

No. 867,815.

PATENTED OCT. 8, 1907.

W. H. GARLAND.
LOOSE LEAF BOOK.
APPLICATION FILED OCT. 4, 1906.

Fig. 1.

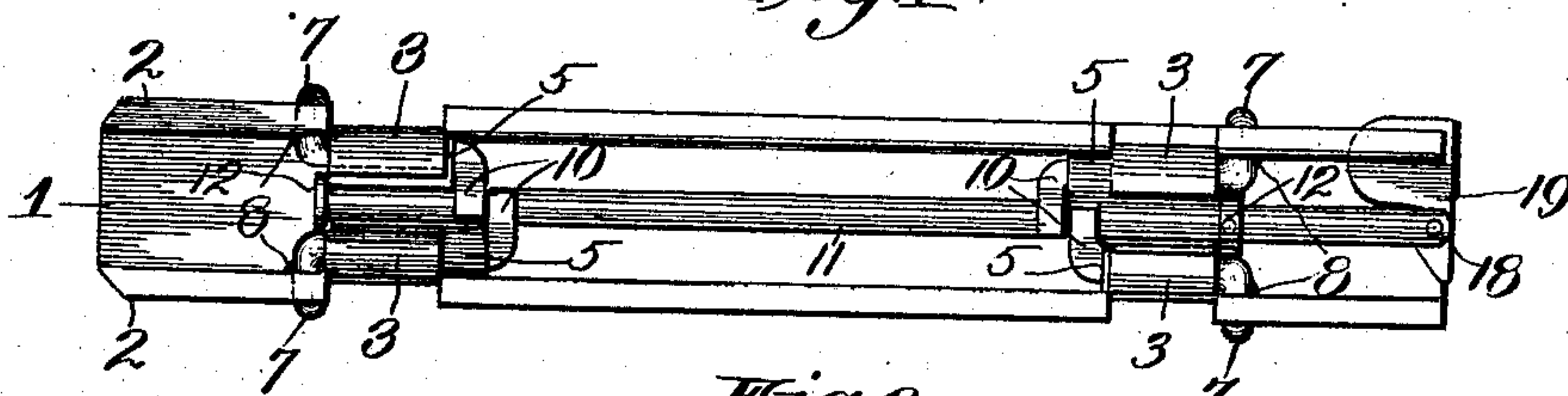


Fig. 2.

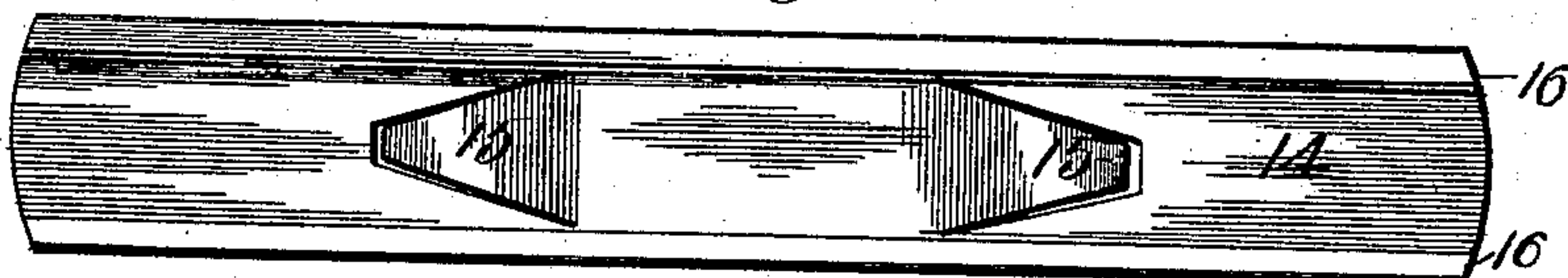


Fig. 3.

