

R. E. MURPHY.

POST BINDER.

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957,895.

Patented May 17, 1910.

Fig. 1.

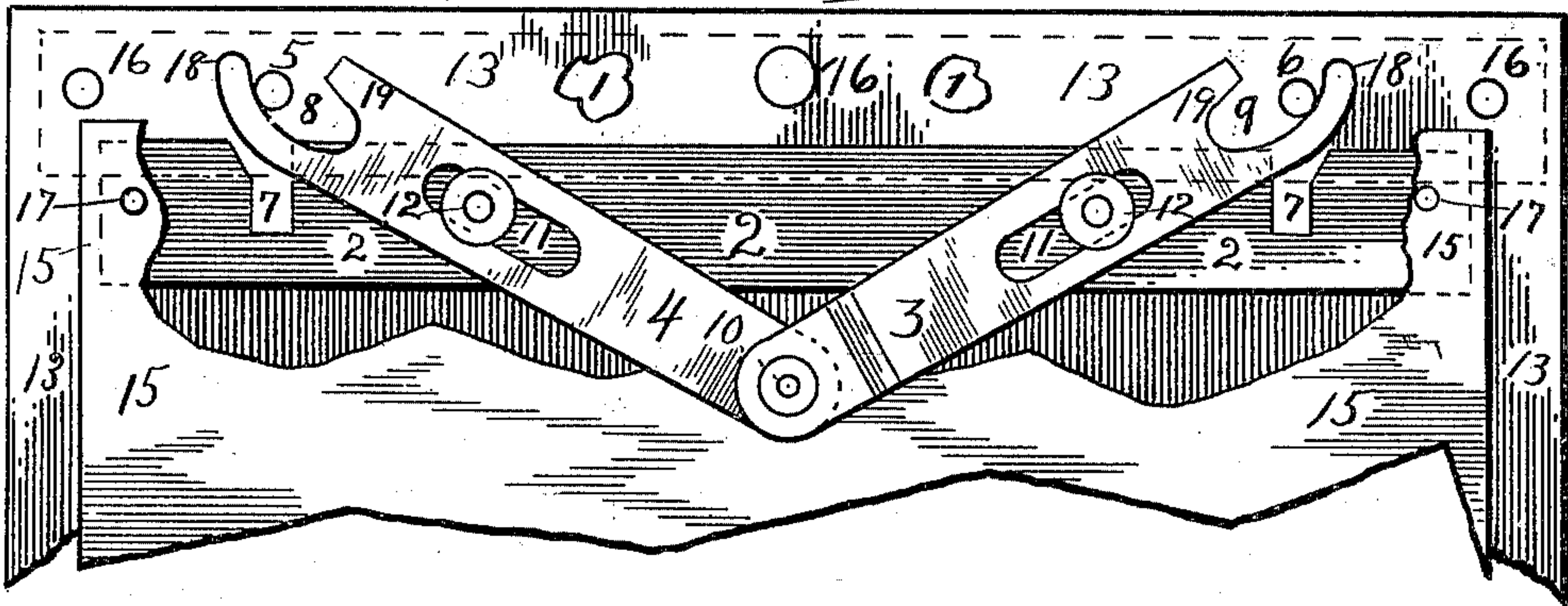


Fig. 2.

