C. FORGERSON.

LOOSE LEAF BOOK DEVICE.

APPLICATION FILED FEB. 7, 1910.

959,849.

Patented May 31, 1910.

Fig. 1.

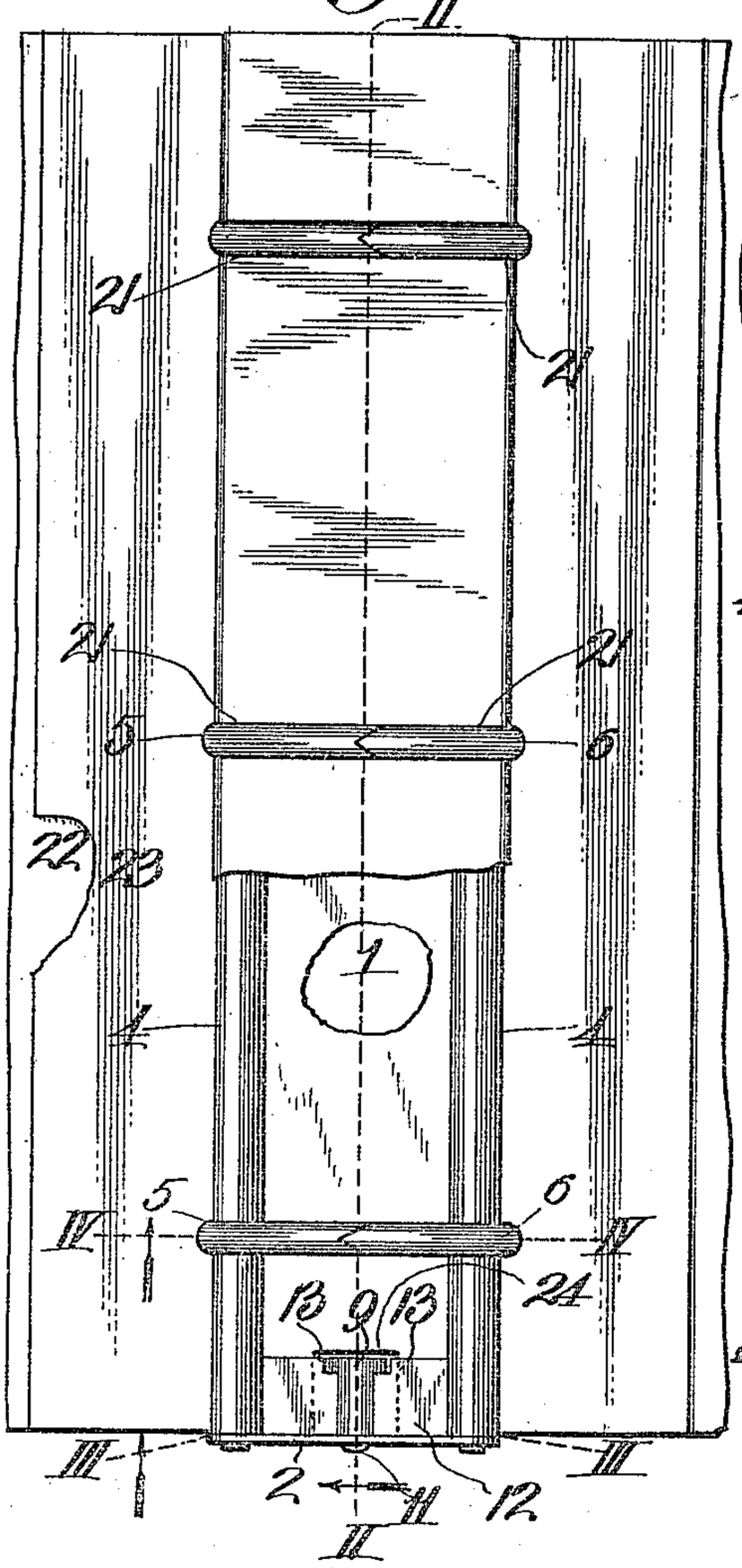


Fig. 3.