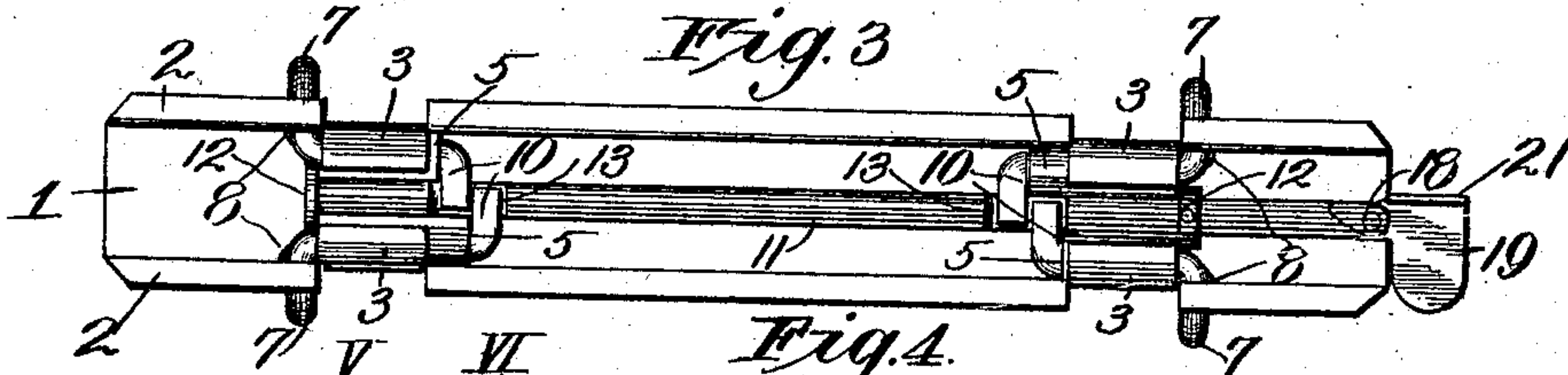


Fig. 4.

