

R. REIFEL & G. BLATTEL.
 LOOSE LEAF BINDER.
 APPLICATION FILED DEC. 28, 1912.

1,094,019.

Patented Apr. 21, 1914.

2 SHEETS—SHEET 1.

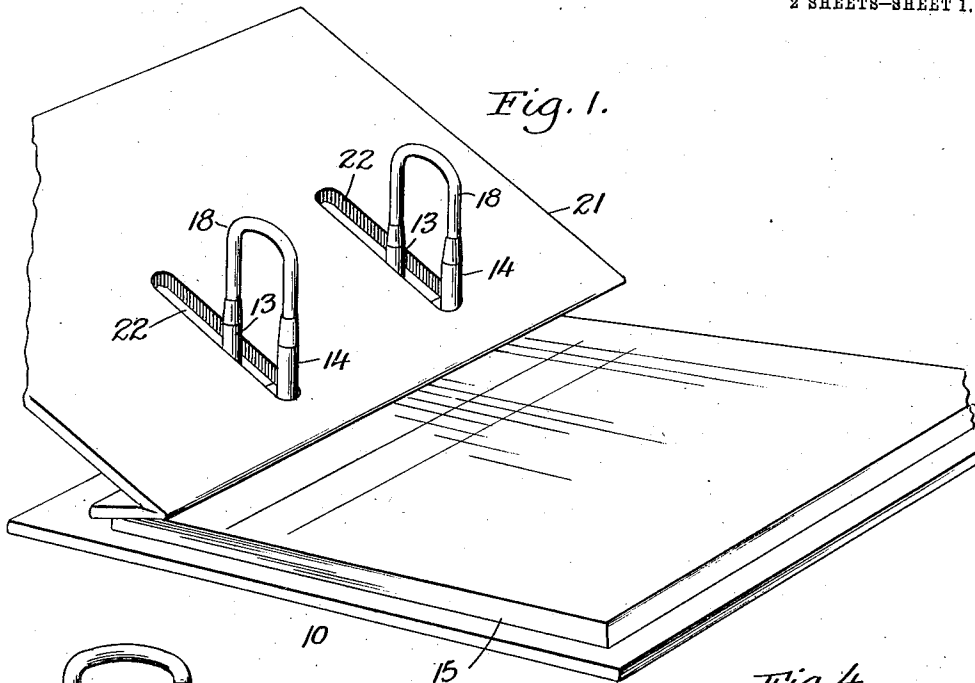
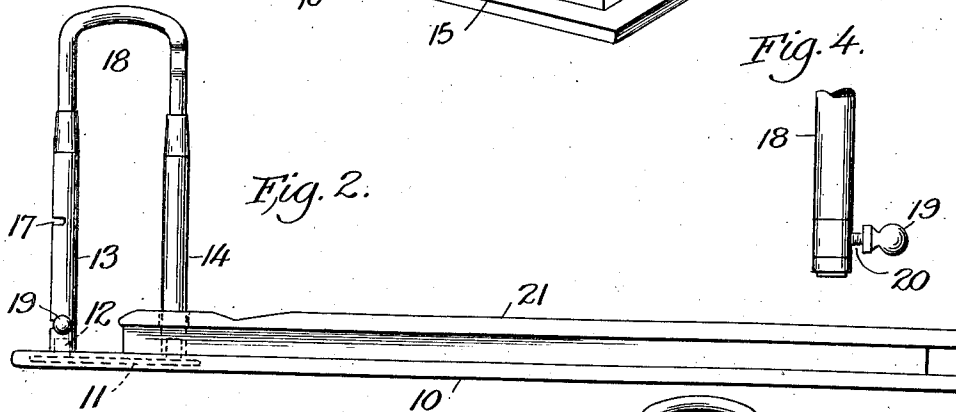


Fig. 4.