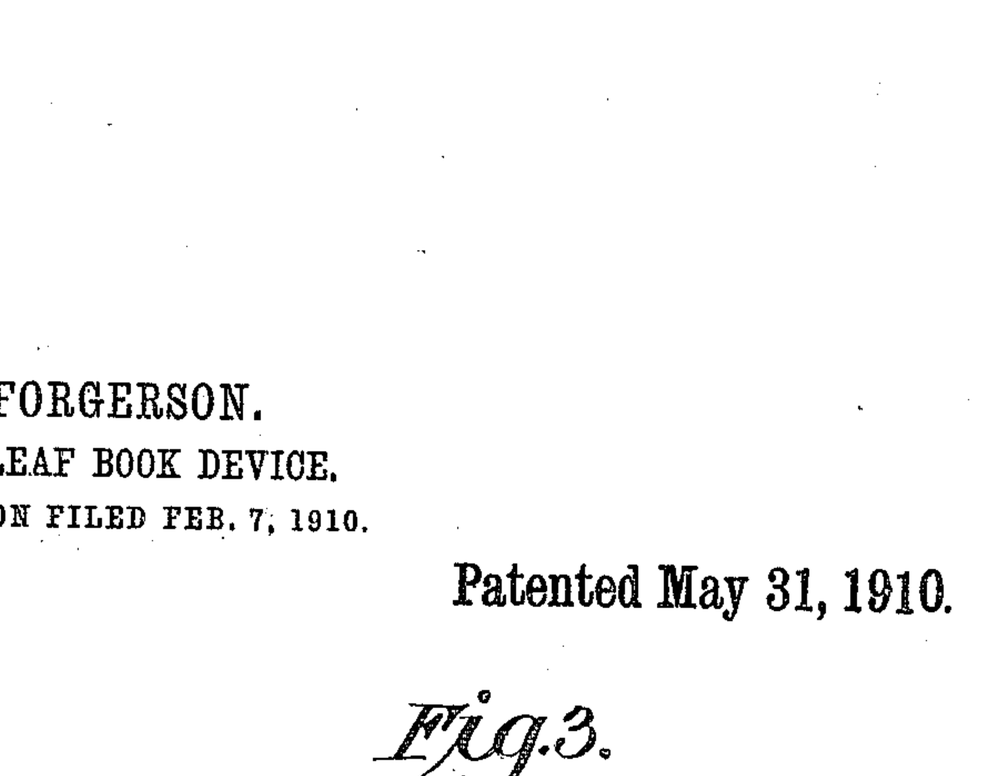


Fig. 4.

Fig. 2.

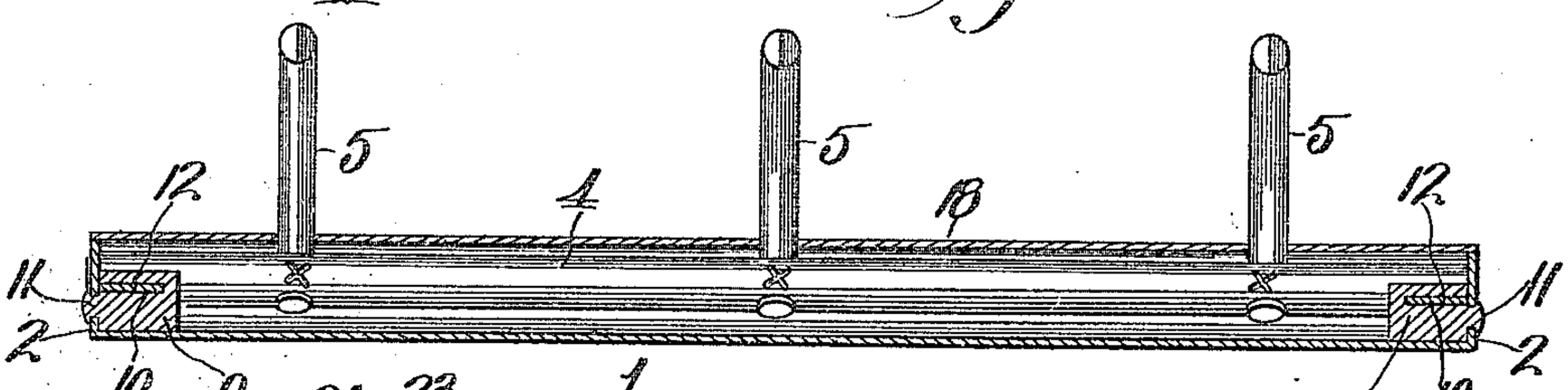
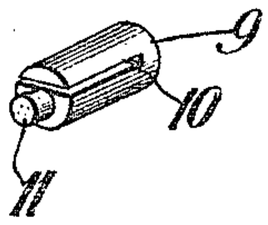


Fig. 5.



Witnesses

Frank P. Glon

H. C. Rodgers.

Inventor

Chas. Forgerson

By Gregory & Thorpe Atty.

UNITED STATES PATENT OFFICE.

