Feb. 17, 1931. C. H. FRANZ, JR 1,793,076

LOOSE LEAF BINDER

Filed Dec. 9, 1929

Fig. 1.

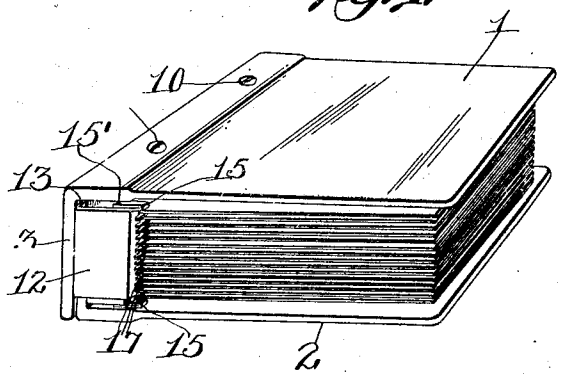


Fig. 3.

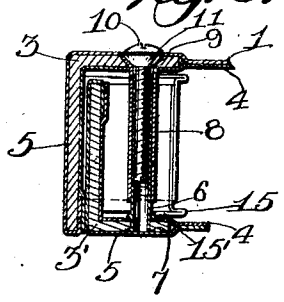


Fig. 2.

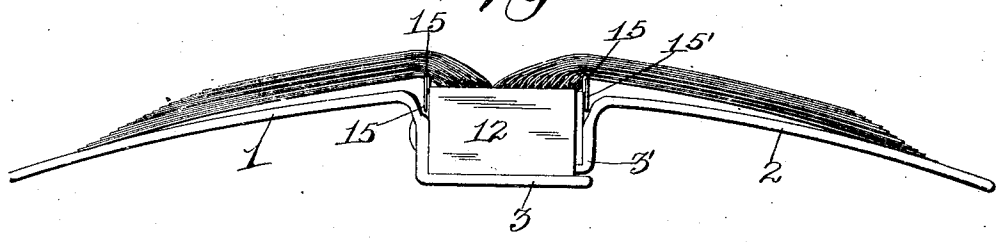
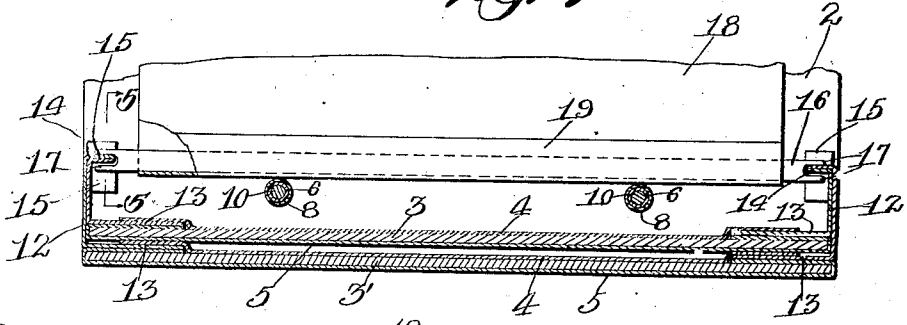


Fig. 4.



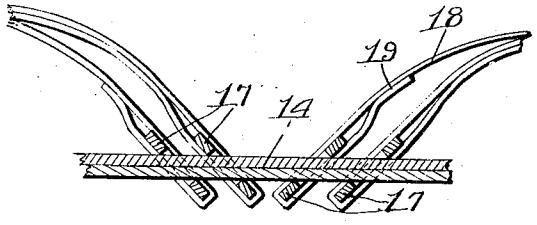


Fig. 5.

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UNITED STATES PATENT OFFICE

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LOOSE-LEAF BINDER

Application filed December 9, 1929. Serial No. 412,862.

This invention relates to improvements in loose-leaf binders.

One of the objects of my invention is the provision of a loose-leaf binder which is especially adapted for use in containing and supporting in loose-leaf formation, bulletins and the like, wherein the bulletins or the like may be folded over a movable supporting bar retained in position between two opposed cover members in such manner that the cover members and bulletin leaves may be readily opened to a position whereby the leaves mounted upon the movable supporting members will lie in a substantially flat position.

