No. 808,492. PATENTED DEC. 26, 1905.

L. K. THIBODEAUX.

LOOSE LEAF BINDER.

APPLICATION FILED MAR. 15, 1905.

Fig 1.

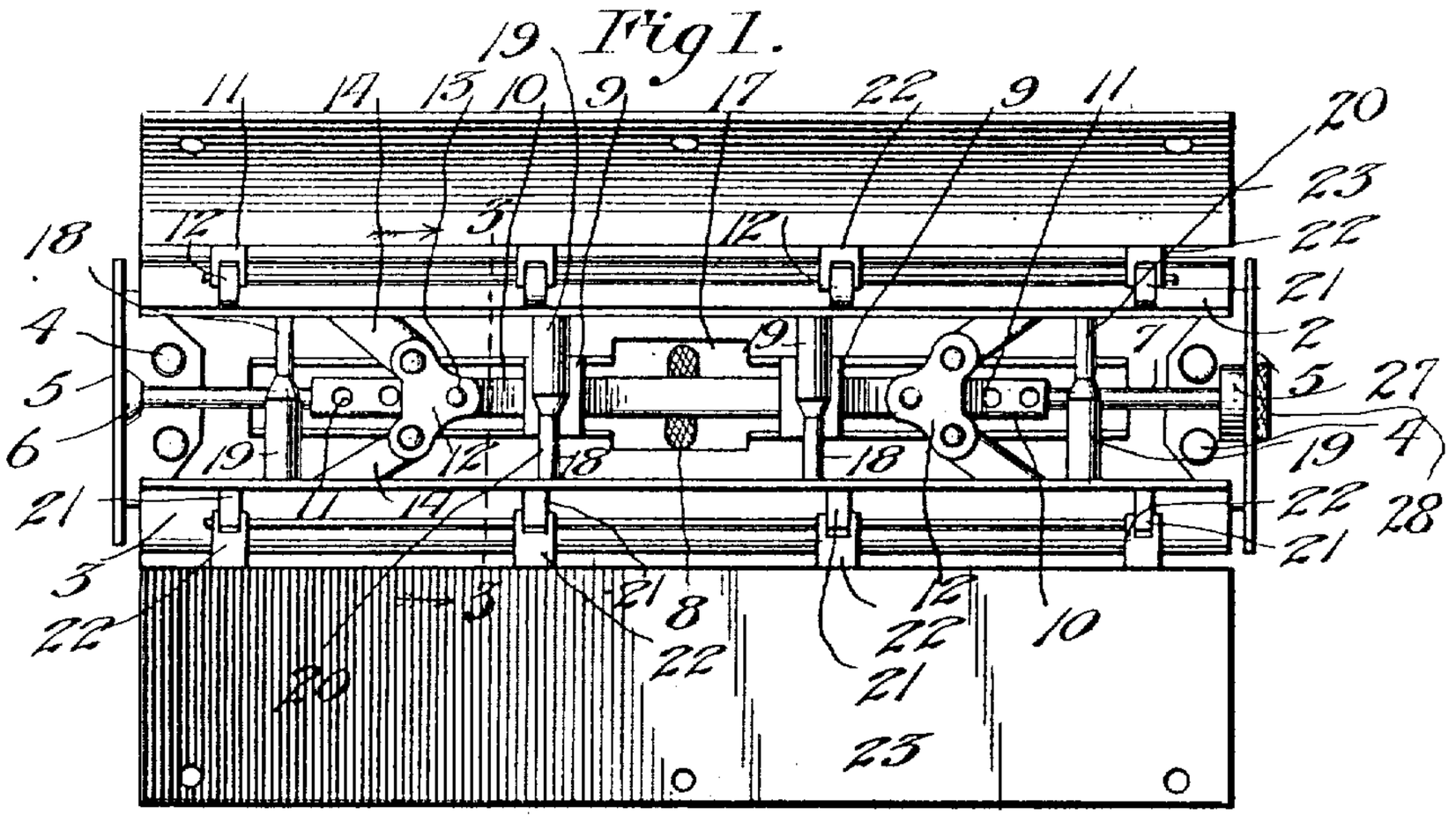


Fig 3.