CHARLES FORGERSON, OF KANSAS CITY, MISSOURI.

LOOSE-LEAF-BOOK DEVICE.

959,849. Specification of Letters Patent. **Patented May 31, 1910.**

Application filed February 7, 1910. Serial No. 542,566.

To all whom it may concern:

Be it known that I, CHARLES FORGERSON, 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-Book Devices, of which the following is a specification.

This invention relates to loose leaf ring books of that type in which the rings are composed of members capable of separation to permit perforated leaves to be slipped upon or removed from them, and my object is to produce a loose leaf ring book which will operate efficiently and reliably and embodies the desirable features of simplicity, strength, durability and cheapness of construction.

A further object is to produce a loose leaf ring book having ring members capable in the preferred construction of independent operation.

With these objects in view and others as hereinafter appear, the invention consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawing, in which:

Figure 1, is a top plan view of a loose leaf ring book embodying my invention, the top plate of the casing and the cover being broken away. Fig. 2, is a central vertical section on the line II—II of Fig. 1. Fig. 3, is an enlarged vertical section on the line III—III of Fig. 1. Fig. 4, is an enlarged vertical section on the line IV—IV of Fig. 1, said figure showing means for compelling the ring members to operate in unison. Fig. 5, is a detail perspective view of a pin or stud forming part of the casing of the book.

In the said drawing where like reference characters identify corresponding parts in all the figures, 1 indicates a substantially rigid sheet metal base plate bowed downward between its side margins and provided at its ends with vertical upturned ears 2, the side margins of the plate being creased to stiffen the same and form downwardly-disposed hooks 3.

4 are parallel rods journaled at their ends in the upturned ears 2, one of the rods being provided with substantially semicircular hooks 5 and the other with substantially semicircular hooks 6; said hooks 5 and 6 being arranged in pairs and bowed oppositely with respect to each other and capable of interlocking at their free ends as shown or otherwise, so as to constitute when so interlocked, rings upon which are adapted to be secured the customary perforated loose leaves, not shown, and said rods are cut away at their lower sides to form flat faces 7 and 8 disposed at an obtuse angle to each other.

9 indicates pins or studs arranged in longitudinal alinement and against the inner faces of the upturned ears 2 and provided with transverse kerfs 10, and to secure the pins or studs firmly to the ears they are provided below said kerfs with reduced extensions 11 fitted through the adjacent ears and upset or riveted at their outer ends against the outer faces of said ears.

12 are flat springs fitted in the kerfs of the pins or studs, the arrangement being such that when the latter are riveted in place the upturned ears prevent the springs working out of the kerfs. The springs are provided at opposite sides of the pins or studs with shoulders 13 to guard against endwise movement of the said springs. The ends of the springs underlie the cut-away ends of the rods and exert a yielding pressure upon the latter. When the hooks 5 and 6 are interlocked at their free ends as shown in Figs. 1 and 4, the springs bear against the flattened faces 7 of said rods so that the resistance of the springs shall be utilized in preventing accidental opening movement of the rings, that is separable movement of the hooks, and when the rings are open, that is when the hooks are separated, the ends of the springs engage the faces 8 of the rods and therefore yieldingly resist closing movement of the hooks, and in this connection it will be noticed that the right or left-hand ends of the springs are capable of independent movement so that it is possible, with respect to Figs. 1 to 3 inclusive, for either rod to be turned independently of the companion rod. To have the hook-carrying rods independently adjustable is desirable, as at times an independent adjustment enables the operator to place new leaves in the book or remove old ones from it with more convenience and celerity than would be possible if both rods had to be operated in unison.

In the modified construction shown by Fig. 4, one of the rods is provided with an inwardly-projecting arm 14 having a longitudinal passage 15 at its inner end and

the other rod is provided with an inwardly-projecting arm 16 having a rounded head 17 at its free end engaging the passage 15 with a sliding relation. By this arrangement it will be apparent that an outward pull applied on one of the hooks will cause the rod to turn, and said rod through the connecting arms 14 and 16, will impart outward movement to the companion rod and its hooks, inward movement of either of said rods imparting like movement to the other rod, as will be readily understood.

18 indicates the top or cover of the casing, the same being of metal and having depending sides 19 terminating in inturned upwardly disposed hooks 20 to interlock with the downwardly-disposed hooks 3 of the base plate 1, and said top or cover is also provided with transverse slots 21 through which the hooks project and in which they are capable of inward and outward swinging movement.