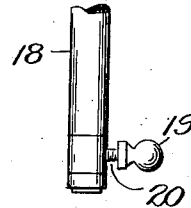
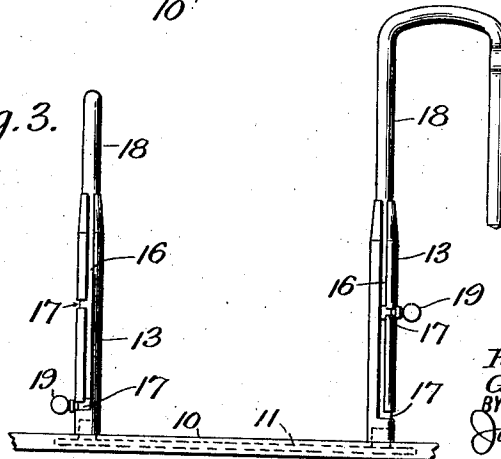


Fig. 3.



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Fig. 5.

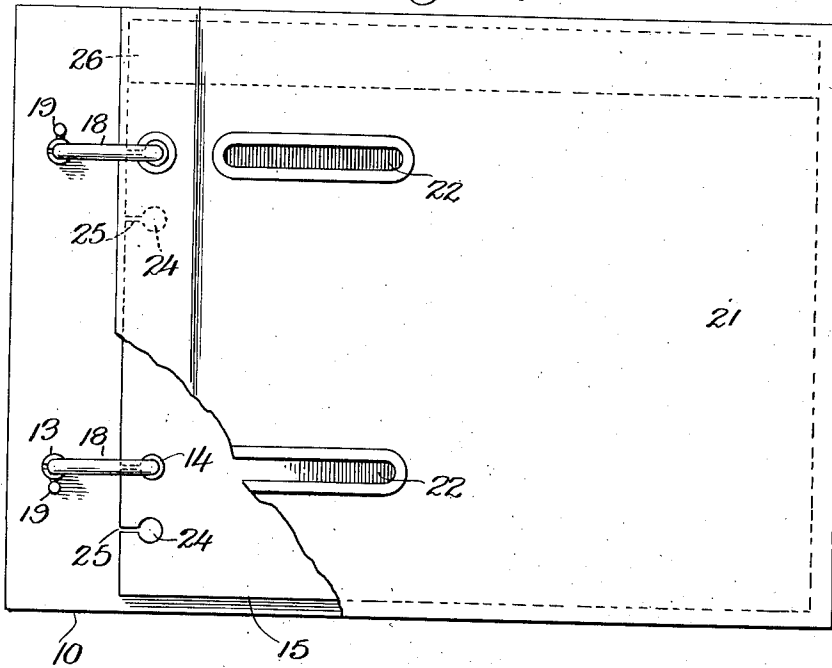


Fig. 6.

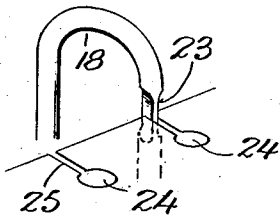
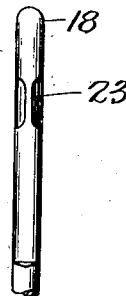


Fig. 7.



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UNITED STATES PATENT OFFICE.

ROBERT REIFEL AND GEORGE BLATTEL, OF NEW YORK, N. Y.

LOOSE-LEAF BINDER.

1,094,019.

Specification of Letters Patent.

Patented Apr. 21, 1914.

Application filed December 28, 1912. Serial No. 739,009.

To all whom it may concern:

Be it known that we, ROBERT REIFEL, a citizen of the United States, and GEORGE BLATTEL, a subject of the Czar of Russia, and residents of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

This invention relates to loose leaf binders and has for its object a simple and quickly operated means whereby the leaves may be inserted or removed and the cover of the binder thrown back, regardless of the thickness of the book, for making records or reference, as will be more fully described in the following specification, set forth in the claims and illustrated in the accompanying drawings, wherein:

Figure 1 is a perspective view of a loose leaf binder comprising this invention and with the back thrown open. Fig. 2 is a side view of the device. Fig. 3 is a view of the essential parts of the invention from the rear. Fig. 4 is a detail view of one of the links. Fig. 5 is a plan view of the binder partly broken away. Figs. 6 and 7 are detail views.

In a loose leaf binder instant release or insertion of the sheets is very necessary and the means for accomplishing these objects must be simple, accessible and readily operated, and in providing these features this device comprises the base board 10 having inclosed at one end a metal plate 11 with four or more studs 12 arising from its upper side. The studs 12 are threaded to screw into the lower ends of tubular posts 13 and 14, the latter being tapered at their upper ends for the convenient passage of the perforations of the leaves 15 as they are secured in the binder.