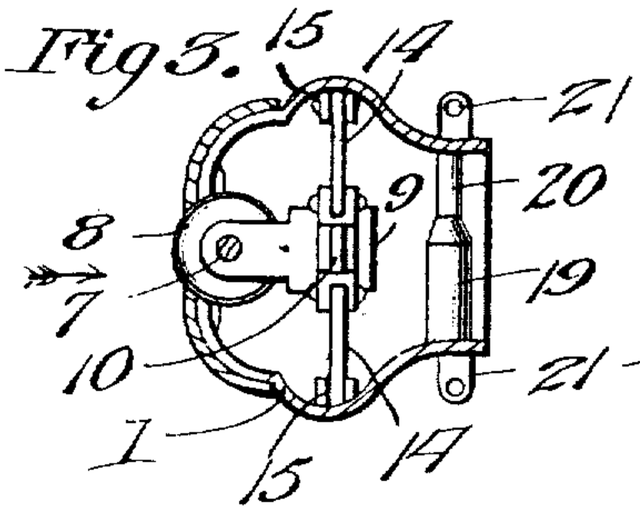


Fig 2.

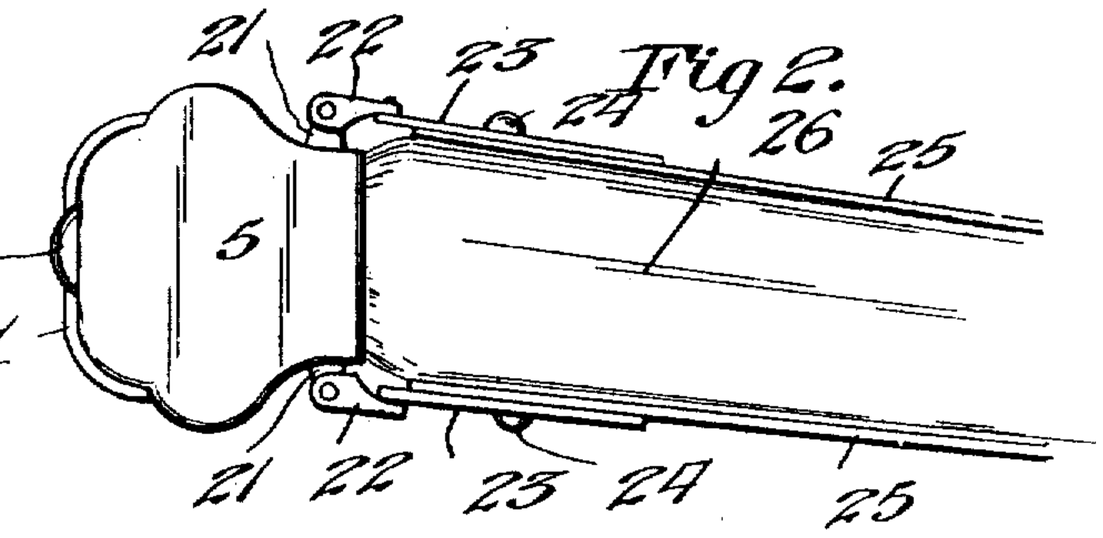


Fig 4.

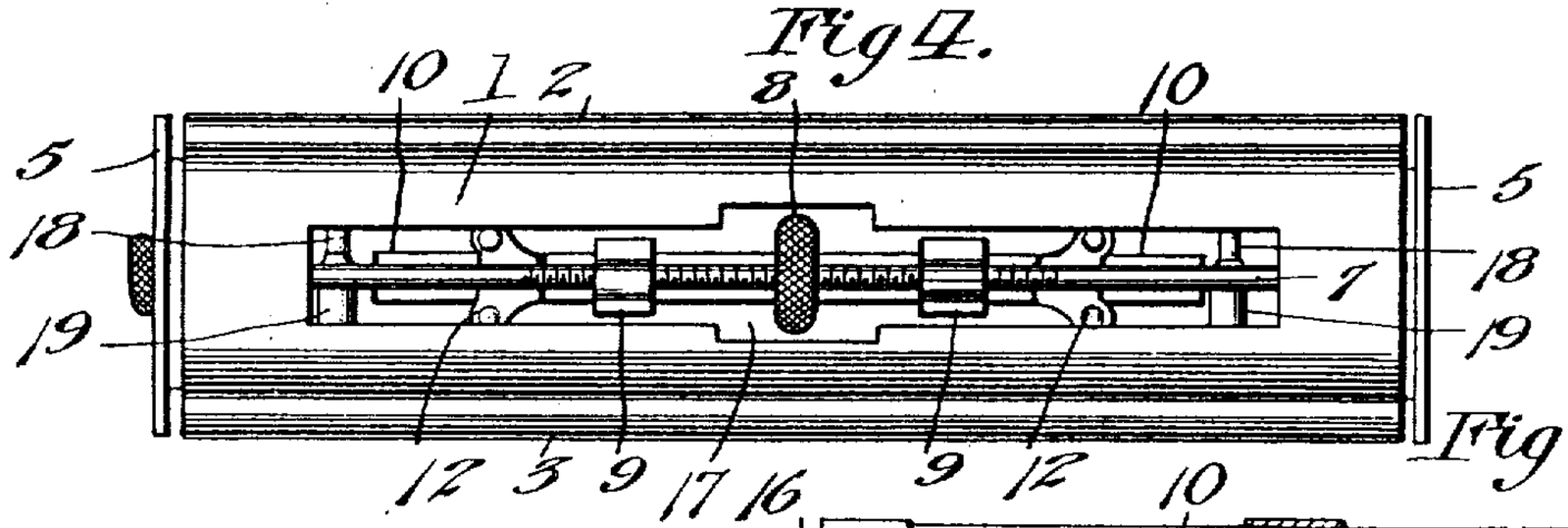


Fig 5.