To bind the casing in a book cover, 22, a binding strip 23 is placed upon the base plate and the top or cover 18 is secured thereto, and in securing said strip in such position it is slipped below the rods 4, and is notched at its ends at 24 to accommodate the pins or studs 9 which preferably contact with or lie upon the base plate. The top or cover 18 is then secured in position so as to fold the binding strip around and into the downwardly disposed hooks 3 and then the side portions of the binding strip are drawn outwardly under the upwardly-disposed hooks 20 and are secured by adhesive material or in any other suitable manner to the adjacent portions of the book-cover 22, as customary in this class of devices. By this arrangement it will be seen that the cover and casing are reliably secured together.

From the above description it will be apparent that I have produced a loose leaf ring book embodying the features of advantage enumerated in the statement of the object of the invention and which is susceptible of modification in various 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. A loose leaf ring book, comprising a book cover, a casing secured thereto consisting of a base plate having downwardly-disposed hooks at its side margins, and upturned ears at its ends, a metallic top or cover overlying the casing and provided at its side margins with upwardly-disposed hooks interlocked with the hooks of the base plate and with transverse slots, parallel rods arranged between the base plate and the metallic cover and journaled at their ends in said upturned ears and provided near their ends and at their undersides with faces extending at obtuse angles to each other, oppositely-bowed hooks extending through said slots and secured at their lower ends to said rods, and means for exerting a yielding pressure upon one of the said faces of each of said rods to hold the same against accidental movement.

2. A loose leaf ring book, comprising a book cover, a casing secured thereto consisting of a base plate having downwardly-disposed hooks at its side margins, and upturned ears at its ends, a metallic top or cover overlying the casing and provided at its side margins with upwardly-disposed hooks interlocked with the hooks of the base plate and with transverse slots, parallel rods arranged between the base plate and the metallic cover and journaled at their ends in said upturned ears and provided near their ends and at their undersides with faces extending at obtuse angles to each other, oppositely-bowed hooks extending through said slots and secured at their lower ends to said rods, and springs suitably secured between the base plate and the top or cover and engaging certain faces of said rods to hold the same against accidental rotation.

3. A loose leaf ring book, comprising a book cover, a casing secured thereto consisting of a base plate having downwardly-disposed hooks at its side margins, and upturned ears at its ends, a metallic top or cover overlying the casing and provided at its side margins with upwardly-disposed hooks interlocked with the hooks of the base plate and with transverse slots, parallel rods arranged between the base plate and the metallic cover and journaled at their ends in said upturned cover and provided near their ends and at their undersides with faces extending at obtuse angles to each other, oppositely-bowed hooks extending through said slots and secured at their lower ends to said rods, pins or studs between the base plate and the top or cover and bearing a rigid relation to the former, flat springs extending through said pins or studs and underlying and exerting an upward pressure upon certain of said faces of the rods to hold the latter against accidental rotatable movement.

4. A loose leaf ring book, comprising a book cover, a casing secured thereto consisting of a base plate having downwardly-disposed hooks at its side margins and upturned ears at its ends, a metallic top or cover overlying the casing and provided with upwardly-disposed hooks interlocked with the hooks of the base plate and with transverse slots, parallel rods arranged between the base plate and the metallic cover and journaled at their ends in said upturned ears and each provided near its ends with inner and outer flattened faces extending at

an obtuse angle to each other, studs or pins secured to the said upturned ends and provided with extensions projecting through and secured to the latter and with kerfs in their outer ends above said extensions, and flat springs arranged transversely in the casing and occupying the kerfs of said pins and having their opposite ends underlying and pressing upwardly against the rods in the vertical plane of their said faces and adapted for engagement with certain of said faces to hold the rods against accidental rotation.

5. The combination in a loose leaf ring book, of a book cover, a base plate upon the same and provided with upturned ears and at its side margins with downwardly-disposed hooks, a binding strip stretched upon and of greater width than said base plate and secured to the book cover at opposite sides of the base plate, a metallic top or cover overlying the base plate and said binding strip and provided with side walls engaging the outer sides of the base plate and upturned hooks engaging the downwardly-disposed hooks of the base plate and clamping the interposed binding strip in the latter, and also provided with transverse slots, parallel rods arranged between the base plate and the metallic cover and journaled at their ends in said upturned ears and provided near their ends and undersides with faces extending at obtuse angles to each other oppositely-bowed hooks extending through said slots and secured at their lower ends to said rods, and means for exerting a yielding pressure upon one of the said faces of each of said rods to hold the same against accidental movement.

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

CHARLES FORGERSON.

Witnesses:

HELEN C. RODGERS,

G. Y. THORPE.