Another object of the invention is the provision of a loose-leaf binder including two opposed cover members carrying telescopic guides upon which are mounted a plurality of movable bars adapted to have engaged therewith loose-leaf bulletins or similar papers in such manner that when the back is moved to an open position, the bars may be slid upon the guides in order to permit the leaves to be opened to a comparatively flat position so that all of the reading matter on any of the leaves is clearly visible.

A further object of the invention is the provision of a loose-leaf binder including opposed flexible cover members having angular reinforcing plates at one edge adapted to be arranged in overlapped relation and carrying telescoping guide members upon which are mounted a plurality of movable bars, which support a plurality of leaves which may form parts of bulletins, papers, or the like, and includes means whereby the angular plates are adjustably connected so that they may be quickly detached from each other or connected together.

A still further object of the invention is the provision of a loose-leaf binder of the above character which includes opposed cover sections having arranged therebetween opposed guide members with longitudinal supporting bars having their ends bifurcated and slidably mounted upon the guide bars so that papers, catalogs, or the like, supported by said bars can be easily moved to an open position and lie substantially flat so that all reading matter on the papers, catalogs or the like, will be clearly visible.

With the above and other objects in view, the invention consists in the novel features of construction, the combination and arrangement of parts hereinafter more fully set forth, pointed out in the claims and shown in the accompanying drawings wherein:

Figure 1 is a perspective view of the loose-leaf binder constructed in accordance with my invention;

Figure 2 is an end elevation showing the same in an open position;

Figure 3 is a detailed transverse sectional view of the binder;

Figure 4 is a horizontal sectional view; and,

Figure 5 is a sectional view on the line 5—5 of Figure 4.

Referring more particularly to the drawing, it will be noted that I provide two outside cover members 1 and 2. The main body portions of the cover members 1 and 2 are of the flexible leather type, but the inner edges thereof have connected thereto the angular metal plates 3 and 3′, the plate 3 being attached to cover 1, and plate 3′ being attached to cover 2.

The flexible cover members 1 and 2 are provided with an inner lining 4 which extends back over the inner edges of the cover members and upon the interior of the metal plates 3 and 3′. The outer portions of the cover members 1 and 2 extend rearwardly and over the exterior of the angular plates 3 and 3′, as shown at 5, thus entirely covering the metal plates.

Attached to the angular plate 3′ are the spaced tubular members 6 which are internally threaded, as illustrated in Figure 3. These tubular members 6 extend through suitable openings in one side portion of the plate 3′ with the outer edge of the tubular member turned over as shown at 7 for securely connecting the tubular member to the plate 3′. Connected to the outer portions of the plate 3 are the tubular members 8 which are adapted to fit over the tubular members 6, as shown at Figure 3. The outer ends of the tubular members 8 are provided with an

annular diverging flange 9 which fits within a suitable seat in the outer face of the angular plate 3, as shown in Figure 3, for retaining these tubular members 8 in position.

In order to connect the two plates 3 and 3′ together, after the tubular members 8 have been fitted over the tubular members 6, as shown in Figure 3, screw bolts 10 are threaded into the tubular members 6 and as these screw bolts are provided with heads which have bevelled faces 11 to fit into the outwardly extending flange 9, the screw bolts may be screwed as far as possible into the tubular members 6 with their heads seated in the outer ends of the tubular members 8, as illustrated.

Attached to each end of each of the angular plates 3 and 3′ are the guide members 12, each having an inwardly extending flange 13 which is riveted or otherwise secured to the inner face of one side of each plate 3 and 3′.

Extending from the free edge of each member 12 parallel with the flange 13 is a guide flange 14 the respective pairs of flanges having at opposite ends tongues 15 and 15′ which extend beyond the outer face of the flange 14 to form stop members. From this construction, it will be apparent that when the two plates 3 and 3′ are fitted together, as shown in Figure 3, the overlapped flange portions 14 of the guide members 12 form a suitable guide for the movable supporting bars 16 which have their ends bifurcated to form spaced fingers 17 adapted to be arranged upon opposite sides of the intimately contacted flanges 14, as shown in Figure 4. From this, it will be apparent that the bars 16 may be readily slid along on the flanges 14 when the cover sections 1 and 2 are moved to an open position, as shown in Figure 2, so that the papers, catalogs, or similar articles, will lie substantially flat as illustrated, whereby the reading matter contained therein will be clearly visible.