The posts 13 are provided on their rear sides with longitudinal slots 16 and lateral slots or branches 17 and may be tapered if desired. The posts are located as at the corners of a rectangle and act in pairs, each of the posts 13 coöperating with the post 14 at its end of the rectangle to receive a link 18 of steel wire which is arched at the top and whose ends are adapted to fit in the adjacent tubes. One end of the link is longer than the other and is adapted to be carried in the post 13 while at the lower end of this longer end is swiveled a knob

19 whose stem 20 slides in the slot 16 and may be diverted into one of the lateral slots 17.

The knob 19 and its stem are capable of locking the link at any desired height in the tubes so as to retain the sheets in the binder and to provide for a pile of sheets of different thicknesses. In order to place additional sheets on the posts 14, the knob 19 is thrown around and alined with the slot 16 when the link is raised until its short end clears the upper end of the tube 14. The link is then swung around to the position shown at the right of Fig. 3 and may be retained at that position by rotating the knob into the upper lateral slot. Both links are thus swung around and the cover or back board 21 removed, affording access to the sheets or permitting new sheets to be placed on the posts. On replacing the cover the links are swung around, the knobs released and both ends of the links drop into the tubes. The links are then locked in place by throwing the knobs around and into the lateral slots. The tubes and links would ordinarily prevent the opening of the back 21 to a position where it would remain and to provide means to permit its remaining open the back is made with slots 22 to receive the links and allow the cover to be thrown back into a position where it will remain.

The back board and sheets are provided with the usual perforations to fit over the posts and those in the back board and its slots 22 may be lined with metal. It is obvious that the parts may be modified or otherwise arranged without departing from the essential features above described.

In the upper end of the short arm of the link 18 is a reduced portion 23 while the perforations 24 of the leaves 15 have a lateral slot or outlet 25 to the rear edge of the sheet. It is often necessary to shift the top sheet of the leaves to one side to compare the final columns of the sheets. The sheet is then lifted, after the cover 21 is swung over, until the outlet 25 reaches the reduced part 23 where it is extracted and replaced by means of the adjacent outlet into the position shown in Fig. 5 where it will be seen that the edge of the lower sheet is exposed for comparison with the upper sheet. The sheets may be thus removed without destroying the perforations or injuring the outlets and the sheets are held firmly in place but upon re-

moving or replacing the entire assemblage of leaves the links are disconnected as above described.

What we claim as new and desire to secure by Letters Patent is:

1. In loose leaf binders, the combination with a base, of tubular posts, a link with ends adapted to fit in the posts, and a swiveled stud on one end of the link and adapted to be locked in one of the posts.

2. In a loose leaf binder, the combination with a base, of tubular posts in pairs, one post of each pair being slotted, removable links entering and connecting the posts, and means on one end of each link and operating in the slots of a post to adjust and lock the link.

3. In loose leaf binders, the combination with a base, of tubular posts, a link with ends adapted to fit in the posts, locking means at one end of the link, and means on the tube coöperating therewith to permit the links to be locked at different heights.

4. In loose leaf binders, the combination with a base, of tubular posts to receive the leaves, coöperating slotted posts, links having ends to fit in the posts, and swiveled studs at one end of the links to work in the slots and be locked at a desired point.

5. In loose leaf binders, the combination with a base, of a plate therein, tubular posts secured to the plate, those at one side having longitudinal and lateral slots, links with ends of different lengths, swiveled studs and knobs on the longer ends of the links and adapted to play in the slots to lock the links at certain points, and a cover with slots to pass over the links and posts.

6. In loose leaf binders, the combination with a base, of tubular posts with slots secured to a plate in the base, leaves with perforations and outlets, links with ends of different lengths and reduced in thickness at the shorter end, locking means at the longer end of the link and operating in the slots of the posts, coöperating posts for the shorter ends of the links, and a cover hinged on the coöperating posts and having slots to enable it to pass the links.

Signed at New York in the county of New York and State of New York this 27 day of December A. D. 1912.

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