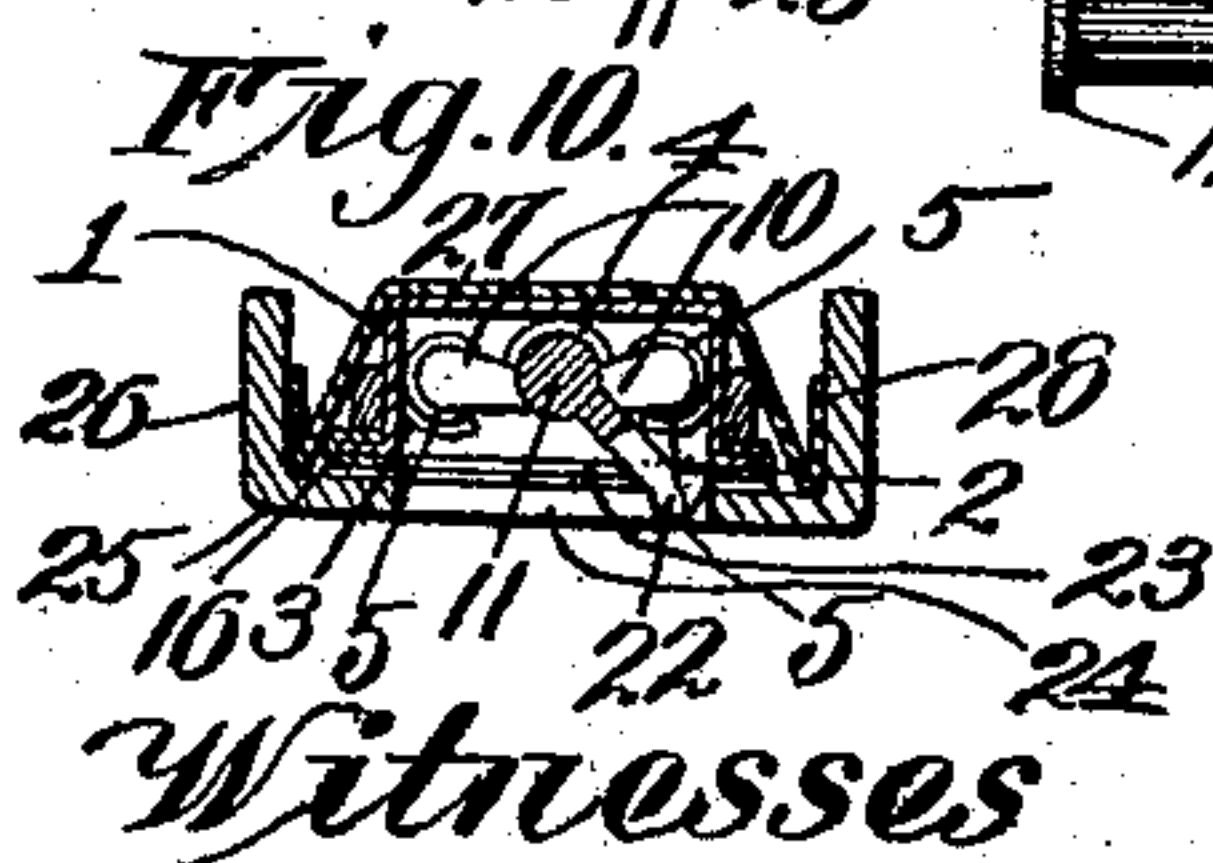
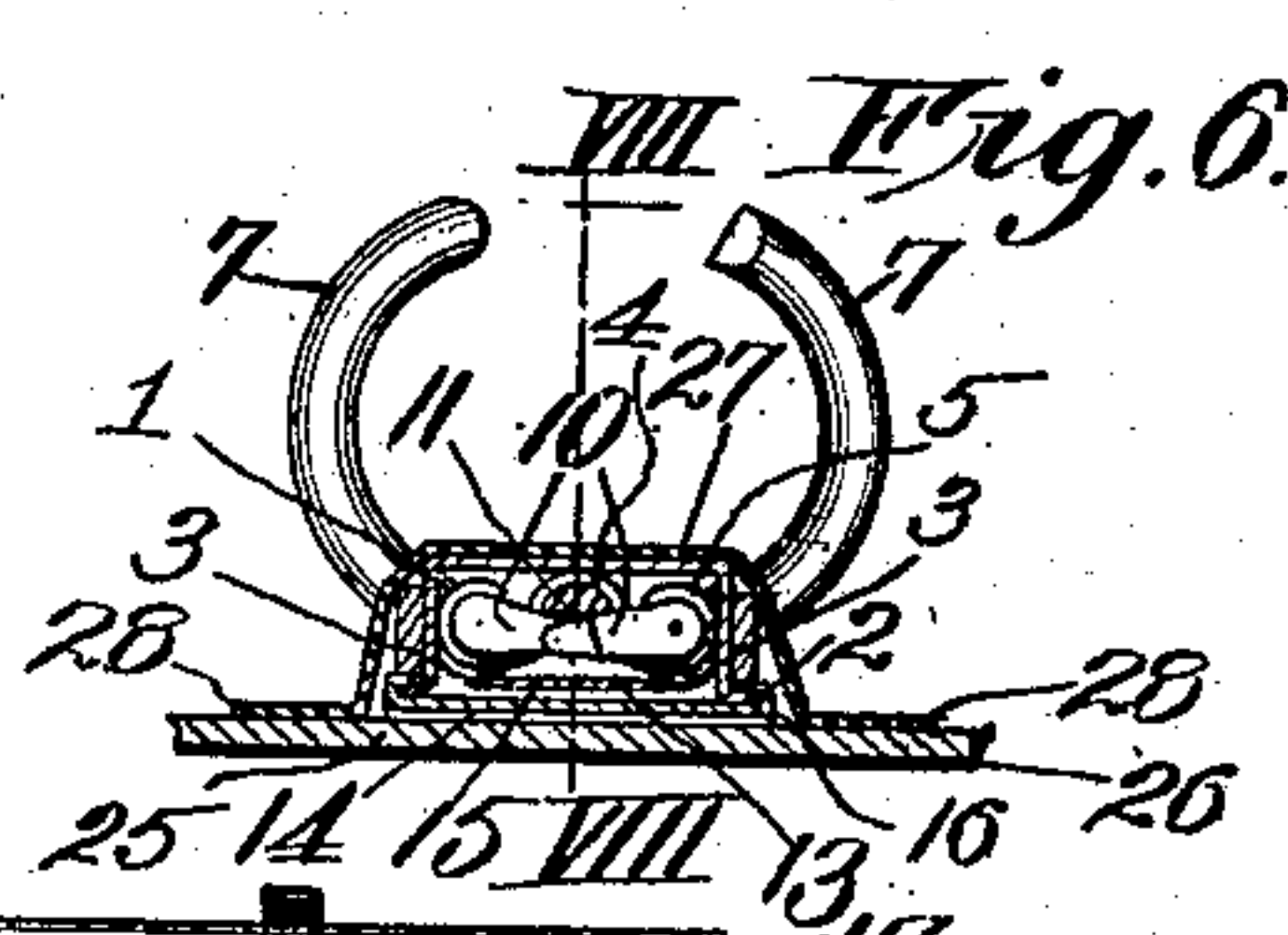
