

C. R. NELSON.
 LOOSE LEAF BINDER.
 APPLICATION FILED JAN. 3, 1905.

901,549.

Patented Oct. 20, 1908.

Fig. 1

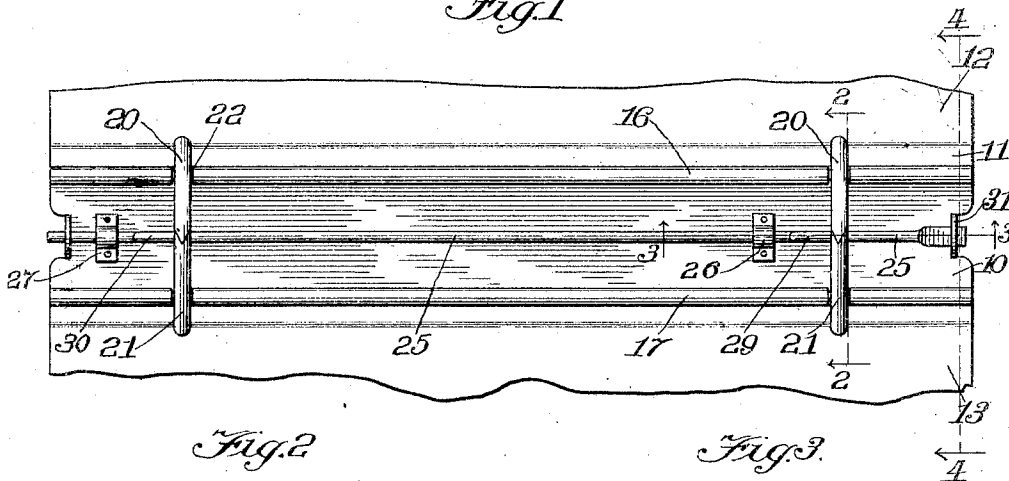


Fig. 2

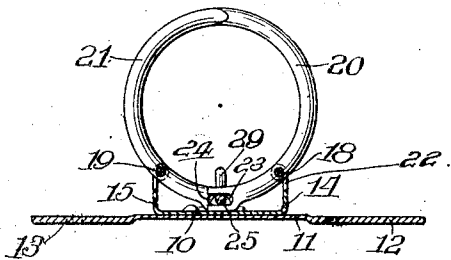


Fig. 3

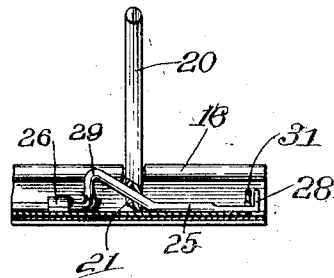


Fig. 4

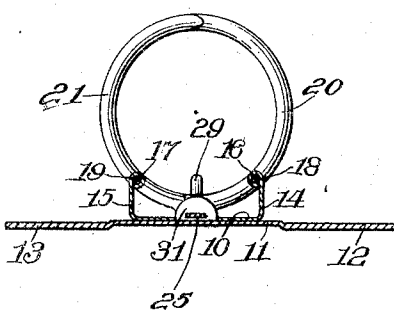
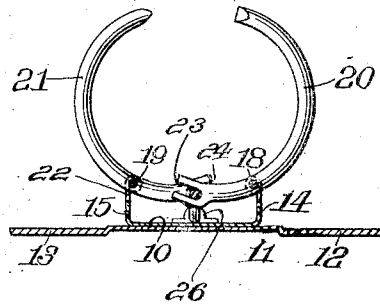


Fig. 5



Witnesses:

Wm. H. Eagle.
 Chas. B. Gilson.

Inventor

Charles R. Nelson.
 By Quist, Liles & Sutter

UNITED STATES PATENT OFFICE.

CHARLES R. NELSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO SIEBER & TRUSSELL MFG. CO.,
A CORPORATION OF MISSOURI.

LOOSE-LEAF BINDER.

No. 901,549.