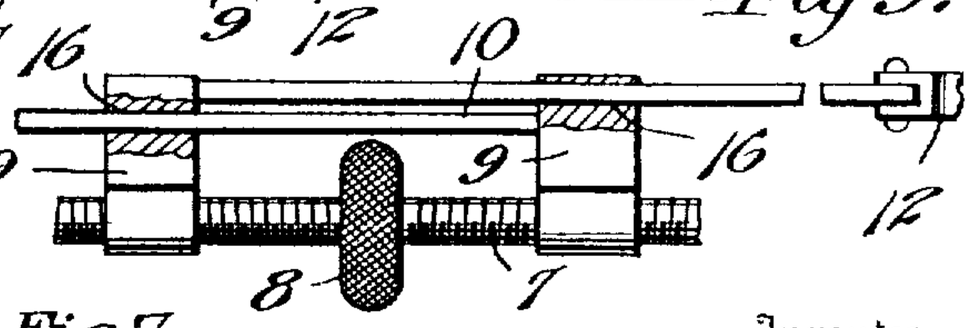


Fig 6.

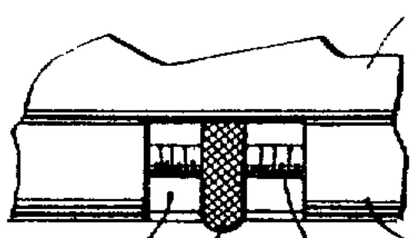
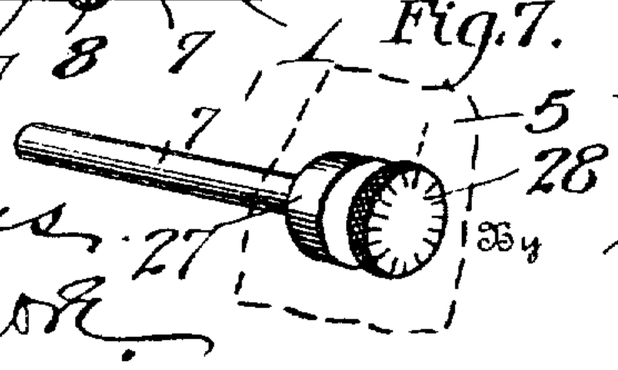


Fig 7.



Witnesses

Phil. E. Barnes.

F. S. Elmore.

Inventor

L. K. Thibodeaux

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

LOUIS K. THIBODEAUX, OF NEW ORLEANS, LOUISIANA.

LOOSE-LEAF BINDER.

No. 808,492. Specification of Letters Patent. Patented Dec. 26, 1905.

Application filed March 15, 1906. Serial No. 250,254.

To all whom it may concern:

Be it known that I, LOUIS K. THIBODEAUX, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

This invention relates to loose-leaf binders, and has for its objects to produce a comparatively simple inexpensive device of this character in which the leaves will be securely clamped within the binder, one wherein the latter may be initially adjusted to vary its leaf-holding capacity, and one wherein the clamping portions of the binder may be readily and positively moved for holding or releasing the leaves.

Further objects of the invention are to provide a device of the type described in which the tension members employed for actuating the binder-clamp will have uniform and simultaneous movement imparted thereto, thus effecting a uniform clamping action upon the leaves, one wherein the latter will be maintained in perfect alinement, and one in which the operating member employed for actuating the tension devices may be locked, thus to prevent removal of the leaves from the binder.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a front elevation of a binder embodying the invention. Fig. 2 is an end view of the same, showing the leaves secured in place. Fig. 3 is a section taken on the line 3 3 of Fig. 1 with the leaf-engaging members in clamping position and the cover-engaging plates omitted. Fig. 4 is a rear elevation of the device viewed in the direction of the arrow in Fig. 3. Fig. 5 is a detail plan view of the tensioning devices and operating-screw. Fig. 6 is a detail view of the central portion of the operating-screw and adjacent parts. Fig. 7 is a detail perspective view illustrating conventionally the means for locking the operating-screw against rotation.