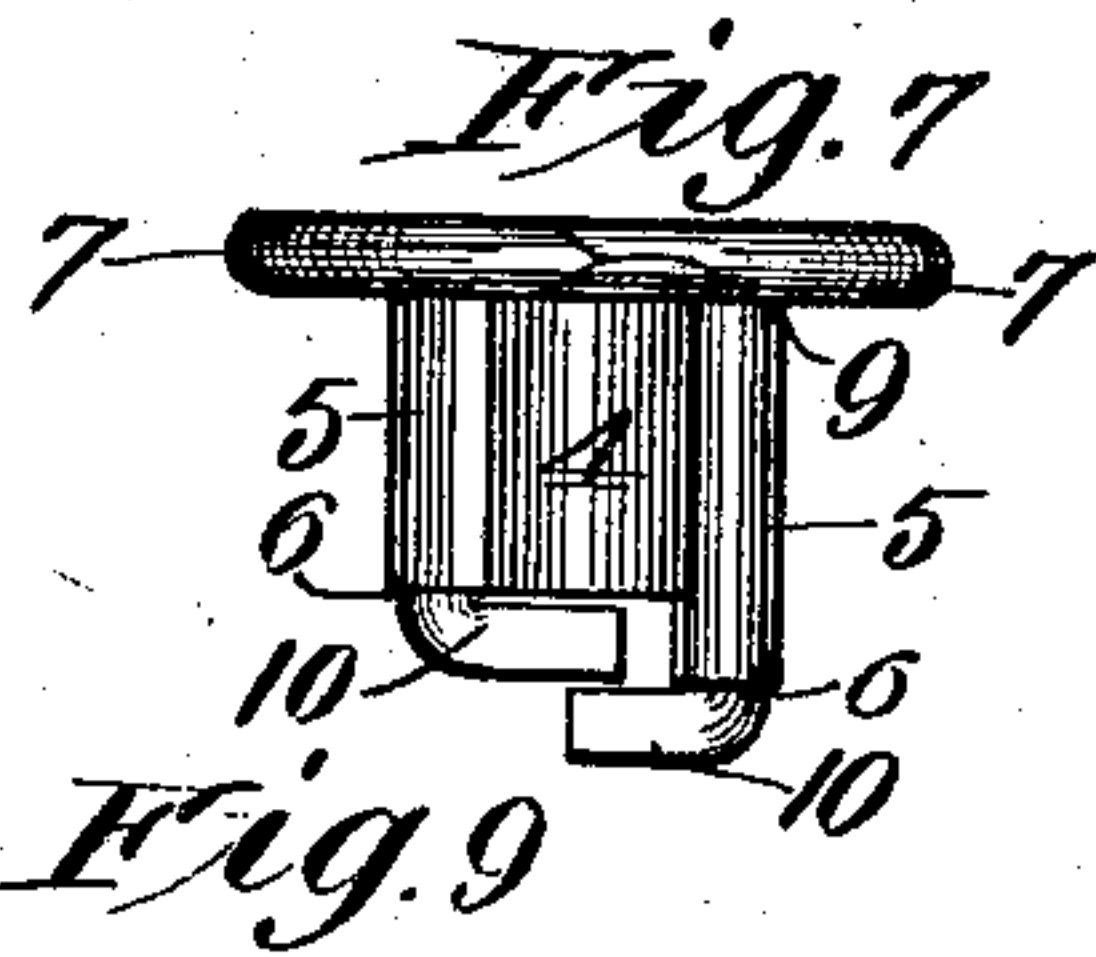
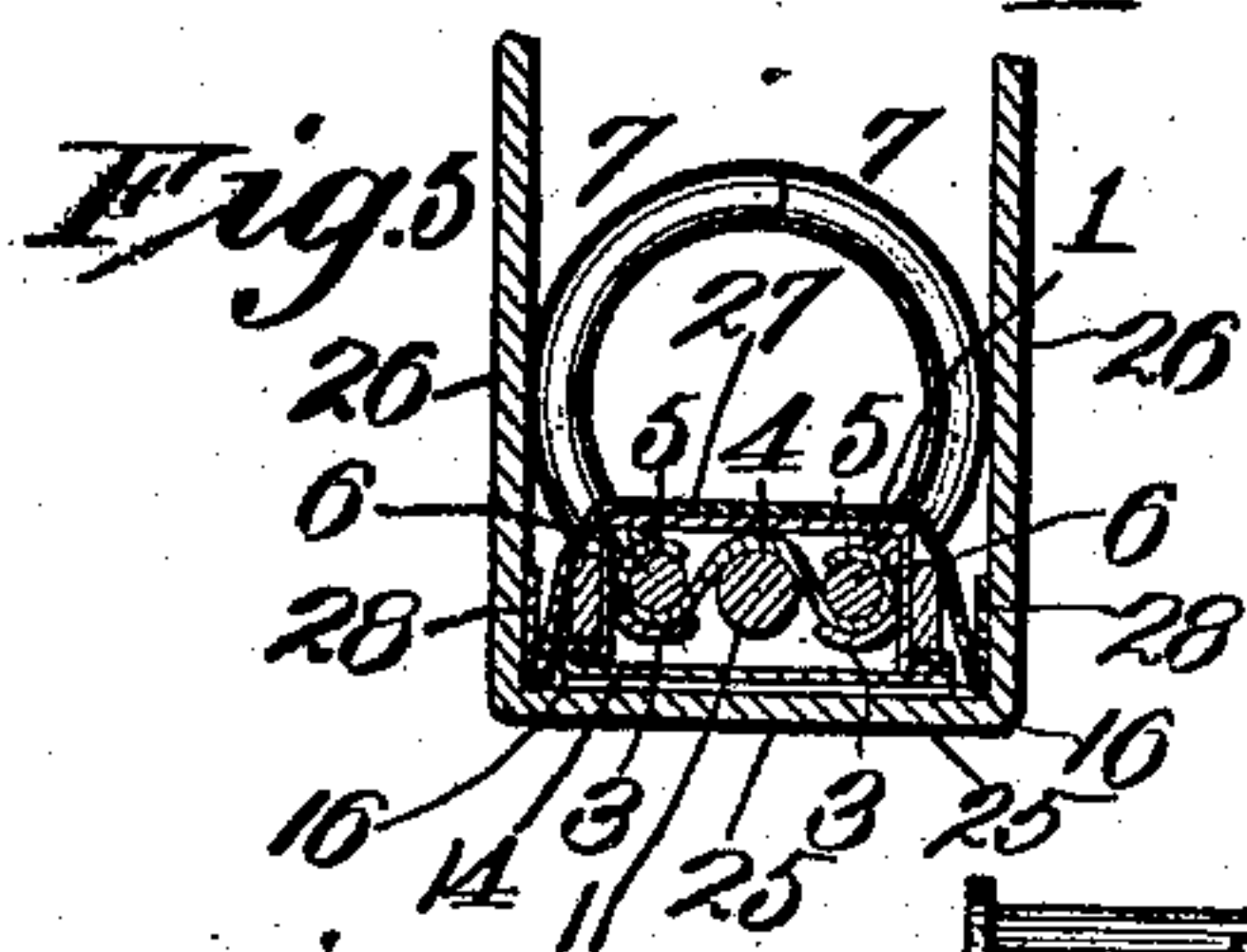
