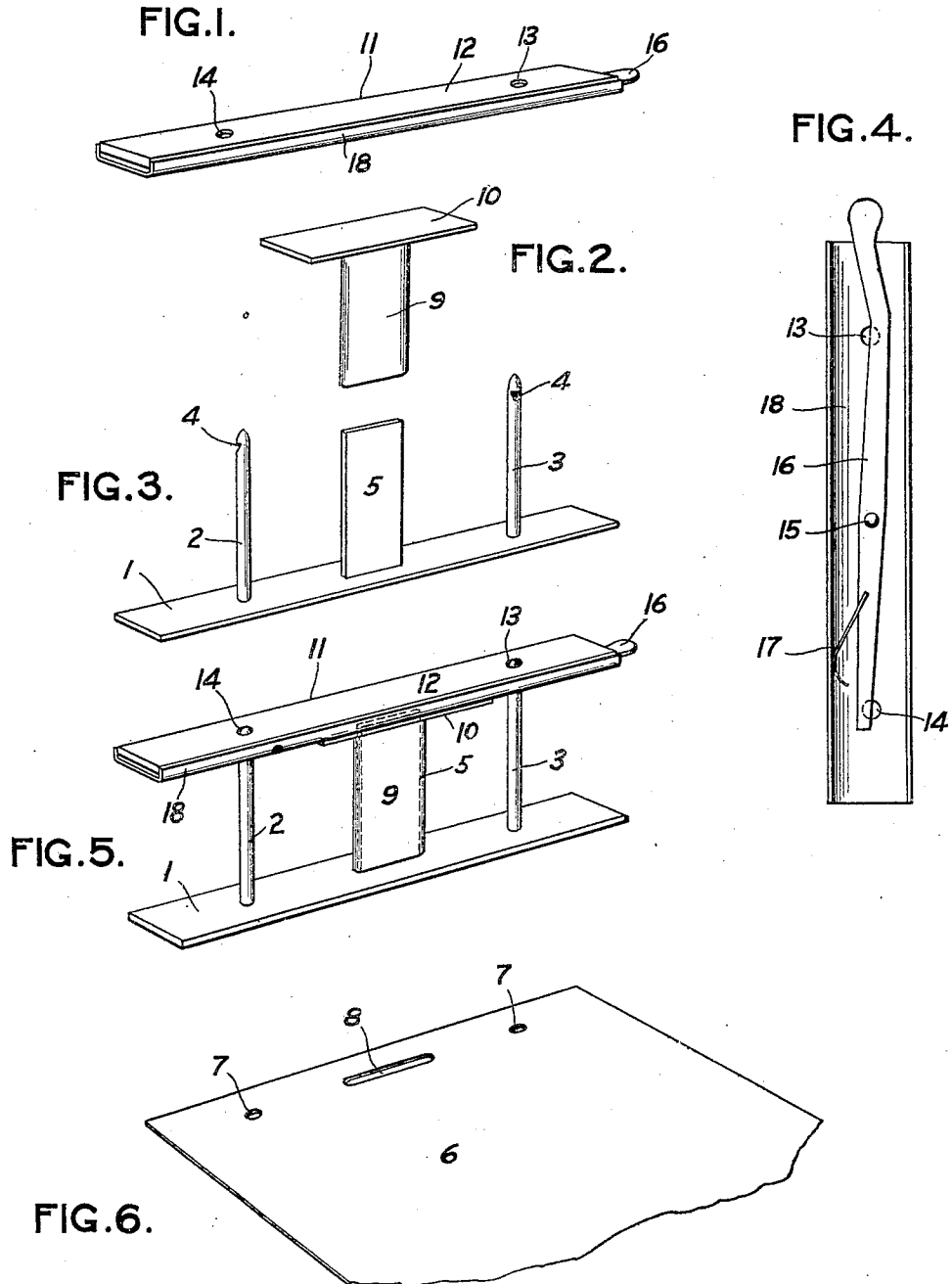


F. G. EICHORN.
 LOOSE LEAF BINDER.
 APPLICATION FILED JULY 15, 1909.

948,502.

Patented Feb. 8, 1910.



WITNESSES:

Clarence W. Carroll
L. Thon

INVENTOR:

Frank G. Eichorn
by O. J. Smith & Sons
his attys

UNITED STATES PATENT OFFICE.

FRANK G. EICHORN, OF ROCHESTER, NEW YORK, ASSIGNOR TO HENRY CONOLLY COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

LOOSE-LEAF BINDER.

948,502.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed July 15, 1909. Serial No. 507,871.

To all whom it may concern:

Be it known that I, FRANK G. EICHORN, a citizen of the United States, and resident of Rochester, in the county of Monroe 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 consists in the apparatus hereinafter described and claimed.