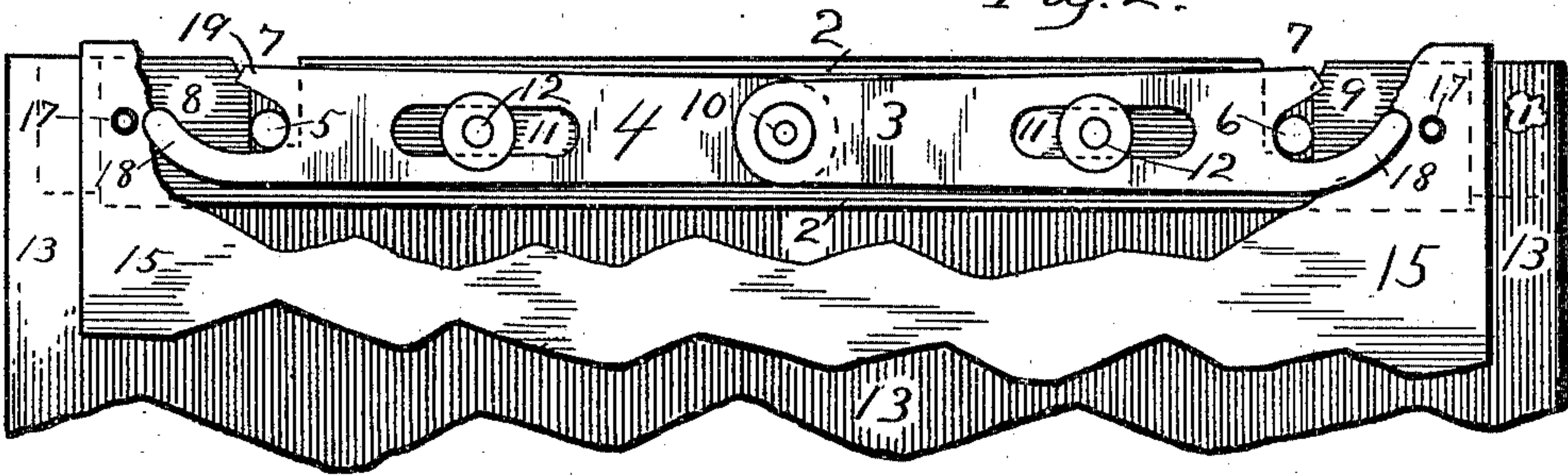
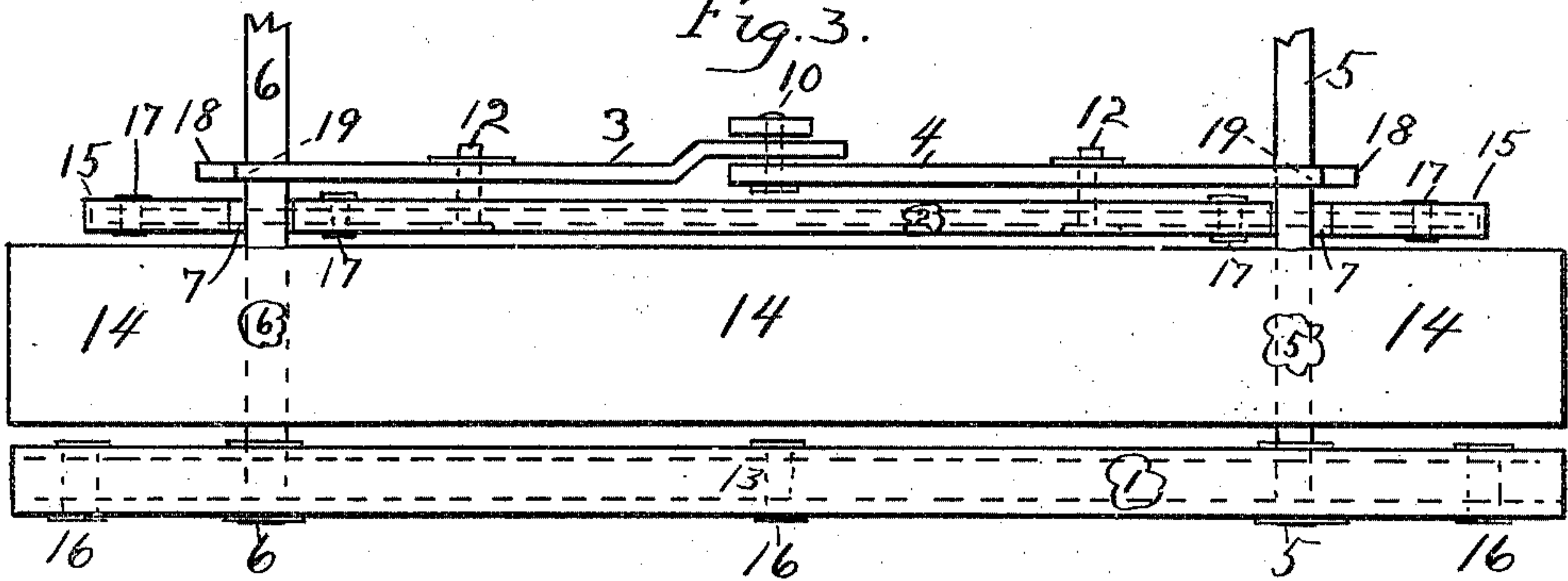


