J. A. FINGER.

LOOSE LEAF BINDER.

APPLICATION FILED NOV. 25, 1921.

1,432,453. Patented Oct. 17, 1922.

Fig. 1

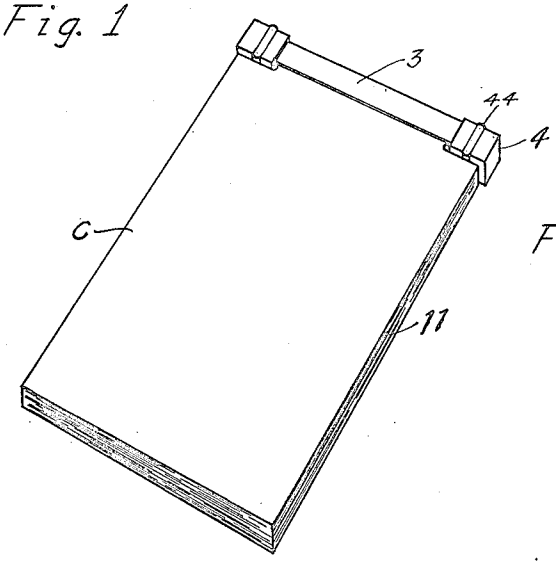


Fig. 2

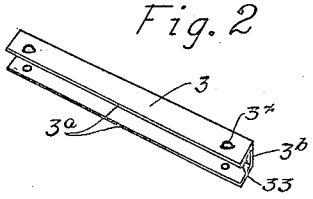


Fig. 3

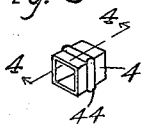


Fig. 4

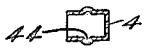


Fig. 5

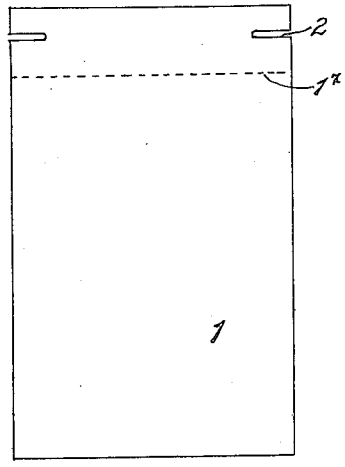


Fig. 6

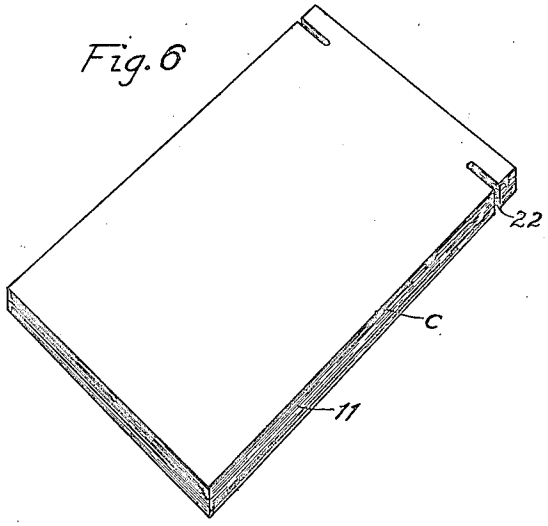


Fig. 9

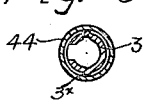


Fig. 7

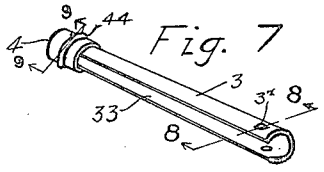


Fig. 8



John A. Finger

INVENTOR

By Mitchell, Chadwick & Kent,

ATTORNEYS

Patented Oct. 17, 1922. 1,432,453

UNITED STATES PATENT OFFICE.

JOHN A. FINGER, OF MEDFORD, MASSACHUSETTS.

LOOSE-LEAF BINDER.

Application filed November 25, 1921. Serial No. 517,542.

To all whom it may concern:

Be it known that I, JOHN A. FINGER, a citizen of the United States, residing at Medford, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

My invention is a loose-leaf book in which the leaves are bound together by means of a slot in each of the sides of said leaves near the binding edge and a stiff binder member, preferably of metal, provided with a slot into which the rear end of the leaves is inserted and secured in the binding member by rings which engage the slots in the loose leaves and pass around the ends of the binding member.

In the drawings:

Figure 1 is a perspective view of the loose-leaf book, complete;

Figure 2 is a perspective view of the binding member;

Figure 3 is a perspective view of an end ring;

Figure 4 is a longitudinal sectional elevation of a binding ring; as on line 4—4 of Figure 3;

Figure 5 is a plan view of a slotted loose leaf;

Figure 6 is a perspective view of a pack of leaves, assembled for binding;

Figure 7 is a perspective view of a modified form of binding member;

Figure 8 is a cross-section on line 8—8 of Figure 7, and

Figure 9 is a cross-section on line 9—9 of Figure 7.

When the book is to be provided with a cover, the cover members are formed of the same size as the leaves and slotted in the same way, and differ only in material and function from the leaves, so that it will be unnecessary to distinguish between the book leaves proper and the cover leaves or members.

As will be apparent from an inspection of the drawings, each leaf, 1, is slotted in the edges near one end by slots, 2, which slots, when a pack of leaves is assembled, register and form side slots, 22, in each pack, 11.

The binding member 3 is preferably of flexible and resilient metal and right angular in cross-sectional shape, having two sides 3^a and a back 3^b, one side being open and forming a longitudinal slot 33. Near each end of each of the sides 3^a is a projection or knob 3^x.

The binding rings 4 are preferably of four sides and closed at one end. Around the inner surface of the four sides is formed a groove 44 and the binding rings are of a size to fit snugly outside the member 3.

When it is desired to form a loose-leaf book a number of leaves 1 is assembled to form a pack 11, the slots 2 registering to form in the sides of the pack slots 22. If desired cover leaves C of stiffer material may be placed outside the pack. The rear edge of the pack is then slipped into the slot 33 of the binding member 3, the slots 22 being close to the lower edge of the sides 3^a. The rings 4 are then slipped over the ends of the member 3 the lower side of the rings entering the slots 22 in the pack and the sides 3^a being sprung inwardly as the forward edge of the rings rides over the projections 3^x, into which the projections are resiliently pressed, giving an engagement sufficient to hold the rings in place against accidental displacement.

The result is that the pack of loose leaves is held together and to the binder by the engagement of the rings 4 with the binder 3 and the slots 22.

The leaves may, if desired, be perforated, as at 1^x, so that if a leaf or leaves be detached the end which is within the binder 3 will be left in place, the binding edge thereby not being reduced, with a consequent loose engagement of the binder.

In Figures 7 and 8 I have shown another form of ring binder member, in which the member 3 is a slotted tube in form, that is an incomplete circle and the members 4 are circular in cross-section. The mode of operation is the same as the form shown in the other figures.

In practice I secure one of the rings 4 permanently in place, as the engagement and disengagement may be easily made by sliding one of the rings endwise.

I claim:

A loose leaf book, made up of a pack of leaves, slotted on the sides, near one end; a tubular binding member, slotted along one side to receive one end of the pack and having bosses on its sides and connecting rings engaging the slots in the leaf pack and the tubular binder member and each provided with a groove on its inner face to cooperate with said bosses.

Signed at Boston, Massachusetts, this twenty-third day of November, 1921.

JOHN A. FINGER.