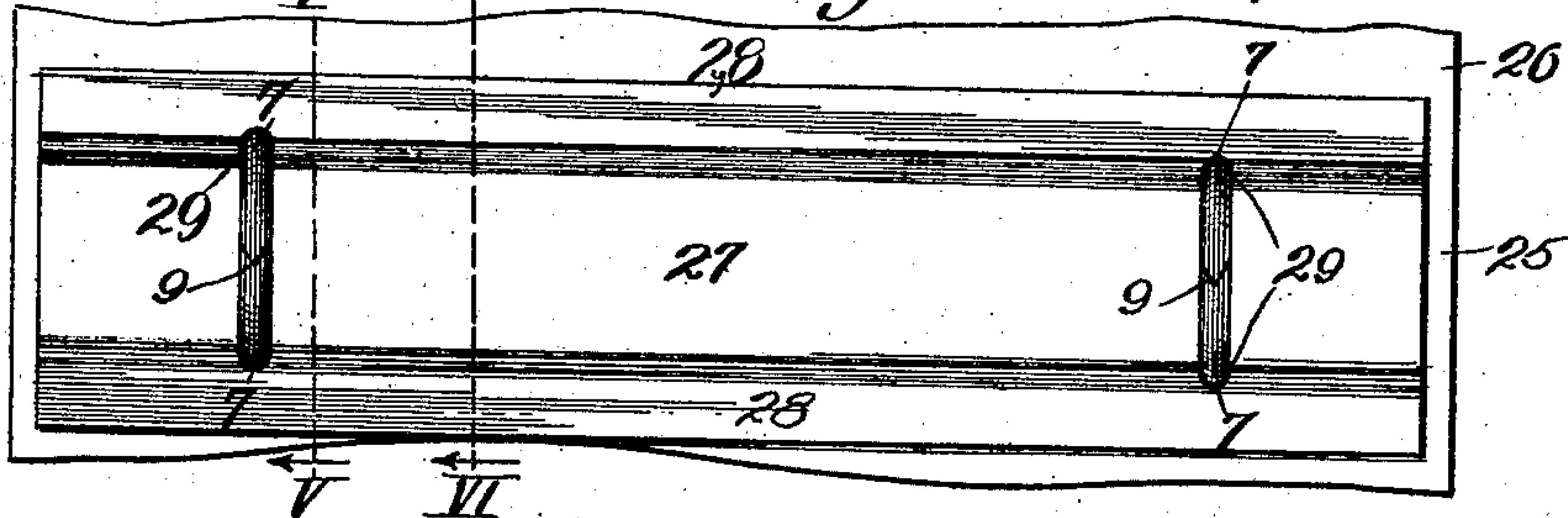
