view of the ledger-back. Fig. 2 is a section on line *x, x*, Fig. 1. Fig. 3 is an enlarged section on line *w, w*, Fig. 2. Fig. 4 is a detail section on line *v, v*, Fig. 2. Fig. 5 is an enlarged detail section on line *y, y*, Fig. 1. Fig. 6 is an end view of the binding mechanism.

The back of the binder mechanism consists of a segmental plate 1, upon which the binding parts are movably mounted.

2 represents brackets attached to the inside face of plate 1. 3 is an adjusting screw journaled in said brackets and having right and left hand threads formed on its opposite ends. Upon each of said threaded ends is secured a slide-nut 4, the rear face of which conforms to and has a bearing engagement against the inner face of the segmental plate 1. It will thus be seen that the adjusting screw is closely and rigidly supported relative to the fixed plate 1, with the slide-nuts which operate the expansible parts, having a substantial bearing in their movements. A segmental cross-piece 5 is rigidly attached over the plate 1 at each end, the opposite ends of the screw 3 terminating adjacent the opposing faces thereof. The pieces 5 are formed with the forwardly projecting bosses 6, to which are secured the guide plates 7, thus forming a top and bottom slide-way 8, between the pieces 5, 7,

within which parts of the upper and lower binding members are secured.

9 represents the extensible members substantially U-shaped in cross-section, one of the limbs 10 lying within the slide-way 8, and the outer limb 11, being provided with a flange 12, extending outwardly, substantially at right angles relative to the limb 10 and constituting the binding lip.

13 represent angle plates secured over the outer ends of the members 9, one portion of said plate extending within the slide-way 8, and another portion of said plate overlapping the outer edge of the guide-plate 7, as shown in Fig. 6. When the binder is wholly contracted, the opposing edges of these plates exposed on the ends of the binder are brought into contact.

14 represents links pivoted respectively to the nut 4, and to the opposite binding members 9, the said links operating in the plane of the space formed between the limbs 10, 11, of said members 9.

15, 16, represent the top and bottom telescoping binding posts secured to the opposite binding lips 12 respectively.

The operating end of the screw 3 is provided with a squared head 17. The cross-piece 5, adjacent the squared head 17, is formed with an orifice 18, in which is mounted a conventional tumbler locking sleeve 19, rotatably and longitudinally movable within the orifice 18. It is provided with a key-way at its outer end, and on the inner end it is formed with a socket orifice 21 for engaging the squared head 17, to operate the screw 3. The sleeve 19 is provided with radially moving pins 22, the inner ends of which are beveled and engage into the key 24, said pins sliding in radial orifices and adapted to engage the spring actuated bolts 26, sliding in the orifices 27, formed in the lock member fixed within the end piece 5.

In operation, the key is inserted, as shown in Fig. 4, the sleeve 19 is longitudinally moved therewith until the socket-way 21 engages the squared head 17, enabling the operator to turn the screw to open or close the binding lips. When the binder is adjusted, the key is pulled outwardly to bring the sleeve 19 wholly within the orifice 18, to position indicated in Fig. 1, disengaging the connection with the screw. By this con-

struction of lock and screw-rod actuating means, the binding members can be adjusted to any degree and the actuating mechanism withdrawn from the rod at any point in its rotation in either direction. Thus the exact degree of tension desired can be brought upon the leaves of the ledger. The key and tumbler sleeve are then rotated to bring the pins 22, and bolts 26, into registration, the bolts forcing the pins inwardly and interlocking into the radial orifices 25, holding the sleeve against rotation, at which position the key can be removed from the sleeve.

The construction of the binder members 9, affords a convenient means for rigidly securing the hinged members 28, to the outer surfaces of the binding lips 12. In order to do this, the lips 10 are drilled with the orifices 29, and the limbs 11 are drilled with smaller orifices 30. The hinge members 28 are formed with tubular bosses 31, inserted through the orifices 30, the inner edges being spun against the inner surface of the limb 11 by a proper tool projected through the orifices 29, thus securely attaching the hinge members for the binder covers. Both faces of the hinge members 28 abutting the clamping plates may be secured similarly.

Having described our invention, we claim:—

1. In a binder, a back-plate, a right and left threaded adjusting screw journaled thereon, cross-pieces secured to the ends of the plate and formed with slide-ways, one end of said screw being formed with a squared head adjacent the cross-piece, said cross-piece being formed with an orifice, a tumbler sleeve rotatably and longitudinally movable in said orifice and formed on its inner end with a socket-way for operating

the screw, said cross-piece being provided with spring actuated bolts to interlock with the sleeve, adjusting nuts engaging the ends of said screw, binding members held by the back plate in sliding relation to said slide-ways of the cross-pieces, and links connecting the longitudinally movable nuts with said binding member, whereby the same may be extensibly operated relative to one another and said back plate.

2. In a binder, a binding member substantially U-shaped in cross-section, having an outwardly extending binding lip on one of the limbs, said limbs being formed with transverse orifices, a hinge member secured upon the outer surface of the binding lip, and having a tubular boss inserted through the adjacent orifice and spun against the inner surface of the binder limb.

3. In a binder, a binding member, a hinge member secured thereto, having a tubular boss inserted through an adjacent orifice in the binding member and spun against the same.

4. In a binder, a pair of movable binding members, a right and left threaded adjusting screw, connections between said binding members and adjusting screw, and means for actuating said screw comprising a rotatable and longitudinally movable tumbler sleeve, adapted to be engaged and disengaged with said screw at any point of rotation of the tumbler sleeve.

In testimony whereof we have hereunto set our hands.

WALTER S. MENDENHALL.
CHARLES E. STEBBINS.

Witnesses:

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