

March 25, 1930.

A. G. LOTTER
LOOSE LEAF BINDER
Filed March 9, 1928

1,751,589

Fig. 1.

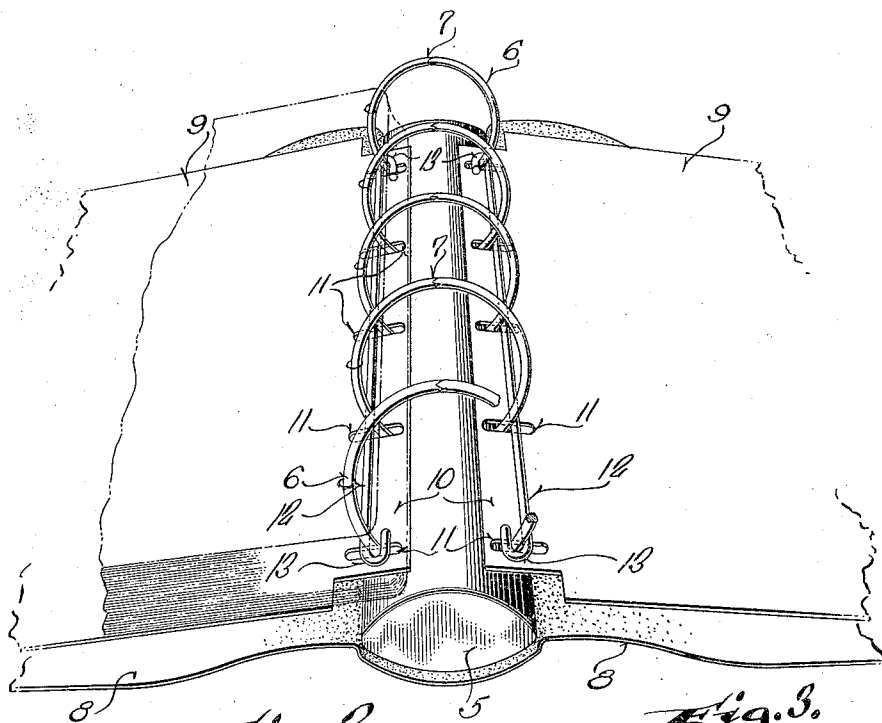


Fig. 2.

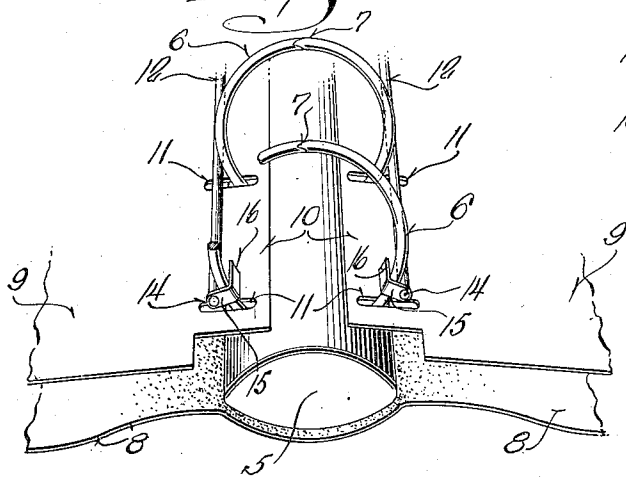
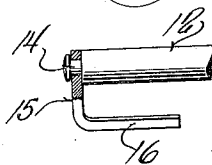


Fig. 3.



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UNITED STATES PATENT OFFICE

ADOLPH G. LOTTER, OF MILWAUKEE, WISCONSIN, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO STATIONERS LOOSE LEAF CO., OF MILWAUKEE, WISCONSIN, A CORPORATION OF
WISCONSIN

LOOSE-LEAF BINDER

Application filed March 9, 1928. Serial No. 260,314.

One objectional feature of the conventional ring type loose-leaf binder including a back member and covers suitably connected therewith and between which the leaves or sheets are secured by two or more retaining rings carried by the back member and having suitable means permitting their separation for the removal or addition of the leaves, is that the leaves tend to bind on the retaining rings as the covers are closed, frequently tearing the leaves about the holes through which the rings pass in addition to the inconvenience experienced in closing the binder.

In Letters Patent Number 1,724,407, issued to me on the 13th day of Aug., 1929, is illustrated a novel loose-leaf binder construction in which this objectionable feature is overcome and this invention has as a primary object the provision of means which may be applied to the binders illustrated in said Letters Patent to further increase their ease of operation and which may be readily applied to all types of loose leaf binders without in any wise altering their construction and which, when applied, greatly increases the ease of opening and closing and which protects the sheets against tearing at the rings. Another object of this invention resides in the provision of an improved attachment for loose-leaf binders which consists of a member disposed between the covers or the conventional follower members and the leaves adjacent the retaining rings and guided to follow about the rings in the closing of the binder to prevent binding and insure uniform sliding of the leaves over the rings.

A more specific object of this invention resides in the provision of improved rod members extending transversely across the binder and mounted to slide over the retaining rings between the covers or sheet followers and the sheets to cause uniform sliding of the sheets over the retaining rings and to prevent the leaves from entering the ring slots in the sheet followers, as the binder is closed.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of

parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the herein-disclosed invention may be made as come within the scope of the claims.

In the accompanying drawings, I have illustrated two complete examples of the physical embodiment of my invention constructed according to the best modes I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective view of a loose-leaf binder in open position with the sheets removed and having my improved device applied thereto;

Figure 2 is a fragmentary view similar to Figure 1 of a slightly modified form of my invention; and

Figure 3 is an enlarged, fragmentary detail view, partly in section and partly in elevation, said view being taken through one end of the anti-friction device illustrated in Figure 2.

