J. C. DAWSON.

LOOSE LEAF BINDER.

PPLICATION FILED OCT. 24, 1910.

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## UNITED STATES PATENT OFFICE.

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## LOOSE-LEAF BINDER.

988,982.

Patented Apr. 11, 1911. Specification of Letters Patent.

Application filed October 24, 1910. Serial No. 588,913.

To all whom it may concern:

Be it known that I, James C. Dawson, a citizen of the United States, and resident of Webster Groves, county of St. Louis, and 5 State of Missouri, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part 10 thereof.

The invention relates to binders intended for permanent records, and provides means for loosely holding the sheets as the record is accumulated, and for permanently bind-15 ing the sheets in place after the record has

been completed.

The invention consists of a structure such as hereinafter described, and as illustrated in the accompanying drawings, in which—

20 Figure 1 is a detail transverse section through the binder; Fig. 2 is a detail sectional view on the line 2-2 of Fig. 1; and Figs. 3, 4 and 5 are detail sections of portions of the binder showing the means for 25 accomplishing the permanent locking of the

sheet-holding mechanism.

The binder comprises a pair of side plates 10, 11, which may be built up in the manner commonly employed in the construction 30 of record books; these side plates being united by a back portion 12 of any preferred construction. A pair of metal plates 13, 14, are secured to the inner faces of the cover plates 10, 11, adjacent their inner mar-35 ginal portions, such plates affording means for carrying the leaf-holding bars and constituting in part the hinges upon which the cover plates flex. The inner margins of the plates 13, 14, are curved inwardly to tubular 40 form, as shown at 15, and these tubular portions are cut away at intervals, as represented at 16, 17, 18, to receive the pierced ends of the sheet-holding bars 19, 20, 21.

A rod 22, inserted in the tube 15, passes 45 through the eyes of the sheet-holding bars. Both ends of the sheet-holding bars are preferably thus secured in like manner, and may be freed for the insertion or removal of sheets by withdrawing the rods 22, or either 50 of them. The outer ends of the rods 22 project beyond the ends of the tubes 15, as shown at 23, while the binder is used for removably holding the sheets, and for convenience of manipulation their projecting 55 ends may be knurled.

A recessed plate 24 is secured to the inner face of each of the side plates 10 and 11, at the inner end of the plates 13, 14, and said plates 24 limit the inward movement of the rods 22. The recess in each of the plates 60 24 is provided with a curved face, as shown at 25, crossing the bore of the tube 15. The inner end of the rod 22 is reduced in diameter, as shown at 26, and engages the curved face 25.

When it is desired to permanently secure the binding mechanism, the rods 22 are driven in with sufficient pressure to bend their reduced ends 26 by the action of the curved face 25, thus causing them to curl 70 up within the recess of the plate 24, as shown in Fig. 5, thereby permanently securing the

rods within the tubes.

While I have shown as a simple form of construction a plate having a circular aper- 75 ture for bending the inner end of the rod, any form of construction which will so distort the rod, upon the application of thrust pressure thereto, as to lock it against withdrawal, will come within the scope of the in- 80 vention.

The metal plates are so bound within the cover plates that after the rods have been forced in for the purpose of distorting their ends, access cannot be secured to them with- 85 out mutilating the binder, and hence it becomes impossible to serreptitiously remove any of the sheets which have been bound in.

I claim as my invention—

1. In a loose leaf binder, in combination, 90 a cover, a tube secured to the inner face of the cover and having lateral apertures, leafholding bars adapted to enter such apertures and being pierced to register with the bore of the tube, a rod for entering the tube, and 95 a curved wall at the inner end of the tube for deflecting the rod laterally.

2. In a loose leaf binder, in combination, a cover, a tube secured within the cover and having lateral apertures, leaf-carrying 100 bars adapted to enter the tube apertures and being pierced to register with the bore of the tube, a rod for entering the tube, and means for distorting the rod to prevent its withdrawal from the tube.

3. In a loose leaf binder, in combination, a cover having hinged side plates, a tube secured to the inner face of each plate adjacent its hinge, such tubes having lateral apertures, a plurality of leaf-carrying bars 110

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adapted to enter the tube apertures and being pierced to register with the bores of the tubes, rods adapted to fit within the tubes and having their entering ends reduced in diameter, and a deflecting plate in line with the inner end of each of the tubes.

4. In a loose leaf binder, in combination, a tube secured to the inner face of the cover and having lateral apertures, leaf-holding bars adapted to enter such apertures and being pierced to register with the bore of the

tube, a rod for entering the tube, and a stop at the inner end of the tube and being oblique to the bore thereof the chamber of the tube having a lateral recess adjacent the 15 stop for receiving the end of the rod when deflected by the stop.

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Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."