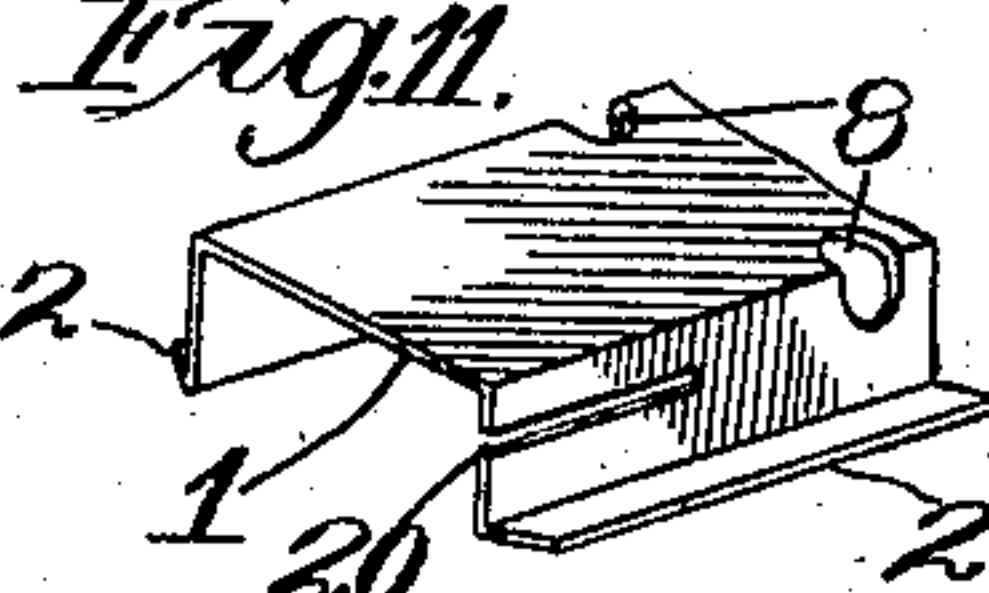
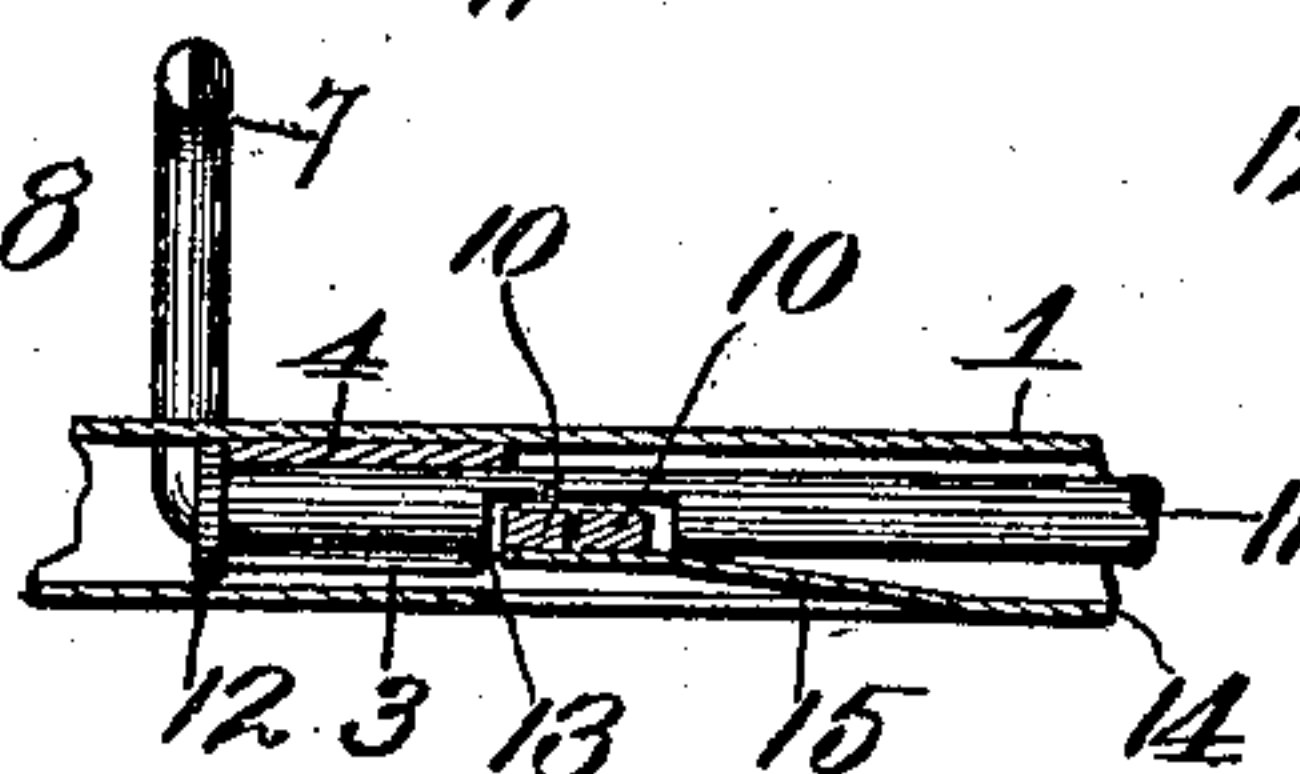