When using this device as a binder for bulletins, newspapers and the like, a plurality of index leaves are preferably used in connection with the papers and bulletins in the binder and these index leaves are fixed to the bars 16 by having their inner edges folded over the bars 16 and then secured to the main body portion of the leaf 18 by any suitable type of adhesive, the folded portion 19 being disposed directly above the bar, as illustrated in Figure 5, so that the leaves will be securely connected to the bars.

From the illustration in Figure 5, it will be readily noted how the bars 16 will assume a position whereby the leaves attached thereto or engaged therewith can be folded to lie substantially flat when the cover sections 1 and 2 are in an opened position, as shown in Figure 2.

When it is desired to insert a bulletin or the like within the binder, the bolts 10 are first removed from the threaded tubular members 6 and the cover 1 can then be detached from the cover 2 by sliding the tubular members 8 outwardly on tubular members 6. The bars 16 can be then engaged with the newspaper, bulletins, or the like, to be inserted between the leaves thereof. The ends of the bars are then engaged with the guide flanges 14 on the members 12 carried by one of the angular plates. The other guide members can then be slid into position as the fingers 17 are spaced a sufficient distance apart to permit both sets of guide flanges 14 to be passed therebetween, as shown in Figure 4. Thus, the cover members may be quickly placed in position by engaging the tubular members 8 over the tubular members 6 and then returning the screw bolts 10 to their operative positions, as shown in Figure 3.

It will be apparent from the foregoing that I have provided a simple and inexpensive binder which can be used for maintaining newspapers, catalogs and similar articles in a classified manner and retaining them in such position that they will not become torn or soiled, but whereby access may be gained to any of the articles between the binder covers in a very short space of time.

I claim:

1. A device of the class described including spaced cover members, having laterally disposed end portions, guide members carried by the end portions at each end of the cover and movable bars slidably mounted upon the guide members.

2. A binder of the class described including spaced cover portions, having angularly disposed overlapping back walls, guide plates attached to the angular back walls and supporting bars having fingers at the ends thereof movably positioned upon the guide plates.

3. A binder of the class described including opposed cover members having angularly disposed backs arranged in overlapping relation, guide members attached to the ends of the back walls with the guide members on one back wall overlapping the guide members on the other back wall, said guide members including supporting flanges and movable retaining bars having spaced fingers at their ends slidably mounted upon said supporting flanges.

4. A binder of the class described including opposed cover members having angularly disposed overlapping back portions, guide members carried by the ends of the overlapping back portions, inwardly extending guide flanges on the guide members, stops at the ends of the flanges and movable bars slidably mounted on the guide flange with the outermost bars adapted to abut said stops.

5. A loose-leaf binder including opposed

cover members having angularly disposed back portions adapted to be arranged in overlapped relation, means for detachably connecting the cover members, interfitting guide members carried by the back portions, guide flanges carried by said interfitting members, stops at the ends of said guide flanges, and a plurality of movable bars having spaced fingers at their ends for embracing said guide flanges to slidably mount the bars.

6. A binder of the class described including opposed flexible cover members, angular plates connected to the back edges of said cover members and adapted to be arranged in overlapped relation, a guide plate at each end of each angular plate with the guide plates on one angular plate interfitting the guide plates on the other angular plate, guide flanges on the guide plates and movable bars having their ends slidably mounted upon said guide flanges.

7. A binder of the class described including opposed flexible cover members, angular plates at the back edges of said cover members adapted to be arranged in overlapped relation, means for adjustably connecting said angular plates, guide members carried by said angular plates for interfitting engagement, guide flanges on said guide plates, and movable bars having spaced fingers at the ends thereof for slidably mounting the bars upon the guide flanges, and stop members arranged at the ends of the guide flanges.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin.

CHARLES H. FRANZ, JR.