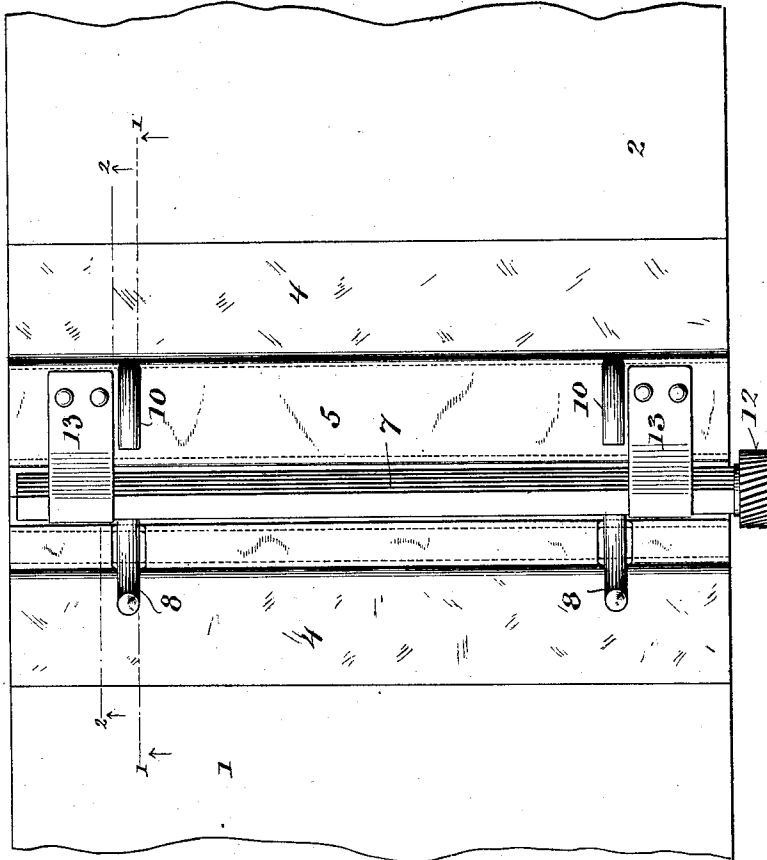
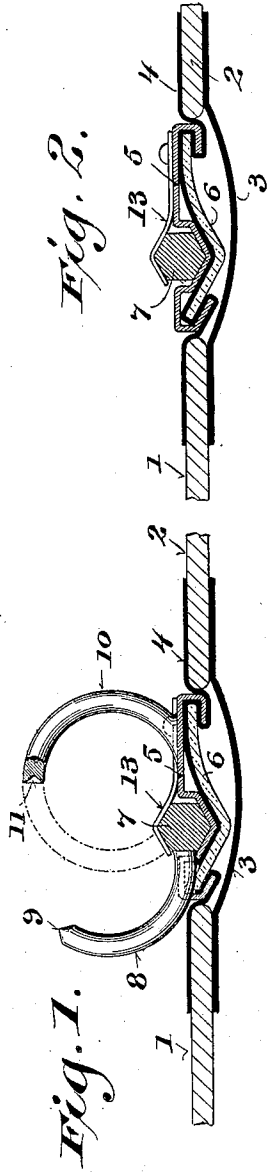


No. 763,583.

PATENTED JUNE 28, 1904.

G. P. WILLIAMS.
LOOSE LEAF BINDER.
APPLICATION FILED JAN. 16, 1904.

NO MODEL.



Witnesses
Geo W. Young.
Hugo Fahl.

Fig. 3.

Inventor:
Gavin Perry Williams
By H. G. Underwood
Attorney

UNITED STATES PATENT OFFICE.

GAVIN P. WILLIAMS, OF MILWAUKEE, WISCONSIN.

LOOSE-LEAF BINDER.

SPECIFICATION forming part of Letters Patent No. 763,583, dated June 28, 1904.

Application filed January 16, 1904. Serial No. 189,322. (No model.)

To all whom it may concern:

Be it known that I, GAVIN PERRY WILLIAMS, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Loose-Leaf Binders; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to that class of blank-book binders in which the leaves are separate and removable; and it consists in certain novel features of construction and combination of parts in the devices for holding said leaves in place and for the ready removal, insertion, or substitution of such leaves, all as will be fully set forth hereinafter, in connection with the accompanying drawings, and subsequently claimed.

In the said drawings, Figures 1 and 2 are transverse sectional views through a book embodying my said invention, taken, respectively, on the planes indicated by the lines 1 1 and 2 2 of Fig. 3; and Fig. 3 is a plan view of said book open and with the fastening devices also open for the reception of the said loose leaves.

Referring by numerals to the said drawings, 1 2 indicate the covers of a book to which my devices are attached, and 3 the back of said book.

4 designates a strip of any suitable fabric or flexible sheet (such as rubber or rubber cloth) to which my devices are secured in any suitable way, as hereinafter described, the side edges of said strip or sheet being then secured (as by cementing, riveting, or otherwise) to the inner surface of the said covers 1 2.

5 indicates a channeled supporting-plate, preferably of thin sheet metal, herein shown as having its side edges bent under toward each other around the edges of a pasteboard or other strip 6, which strip is beneath the fabric sheet 4, which latter is interposed at the edges between said strip 6 and the plate 5, all being secured together, as best shown in Figs. 1 and 2, by crimping the edges of the said

plate 5, so that said plate 5 occupies the space at the back of the book when the latter is closed. The said plate has a longitudinal polygonal-faced channel for the reception of a correspondingly polygonal-shaped rod 7, from one face of which there rise ring-sections 8, having preferably pointed ends 9, which engage when the rod is properly turned with other ring-sections 10, having, preferably, end sockets 11 to receive the said pointed ends 9 and complete the said rings, these sections 10 rising from the plate 5. The rod 7 is preferably formed with a milled head 12 rigid therewith for convenience in manipulation, and the rod is held in place by springs 13, secured adjacent to one edge of the plate 5 and extending transversely over said rod near said rings, the free ends of these springs being bent to conform to the shape of two adjacent polygonal faces of the said rod.

The operation of my device will be readily understood from the foregoing description of its construction, taken in connection with the accompanying drawings. In the position of the parts shown in full lines the rings are open, and any desired number of loose leaves (each perforated at the edge in line with said rings) can be slipped on the ring-sections 10, after which a slight turn of the rod 7 will bring the sections 8 8 into engagement with said sections 10 10, as indicated by dotted lines in Fig. 1, the rod 7 being readily turned by its head 12 under the springs 13 13, which yield sufficiently to enable this to be done, and then instantly snap down again, securely holding the rod in its new position, and thereby securing the loose leaves in position upon the rings. To enable a leaf or leaves to be removed, the rod 7 can be quickly turned in the reverse direction, thereby opening the rings again, as shown in the drawings.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a binder for loose leaves, the combination with a plate having a longitudinal channel formed therein having two plane sides at an angle to each other, of a rotatable polygonal-

faced rod located therein, spring-detents secured to said plate and extending transversely over said rod, and shaped at their free ends to conform to two adjacent faces of said rod,
5 and opposed ring-sections, rising from said plate and said rod respectively.

In testimony that I claim the foregoing I

have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

G. P. WILLIAMS.

Witnesses:

H. G. UNDERWOOD,

GEO. W. YOUNG.