Fig. 8.



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UNITED STATES PATENT OFFICE.

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LOOSE-LEAF BOOK.

No. 867,815.

Specification of Letters Patent.

Patented Oct. 8, 1907.

Application filed October 4, 1906. Serial No. 337,374.

To all whom it may concern:

Be it known that I, WILLIAM H. GARLAND, a citizen of the United States, residing at Kansas City, 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.

This invention relates to loose leaf books of that type embodying pairs of substantially semicircular hooks which interlock together at their free ends and are secured in such position to fasten the leaves in place, and has for its object to produce a book of this character wherein the hooks are locked rigidly together and can not be separated by any pull or pressure applied directly upon them, such for instance as would be applied by pulling in opposite directions upon the leaves or by pulling in opposite directions upon the hooks themselves.

Other objects of the invention will hereinafter appear, and it consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed, reference being had to the accompanying drawing, in which,

Figure 1, is an inverted plan view of the fastening device,—the book and clamp plate being omitted— with the hooks locked in operative or closed position. Fig. 2, is a detail top plan view of the spring clamp plate forming a part of the fastening device. Fig. 3, is a view similar to Fig. 1 but with the hooks in their inoperative or opened position. Fig. 4, is a plan view of a portion of the book with the hooks in their operative or closed position. Fig. 5, is a vertical section taken on the line V—V of Fig. 4, with the fastening device and book cover in closed position, the leaves being omitted. Fig. 6, is a section taken on the line VI—VI of Fig. 5 but with the hooks occupying their inoperative or opened position. Fig. 7, is a detail plan view of a pair of hooks and a plate connecting and forming journals for said hooks. Fig. 8, is a longitudinal section taken on the line VIII—VIII of Fig. 6. Fig. 9, is a side view of the cam rod for closing the hooks and locking them in such position. Fig. 10, is a cross section showing the rod equipped with a modified means for operating it. Fig. 11, is a perspective view of one end of a channel plate forming a part of the invention.

In the said drawings, 1 indicates a channel plate provided with outwardly projecting flanges 2 at its side margins. Near its ends tongues are stamped out of opposite sides of said plate and bent inward to form supports 3 for a pair of short bearing plates consisting of arched central portions 4 flanked by pairs of eyes 5 which form journals for the short longitudinal or body portions 6 of a pair of segmental hooks 7 which extend through holes 8 of the channel plate. One of each pair of hooks is bifurcated as at 9 to receive the

beveled or pointed end of the other as shown most clearly in Fig. 7. The opposite ends of the body portions of the hooks terminate in inwardly projecting arms 10, disposed side by side, it being noted in this connection that the arms 10 are so disposed because one of the eyes is longer than the other, as shown clearly in Figs. 1, 3, and 7.

11 indicates a rod arranged longitudinally within the channel plate 1 and between and parallel with the body portions 6 of the hooks, the arched portions 4 of the bearing plates forming journals for said rod, which is held against said arched portions by the underlying arms of the hooks as shown most clearly in Figs. 1, 3, and 8, the rod being prevented from longitudinal movement by the heads or enlargements 12, engaging the opposite edges of the bearing plates, from arms 10.

13 indicates notches in rod 11, to receive the arms 10 of the hooks when the latter occupy their inoperative or open position, and to hold them yieldingly open I provide a back plate 14 bent to bridge the channel plate and form a cover for all of the parts described except the hooks and provided with stiff spring tongues 15, which tongues are the means employed for pressing said arms 10 up into the notches and thereby hold the hooks yieldingly apart to facilitate the insertion or removal of leaves of the book.

