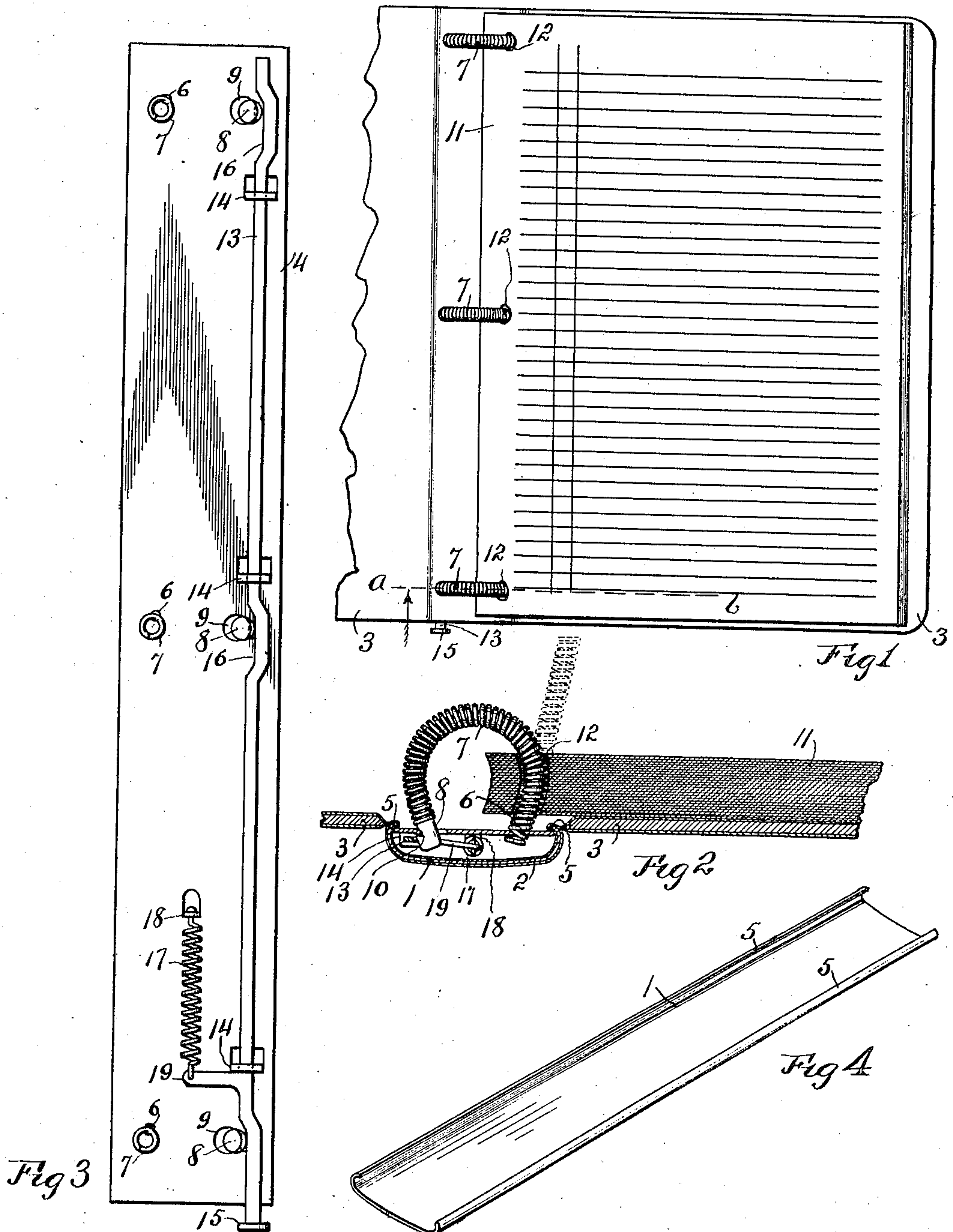


A. L. MURPHY, SR.
 LOOSE LEAF BOOK.
 APPLICATION FILED JULY 3, 1909.

960,672.

Patented June 7, 1910.



WITNESSES:
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UNITED STATES PATENT OFFICE.

ARTHUR L. MURPHY, SR., OF INDEPENDENCE, MISSOURI.

LOOSE-LEAF BOOK.

960,672.

Specification of Letters Patent.

Patented June 7, 1910.

Application filed July 3, 1909. Serial No. 505,780.

To all whom it may concern:

Be it known that I, ARTHUR L. MURPHY, Sr., a citizen of the United States, residing at Independence, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Loose-Leaf Books, of which the following is a specification.

My invention relates to improvements in loose leaf books.

The object of my invention is to provide a loose leaf book which is simple in construction, easy to operate, is not liable to get out of order, and which will reliably releasably retain the leaves and permit their being readily turned.

The novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawings which illustrate the preferred form of my invention, Figure 1 is a portion of a loose leaf book provided with my invention and shown in plan in the open position, the hooks being shown in the closed positions. Fig. 2 is a cross section on the dotted line *a-b* of Fig. 1. Fig. 3 is a bottom view of the hook supporting member and parts connected therewith. Fig. 4 is a perspective view of the flanged plate which forms the back of the book and supports the hook plate.