Referring now more particularly to the accompanying drawing, in which like numerals designate like parts throughout the several views, 5 designates the back of a loose-leaf binder of the ring type which is approximately elliptical and tubular to receive the mechanism, not shown, mounting a plurality of spaced retaining rings 6 adapted to split, at a point 7, to permit engagement thereof of a plurality of apertured loose leaves or sheets.

Suitable covers 8 are hinged or otherwise connected with the longitudinal side portions of the back 5 to provide coverings for the sheets when the binder is closed. In structures of this type, it is customary to provide follower members 9, preferably of fiber board or the like, between the outermost sheets and the covers 8, the followers having their inner ends 10 provided with apertures or elongated slots 11 spaced apart to correspond with the distance between the rings 6, which are received therein in the manner illustrated, the follower members 9 assisting in closing of the body of leaves, not shown, as the binder is closed.

As brought out in the specification of the

Letters Patent above referred to, the leaves have a tendency to bind on the retaining rings as the binder is closed, and those adjacent the sheet followers very often are wedged between the edges of the ring slots in the followers, and the rings frequently causing the sheets to become torn adjacent their apertures in addition to the interfering with the closing action of the binder. This tendency to bind is overcome by members 12 illustrated in the present embodiment as rod members located at opposite sides of the rings with their ends looped or hooked, as at 13, about the adjacent end rings. In this manner, the rods 12 are mounted to freely follow the rings directly adjacent thereto, to prevent the wedging of the leaves between the edges of the ring slots in the follower members, and the rings, whereby the leaves move evenly over the rings, without binding.

In that form of my invention illustrated in Figures 2 and 3, provision is made whereby the rod members 12 rotate as they move over the rings, the ends of the rods being reduced in diameter, as at 14, and journaled in the transverse ends 15 of retaining members having arms or tongues 16 which engage over the adjacent endmost rings 6, in the manner of the hooks 13 to thus retain the rod members in place.

It will thus be readily apparent that my improved devices may be readily applied to all binders whether now in use or at the time of manufacture and that they materially facilitate the opening and closing movements of the binder and reduce undue wear on the leaves of the binder to a minimum.

What I claim as my invention is:

1. In a loose leaf binder including a plurality of spaced concentric rings, a cover member and a plurality of leaves loosely retained by the rings, means disposed between the cover member and the outermost leaves and engaged with the rings, and a member mounted transversely of the rings between said means and the outermost leaves for movement therewith adjacent the rings as the binder is closed to prevent binding of portions of the leaves between the rings and said means.

2. In a loose leaf binder including a plurality of spaced concentric rings, a cover member and a plurality of leaves loosely retained by the rings, means disposed between the cover member and the outermost leaves and engaged with the rings, a rod member adapted to be disposed between the outermost leaves and said means adjacent the rings, and means connecting said rod member with the rings whereby the same follows about the ring peripheries as the leaves are slid thereover in closing of the binder to prevent binding of portions of the leaves between the rings and said means.

3. In a loose-leaf binder including a plu-

rality of spaced, concentric rings, a plurality of leaves loosely retained thereby and followers loosely connected with the retaining rings and engaging the outermost of said leaves, anti-binding members disposed between the followers and the outermost leaves adjacent the rings to cause the even movement of the leaves over the rings.

4. In a loose-leaf binder including a plurality of spaced, concentric rings, a plurality of leaves loosely retained thereby and followers loosely connected with the retaining rings and engaging the outermost of said leaves, anti-binding members disposed between the followers and the outermost leaves adjacent the rings to cause the even movement of the leaves over the rings, each anti-binding member including a wire having its ends folded inwardly upon its medial portion and slidably engaged about the endmost of said rings.

5. In a loose-leaf binder including rings, a member connected with the rings and a plurality of leaves loosely retained by the rings and engageable by said member to be slid over the rings as the binder is closed, means positioned between the plurality of leaves and said member adjacent the rings to prevent binding of portions of the leaves between the rings and said member as they are slid over the rings.

6. In a loose-leaf binder including rings, a member connected with the rings and a plurality of leaves loosely retained by the rings and engageable by said member to be slid over the rings as the binder is closed, means positioned between the plurality of leaves and said member adjacent the rings to prevent binding of portions of the leaves between the rings and said member as they are slid over the rings, and means whereby said first-mentioned means is freely slidably held adjacent the rings at all times.

7. In a loose-leaf binder including rings, a follower having a loose connection with the rings and a plurality of leaves loosely retained by the rings and engageable by the follower to be slid over the rings as the binder is closed, a rod member positioned between the follower and the leaves to prevent binding of the leaves between the rings and the follower as they are slid over the rings.

8. In a loose-leaf binder including rings, a follower having apertures to loosely receive the rings and a plurality of leaves loosely retained by the follower to be slid over the rings as the binder is closed, a rod member slidably connected with the rings and extending transversely thereof between the follower and the leaves to prevent wedging of portions of the leaves between the edges of the follower apertures and the rings as the binder is closed.

In testimony whereof I have hereunto affixed my signature.

ADOLPH G. LOTTER.

CERTIFICATE OF CORRECTION.

Patent No. 1,751,589.

Granted March 25, 1930, to

ADOLPH G. LOTTER.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 2, line 116, claim 7, after the word "of" insert the words "portions of"; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 22nd day of April, A. D. 1930.

(Seal)

M. J. Moore,
Acting Commissioner of Patents.