The side edges of the back plate are beveled back to form grooves 16, to receive the flanges 2, so that said back plate can be engaged with said flanges and slid longitudinally thereof until it completely bridges the channel plate. For the purpose of turning the rod 11 and thereby causing that portion of it above arms 10 to press the latter outwardly against the resistance of spring tongues 15 to effect the closure of the hooks, I prefer to bifurcate the end of the rod as at 17 adjacent to the rear edge of the book and pivot in said bifurcation as at 18, a handle 19, which handle after the rod is turned so as to close and lock the hooks, may be swung into the longitudinal slot 20 in the channel plate, in which position it fits snugly as shown in Fig. 1, and is accessible because it can be swung to the position shown in Fig. 3 by engaging a finger nail with its short flange 21.

In the modified construction shown in Fig. 10, I show in lieu of the pivoted handle 19, a segmental handle rigid with the rod 11 and projecting slightly through the registering slots 23 and 24 of the back piece 14 and the back 25 of the cover 26.

27 indicates a strip of leather or other flexible material of the same length but greater width than the channel plate and secured to the latter as shown most clearly in Figs. 5 and 6, the opposite edges of said strip of leather being bent down at opposite sides of the plate to the junction of the back and sides of the cover where the edges are bent back and cemented or otherwise se-

cured to the sides of the cover as at 28, said leather strip being perforated as at 29 to receive the hooks.

With the parts arranged as shown in Figs. 3 and 6, the customary perforated leaves can be slipped on or removed from the hooks, and the spring tongues 15 hold the latter open with a yielding pressure.

To secure the leaves in position the operator turns the rod half way round so that its uncut portion originally above the arms 10, shall force the latter downward and thus cause the segmental hooks to interlock together, it being noticed that they are thus interlocked with an unyielding pressure and that they cannot be opened until the rod is again turned until the notched portions 13 are disposed downward to receive the arms 10 continuously pressed in an upward direction by the spring tongues of the back piece, it being understood of course that the rod may be turned through the medium of handle 19, handle 22 or any other suitable means.

From the above description it will be apparent that I have produced a loose leaf book possessing the features of advantage enumerated as desirable and which may be modified in some particulars without departing from the spirit and scope of the appended claims.

Having thus described the invention what I claim as new and desire to secure by Letters Patent, is:—

1. In a loose leaf book, a plate having openings and a slot at one end, a pair of hooks extending through said openings and adapted to interlock at their free ends and provided with parallel body portions suitably journaled and equipped with inwardly projecting arms, a rod extending longitudinally of said plate and suitably journaled and provided with a cam portion overlying said arms and adapted when the rod is turned to one position to permit said arms to rise and the hooks to open and when the rod is turned part way round to depress said arms and close the hooks, and a handle pivoted to one end of the rod and adapted when the hooks are closed to fit in the slot in the plate and prevent turning movement of the rod.

2. In a loose leaf book, a channel plate provided with outwardly projecting side flanges and openings, and with inwardly projecting supports, bearing plates resting on

said supports, segmental hooks extending through said openings and provided with longitudinal body portions journaled in said bearing plates and equipped with inwardly projecting arms, a rod extending longitudinally of the plate and suitably journaled and provided with cam portions overlying the arms of said body portions, means for holding said arms upward with a yielding pressure when the cam portions of the rod occupy their highest position, and means to lock said rod against turning movement after it has been turned to lower said cam portions and effect the depression of said arms.

3. In a loose leaf book, a channel plate provided with outwardly projecting side flanges and openings and with inwardly projecting supports, bearing plates resting on said supports and having arched middle portions, segmental hooks extending through said openings and provided with longitudinal body portions journaled in said bearing plates and equipped with inwardly projecting arms, a rod extending longitudinally of the plate and journaled in said arched portions of the bearing plates, and provided with cam portions underlying the arms of said body portions, means for holding said arms upward with a yielding pressure when the cam portions of the rods occupy their highest position, and means to lock said rod against turning movement after it has been turned to lower said cam portions and effect the depression of said arms.

4. In a loose leaf book, a channel plate provided with outwardly projecting side flanges and openings and with inwardly projecting supports, bearing plates resting on said supports and having arched middle portions, segmental hooks extending through said openings and provided with longitudinal body portions journaled in said bearing plates and equipped with inwardly projecting arms, a rod extending longitudinally of the plate and journaled in said arched portions of the bearing plates, and provided with cam portions underlying the arms of said body portions, and with collars engaging the bearing plates, means for holding said arms upward with a yielding pressure when the cam portions of the rod occupy their highest position, and means to lock the rod against turning movement after it has been turned to lower said cam portions and effect the depression of said arms.

In testimony whereof I affix my signature, in the presence of two witnesses.

WILLIAM H. GARLAND.

Witnesses:

H. C. RODGERS,
G. Y. THORPE.