Fig. 3.



WITNESSES:

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POST-BINDER.

957,895.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROY EMMY MURPHY, a citizen of the United States, residing at Colorado Springs, in the county of El Paso and State of Colorado, have invented a new and useful Improvement in Post-Binders for Loose-Leaf Books, of which the following is a specification.

My invention relates to improvements in post binders in which the base 13, having a metal plate 1, supports two metal posts, connected at top plate 2, by means of a toggle joint, on top of said plate 2, engaging the two metal posts.

The objects of my improvements are to provide means of quickly and securely clamping down over posts 5 and 6, the back edge of the leaves of a loose-leaf book, and to provide a means of quickly removing the upper cover from a loose-leaf book by an automatic device for latching and unlatching said cover to and from said posts whether the leaves in the book be few or many. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1, is a top view of the top and bottom covers or bindings, showing the top cover unlatched and partly removed from the posts of the under binding or cover, and parts of the cover 15, removed to show the working parts beneath. Fig. 2, is a top view of the top binding latched down to the posts 5, and 6, thus connecting the top and lower bindings. Fig. 3, is a rear elevation of the loose-leaf book, showing the back edge of the under binding 13, and the back edge of the top binding, or cover, 15, which is shown latched down upon the leaves 14 between the two bindings.

Similar numerals refer to similar parts throughout the several views.

The top cover, or binding, 15, carrying toggle arms 3, and 4, and the under binding 13, containing base plate 1, provided with posts 5 and 6, constitute the principal part of the machine.

The under binding 13, consists of a protecting board or sheet of canvas, leather, or some other suitable material of suitable size to protect the leaves of the book, and inclosing near its back edge a metal plate 1 which is fastened to said under binding by rivets 16, and by posts 5, and 6, or otherwise, and which plate 1, has rigidly and

permanently riveted thereto, two posts 5 and 6, perpendicular to the top flat side of said plate 1, and they are made to hold the leaves of a loose-leaf book, in place by passing through suitable holes provided in or near the back edge of the said leaves, and projecting up through said leaves so that they may be engaged by the recess 8, and the recess 9, and toggle arms 4, and 3, respectively, so as to clamp cover plate 2, which is contained within the back edge of top binding 15, down rigidly against the top of the leaves of a loose-leaf book as shown in Fig. 2.

The top binding or cover, 15, consists principally of a protecting board or sheet of suitable material, hinged near its back edge, so that the cover can be lifted from in front like the lid of any common book to expose the leaves beneath, and inclosing between said hinge and the back edge of said cover a metal plate 2, which is fastened to said cover 15, by means of rivets 17, or otherwise, and which plate 2, carries studs 12, and 12, supporting toggle arms 3, and 4, of a toggle joint.

To clamp cover plate 2, on base plate 1, the operator takes hold of top binding 15, near the ends of cover plate 2, and forces toggle arms 4 and 3 against posts 5, and 6, and in so doing said cover plate 2, is automatically locked on said posts 5, and 6, by means of toggle arms 3, and 4.