Similar reference characters denote similar parts.

1 denotes a longitudinal plate which forms the back of the book and to which the covers 2 are hinged in any suitable manner, as, for instance, by flexible binding material 3.

4 is a flat longitudinal plate disposed lengthwise in the concave inner side of the plate 1, the latter plate having at opposite edges longitudinal flanges 5 which respectively embrace opposite edges of the plate 4. The plate 4, which is the hook supporting member, is provided with a plurality of holes 6 in which are preferably respectively secured one set of ends of one or more flexible hooks, preferably comprising coil springs 7 composed of wires formed having superimposed coils, the free ends of which have respectively secured in them securing devices, preferably comprising pins 8 adapted respectively to enter holes 9 provided in the member 4, the pins having each a lateral notch 10 adapted to receive the plate 4 to hold the hook when the pin is in the hole 9. The coil springs 7 are preferably normally straight, as shown in dotted lines in Fig. 2,

to enable the leaves 11 to be more easily inserted upon and withdrawn from the hooks when the hooks are in the open positions, the leaves 11 being each provided with holes 12 to receive the hooks 7.

To release the pins from the locked position, shown in Figs. 1 and 2 the following mechanism is preferably provided:—A longitudinal member comprising preferably a flat bar 13 is located between the plates 1 and 4 and is longitudinally slidable in holes provided in projections 14 which extend toward the plate 1 from the plate 4. The projections 14 are preferably formed by cutting tongues in the plate 4 and then bending said tongues at right angles to the plate. The bar 13 preferably has an end projecting beyond the plates 1 and 4, the projecting end being provided with a button 15 by which the bar is grasped to be manipulated. The bar 13 is provided, preferably with lateral recesses 16 in one edge through which the pins 8 extend when in the closed position. By drawing the bar 13 outwardly the bar will strike the pins 8 and force them in the holes 9 to positions in which the plate 4 will be disengaged from the notched portions of said pins. If, as is the case in the preferred form of my invention, the hooks 7 are of resilient material, the hooks on being released will spring to the straight position, shown in dotted lines in Fig. 2, when leaves may be readily removed from or placed upon the hooks. A coil spring 17 having one end secured to a projection 18 on the plate 4 and the other end secured to a projection 19 on the bar 13 serves to retract the bar to the position shown in Fig. 3, in which the pins 8 are free to enter the holes 9 and engage the plate 4.

When the leaves are placed on the hooks, the hooks are inserted in the holes 9, when the resiliency of the springs 7 will cause the pins to move to positions in which the plate 4 will enter the notches 10, thereby holding the hooks in the closed positions.

Preferably the plate 4 is of such form that when the hooks are moved to the closed positions, the springs 7 will assume a curved position, as shown in Fig. 2, thus permitting the leaves 11 to be easily turned forwardly and backwardly.

My invention may be modified in different ways, within the scope of the appended claims, without departing from its spirit.

Having thus described my invention, what

I claim and desire to secure by Letters Patent is:—

5 1. In a loose leaf book, the combination with a supporting plate, of a hook comprising a coil spring secured at one end to said plate and a locking device secured to the free end of said spring and having means for releasably engaging said plate, a member movable to and from a position in which it will release said device from said plate and means for retracting said member from said position.

15 2. In a loose leaf book, the combination with a supporting plate having a hole, of a hook comprising a coil spring secured at one end to said plate and a locking device secured to the free end of the spring and adapted to enter said hole and engage said plate, a member movable to and from a position in which it will release said device from said plate and a spring for retracting said member from said position.

25 3. In a loose leaf book, the combination with a supporting plate having a hole, of a hook comprising a coil spring secured at one end to said plate and a locking device secured to the free end of said spring and adapted to enter said hole and engage said plate, and a member slidable to and from a position in which it will disengage said device from said plate.

35 4. In a loose leaf book, the combination with a supporting plate having a plurality of holes, of a plurality of hooks comprising coil springs secured at one set of ends to

said plate and a plurality of devices secured respectively to the free ends of said springs for entering said holes respectively and releasably engaging said plate, and means for simultaneously releasing said devices from said engagement.

5. In a loose leaf book, the combination with a supporting plate having a plurality of holes, of a plurality of hooks comprising coil springs secured at one set of ends to said plate and devices secured respectively to the free ends of said springs for respectively entering said holes and engaging said plate, and a member slidable on said plate to and from a position in which it will force devices out of engagement with said plate.

6. In a loose leaf book, the combination with a supporting plate having a plurality of holes, of a plurality of hooks comprising coil springs secured at one set of ends to said plate and devices secured respectively to the free ends of said springs for entering said holes and releasably engaging said plate, a member slidable to and from a position in which it will force said devices from engagement with said plate, and means for retracting said member from said position.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

ARTHUR L. MURPHY, SR.

Witnesses:

E. B. HOUSE,

C. C. DEARBORN.