The object of the invention is to provide a loose leaf binder mechanism that is of simple construction, easy to operate, and that has means whereby leaves removed from the binder may be held with their perforations in proper registry for easy return to the binder.

In the drawings:—Figure 1 is a perspective view of the retainer element of the binder; Fig. 2 is a perspective view of the transfer blade of the binder; Fig. 3 is a perspective view of the binder plate and its posts; Fig. 4 is a bottom plan view of the retainer blade shown in Fig. 1 with the cover plate removed; Fig. 5 is a perspective view of the binder; and Fig. 6 is a perspective view of one end of a sheet of paper adapted to be used in said binder.

In the drawings, 1 is the base plate adapted to be attached to one of the side covers of a book, if so desired, or to a drawer bottom, or to any other support. The base plate 1 carries two vertical posts 2, 3, each having near its upper end a notch 4. These notches face in opposite directions. Between the posts 2 and 3, and preferably in line therewith, is a vertical plate or blade 5. The sheets of paper 6 have near one edge two circular perforations 7, 7, adapted to fit upon the posts 2, 3, and between the circular perforations is an elongated slot 8, adapted to fit loosely around the blade 5. A hollow, flattened tube 9 is adapted to fit over and around the blade 5 for its full length, and has on one end at right angles to the blade a short plate 10; which plate, when the tube 9 is upon the blade 5, is shorter than the distance between the posts 2, 3. When the tube 9 is upon the blade 5, the top of the plate 10 is below the level of the notches 4, 4, in the posts 2, 3.

If the series of sheets of paper are placed upon the posts and the transfer device (consisting of the tube 9 and plate 10) is in position, means are provided for preventing the too easy removal of the paper sheets, and for

this purpose the retainer 11 is employed. It consists of a plate 12 having perforations 13 and 14 adapted to fit on the ends of the posts 2 and 3. On the plate 12 is pivoted at 15 a lever 16, which is normally thrown in one direction, so as partly to cover perforations 13 and 14 by a spring 17, which may press against a portion of the plate 12, or of the cover piece 18, which incloses the lever for protection. This cover piece is fastened in any suitable way to the plate 12, and has perforations registering with the perforations 13 and 14. Now when the retainer 11 is placed upon the ends of the posts 2, 3, and pressed down, the edge of the lever 16 snaps into the notches 4, 4, and the retainer is thus held in place upon the ends of the post.

In order to remove any sheets of paper from the binder, it is necessary to remove the retainer from the posts, and this is done by moving the exposed end of the lever 16 until the said lever, having turned upon its pivot 15, is free from the notches 4; whereupon the retainer may be removed from the posts. If now one desires to remove, or to insert a sheet from the middle of the mass of sheets in the binder, a finger is inserted between the sheets at the right point, and then lifting the said sheets upward and pressing with the thumb on the plate 10, the said sheets are held against said plate, and may be removed with the tube 9 from the binder. The sheet now exposed may be removed or a new one inserted, and then the other sheets may be returned to place by fitting the tube 9 upon the plate 5 and the perforations 7 on the ends of the posts 2, 3, whereupon the sheets are all easily and accurately returned to place. The long flat tube or hollow blade 9 pulls the sheets upon it to retain their registration. The retainer is now again put in place, which holds the transfer device in position, so that all parts of the binder are constantly in position for use, and are always removable and not apt to be separated or any lost.

What I claim is:—

1. In a loose leaf binder, a base plate having posts and a blade thereon, a tube over said blade and having on its upper end a plate at right angles thereto, and a retainer resting over said last mentioned plate and releasably attached to the free ends of the posts.

2. In a loose leaf binder, a base plate hav-

ing posts and a blade thereon, a flattened tube fitting around the blade and having on its upper end a plate at right angles thereto, and a retainer resting over said last mentioned plate and releasably attached to the free ends of the posts.

3. In a loose leaf binder, a base plate having posts and a blade between said posts, a flattened tube fitting around said blade and having on its upper end a plate at right angles thereto, and a retainer resting over said last mentioned plate and releasably attached to the free ends of the posts.

4. In a loose leaf binder, a base plate having posts thereon provided with notches in their free ends and a blade between said posts, a flattened tube fitting upon said blade and having on its upper end a plate at right angles thereto, a retainer resting over said last mentioned plate and having perfora-

tions for the ends of the posts, and a spring-actuated latch mechanism engaging said notches.

5. In a loose leaf binder, a base plate having posts thereon provided with notches in their free ends and a blade between said posts, a flattened tube fitting upon said blade and having on its upper end a plate at right angles thereto, a retainer resting over said last mentioned plate and having perforations for the ends of the posts and having a lever pivoted on said plate adjacent to said perforations, and spring means for throwing said lever to engage said notches when the posts are in the perforations.

FRANK G. EICHORN.

Witnesses:

D. GURNEE,
L. THON.