Specification of Letters Patent.

Patented Oct. 20, 1908.

Original application filed November 30, 1903, Serial No. 183,223. Divided and this application filed January 3, 1905. Serial No. 239,405.

To all whom it may concern:

Be it known that I, CHARLES R. NELSON, a citizen of the United States, and resident of Chicago, county of Cook, and State of Illinois, 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 thereof.

The invention relates to the class of loose leaf binders in which intercollating sheet holding prongs or hooks are provided for receiving the leaves and securing them between the covers of a book, the prongs being pivoted so as to swing in a plane transverse to the length of the book.

The object of the invention is to simplify the construction of this class of binders in order to adapt them to the manufacture of the smaller sizes.

The invention consists in the construction and arrangement of parts to be hereinafter described, and which are illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the interior of a binder constructed according to the invention; Figs. 2, 3 and 4 are sectional views on the lines 2—2, 3—3 and 4—4, respectively, of Fig. 1; and Fig. 5 is a sectional view, similar to Fig. 2, showing the parts in a different position.

The support for the binding parts consists in a metal plate or slide-way 10, the width of which is slightly less than that of the back and the length of which is substantially equal to the length of the book. To this metal plate is preferably attached a flexible back-piece 11, which unites the cover boards 12 and 13. The sides of the plate 10 are turned up, as indicated at 14 and 15, and its edges are rolled inwardly, as indicated at 16 and 17, to form a housing for wires 18 and 19, upon which impaling hooks or binding members 20 and 21 are pivoted. The sides 14 and 15 are recessed, as at 22, to receive these impaling hooks. As shown, the binding members 20 and 21 are each substantially semi-circular in form, the greater portion of their length being forward of the pivots 18 and 19. Their outer ends are complementary in form so as to make a smooth joint when

these ends are brought together, as well as to provide a pointed member for entering the apertures in the leaves. The inner ends of these hooks are somewhat reduced in thickness that they may fold by each other and are slotted, as shown at 23 and 24, so as to straddle a sliding cam-rod 25, which extends along the median line of the back plate 10 for its entire length and is secured thereto by straps 26 and 27, which form ways in which it may slide. One of the ends of the cam rod 25 is turned up, as indicated at 28, to form a thumb-piece for moving it back and forth, and a portion of its length adjacent each set of the impaling hooks is looped up, as indicated at 29 and 30, these bent portions engaging the slotted ends of the binding members 20 and 21 to swing the members about their pivots by a cam action when the rod is reciprocated. As the cam rod 25 is most conveniently formed of material having a round cross section, it will preferably be reduced to rectangular shape at some portion of its length, as at the end adjacent the thumb piece 28, in which case an ear 31 is turned up from the back plate 10 and apertured to receive it and prevent its turning on its axis.

Leaves are inserted into or removed from the binder most conveniently by opening out the cover boards 12 and 13, to the position shown in the various figures of the drawings, and then opening the impaling hooks 20 and 21, to the position of Fig. 5, by pulling out upon the thumb-piece 28. To close the binder the thumb-piece 28 is pushed into its original position, this movement bringing the ends of the hooks together, in which position they will remain entirely independent of the movement of the cover boards 12 and 13.

In the drawings, the back member 10 is shown as supporting two sets of binding members 20 and 21, though this number may be increased without departing from the invention.

I claim as my invention—

1. In a loose leaf binder, in combination, a slide way a binding ring comprising a pair of mating filing members pivotally attached to the slide way and having overlapping inner ends, and a cam slide having a single in-

clined cam portion for operatively engaging the overlapped ends of both members of the ring.

2. In a loose leaf binder in combination, a slide way, a binding ring comprising a pair of mating filing members pivotally attached to the slide way and having overlapping bifurcated inner ends, and a cam rod mounted on

the slide way and having a single inclined cam portion laid into the bifurcated ends of both members.

CHARLES R. NELSON.

Witnesses:

LOUIS K. GILLSON,
E. M. KLATCHER.