Referring to the drawings, it will be seen that the binder comprises, essentially, a back section 1 and side clamping members or sections 2 and 3, there being attached to the back 1, preferably by means of rivets 4, end members or sections 5, equipped with bearings 6 for an operating member or screw 7, provided at its longitudinal center with a milled head 8 and having right and left hand threaded portions disposed, respectively, on opposite sides of the head 8. Arranged upon and for relatively reverse movement longitudinally of the screw-shaft 7 is a pair of blocks or sleeves 9, disposed, respectively, on opposite sides of the head 8 and each provided with a fixed arm or extension 10, having a series of longitudinally-spaced perforations 11. Arranged upon and for adjustment longitudinally of each of the arms 10 is a coupling member or head 12, adapted to be fixed in place by means of a fastening member 13, entered through one of the perforations 11, there being pivoted to each of the coupling members the inner ends of a pair of oppositely-extended connecting elements or links 14, in turn pivotally engaged at their outer ends, as at 15, respectively, with the clamping members 2 and 3. It is to be noted in this connection that the arm 10 of each block extends through a guide-opening 16 in the other block, as seen clearly in Fig. 5, whereby the blocks are mutually supporting and the arms present a double guide which insures smooth even movement of the blocks upon the screw, and, further, that through the adjustability of the coupling members 13 upon the arms an initial adjustment of the clamping members 2 and 3 toward and from each other for varying the holding capacity of the binder may be obtained.

Formed in the section 1 is an opening 17, through which the head 8 is exposed, thus to permit of its being readily engaged for operating the screw-shaft 7, while arranged at longitudinally-spaced intervals in the front portion of the binder is a plurality of leaf-centering members or posts 18, each consisting of a tubular member 19, carried by one of the sections 2 or 3, and a solid member 20, carried by the other of said sections and designed to telescope with the tubular member 19, there being fixed upon the outer faces of the sections 2 and 3 rigid perforated ears 21, to which are pivotally connected, by means of hinges 22, metal plates 23, designed to be secured by rivets 24 with the side boards 25, which, as usual, serve to protect the leaves 26, secured within the binder.

Carried at one end of the back section 1 and suitably secured to the adjacent end member 5 is a lock-casing 27, containing any appropriate locking mechanism (not shown) designed for locking the screw 7 against

movement and operable through the medium of a rotary head 28, which when turned in one direction causes the mechanism to lock the screw and when turned in the other direction to release the screw.

In practice an initial adjustment of the clamping members 2 and 3 toward and from each other is attained by adjusting the coupling members 12 longitudinally of the arms 10, as heretofore explained, thus to obtain the desired capacity of the binder. The parts having been thus properly arranged, the leaves are recessed at appropriate points to fit the centering-posts 18 and are then entered between the clamping members 2 and 3 which are actuated through the medium of the operating-screw and the tensioning devices, comprising the coupler members 12 and links 14, for securely clamping the leaves in position, it being apparent that as the screw is rotated the leaves 9 will be acted upon, respectively, by the right and left hand threads, thus to cause them to travel toward and from each other and actuate the tension devices for drawing the clamping members together or forcing them apart, according to the direction of rotation of the screw, the sleeves 9 being guided in their movements by the arms 10, as heretofore explained. After the clamping members have been properly adjusted for clamping the leaves the operating member or screw 7 may be fixed against further movement through the medium of the locking mechanism 27 28, thus to prevent unauthorized removal of the leaves from the binder.

From the foregoing it is apparent that I produce a comparatively simple inexpensive device which in practice will admirably perform its functions to the attainment of the ends in view, one wherein the leaves will be securely clamped in place and one in which the clamping members will be positively operated for releasing the leaves, it being understood that in attaining these ends minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new is—

1. In a device of the class described, a binder comprising a pair of clamping members, an operating-screw rotatively sustained within the binder, blocks or sleeves in threaded engagement with and movable reversely by the screw, arms carried by the blocks, and coupling members adjustable upon the arms and operatively connected with the clamping members.

2. In a device of the class described, a binder comprising a pair of clamping members, an operating-screw rotatively sustained within the binder, movable heads threaded upon and operable by the screw, arms carried respectively by the heads and extended in relatively reverse directions, coupling members adjustable upon the arms for obtaining an initial adjustment of the clamping members, and operative connections between the coupling members and clamping members.

3. In a device of the class described, a binder comprising a pair of clamping members, an operating-screw rotatively sustained within the binder, blocks or sleeves in threaded engagement with and movable reversely by the screw, said blocks being provided with guide-openings, arms carried by the blocks, the arm on each block being movably extended through the guide-opening in the other block, and operative connections between the arms and clamping members.

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

LOUIS K. THIBODEAUX.

Witnesses:

GEO. LABARRE,

P. F. BRINKMANN.