When the operator forces cover plate 2, against posts 5, and 6, said lugs 19, being shorter than the lugs 18, said posts first engage long lugs 18, and 18, of toggle arms 3, and 4, holding them back toward the operator or from the back of the book. This causes the toggle arms 3, and 4, to pivot on studs 12, and 12, thus bringing the hinge joint 10, backward, or toward the back of the book or from the operator, as he pushes said cover plate 2, from him until the hinge joint 10, passes a point in line with said studs 12, and 12, and posts 5, and 6, as shown in Fig. 2. It is obvious, that as hinge joint 10, is brought into line with stud 12, and stud 12, and posts 5, and 6, that toggle arms 3, and 4, must slide on studs 12, and 12, by means of slotted holes 11, and 11, near the centers of said toggle arms 3, and 4, by reason of the straightening of said toggle joint from its position as shown in Fig. 1, to its position as shown in Fig. 2. It is also obvious, that

recesses 8, and 9, are forced farther apart as the toggle joint is straightened and in so doing they are forced against the posts 5, and 6, with sufficient pressure to hold them
 5 in place by means of the friction of their pressure thereon, the distance between said posts being a little less than the distance between the bottoms of the said recesses in toggle arms 3, and 4, when they are fully
 10 extended, so that when the said toggle arms 3, and 4, are extended at full length they force the posts 5, and 6, against the outer edges of recesses 7, and 7, which keeps the posts 5, and 6, from spreading farther, and
 15 which makes an additional friction to hold the cover plate 2, against the posts 5, and 6. The said toggle arms 3, and 4, are hinged at hinge joint 10, by means of a stud and bolt, and said arms are supported from touching
 20 each other by means of a washer to facilitate free action. Said toggle arms 3, and 4, are carried on plate 2, by means of studs 12, and 12, secured to cover plate 2, by means of bolts or rivets; said studs being rigidly at-
 25 tached to cover plate 2, and working freely in toggle arms 3, and 4, in slotted holes 11, and 11.

When top binding 15, is clamped to under binding 13, as shown in Fig. 2, and it is de-
 30 sired to remove it, the operator may take hold of hinge joint 10, and force it forward from the back of the loose-leaf book which will cause it to unlatch, when the cover can be raised off or pulled forward as desired:
 35 or he may take hold of the top binding 15, over the ends of cover plate 2, and pull it forward from the back of the loose-leaf book, which will cause the back of posts 5, and 6, to be pressed against the inner
 40 edge of short prongs 19, and 19, which will cause hinge joint 10, to be forced forward to a position from that occupied by it in Fig. 2 to that occupied by it in Fig. 1, thus releasing posts 5, and 6, from recesses 8, and

9, of toggle arms 3, and 4, and recesses 7, 45 and 7, of cover plate 2.

I am aware that prior to my invention, covers and bindings in combination with post binders have been used. I therefore do not claim such a combination broadly; 50 but

I claim:—

In a temporary binder of the class described, the combination of two sections connected by two binding posts which are 55 rigidly attached to the lower section and adjustably clamped to the upper section, a plate 2, having in one edge near its ends recesses 7, provided to receive the said posts and having on its upper side the two studs 60 12, each located about $\frac{1}{4}$ the distance from one end of said plate to the opposite end thereof, a toggle joint comprising the two arms 3 and 4, each having near its center the slotted holes 11, through which pass the 65 aforesaid studs 12, sliding loosely longitudinally in the said arms 3 and 4, the outer end of the arm 3, being provided with recess 9, encompassed at its front in part by the short lug 19, and at its rear by the long 70 lug 18, which extends beyond the end of the short lug 19, the arm 4, having recess 8 encompassed in front by the short lug 19, and at its rear by the long lug 18, which extends beyond the end of short lug 19, said 75 recesses 8 and 9, being provided to receive posts 5 and 6, when the plate 2 is forced toward said posts, the lugs 19 at the front extremities of the arms 3 and 4 provided to engage posts 5 and 6, when the upper sec- 80 tion and plate 2 are being withdrawn from the posts 5 and 6, substantially as set forth and for the purposes specified.

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Witnesses:

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