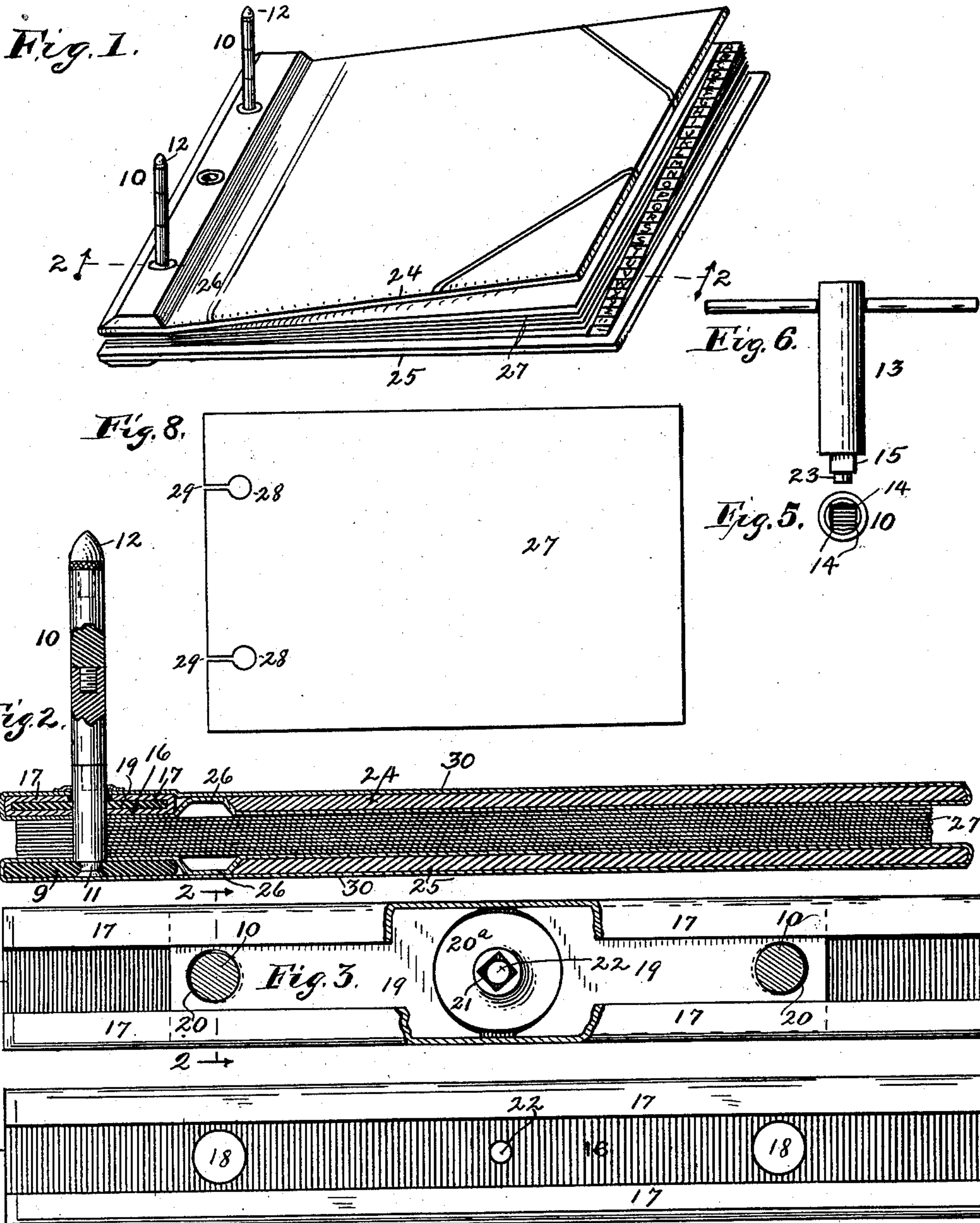


No. 752,747.

PATENTED FEB. 23, 1904.

E. T. A. AKASS.
LOOSE LEAF BINDER.
APPLICATION FILED JAN. 19, 1903.

NO MODEL.

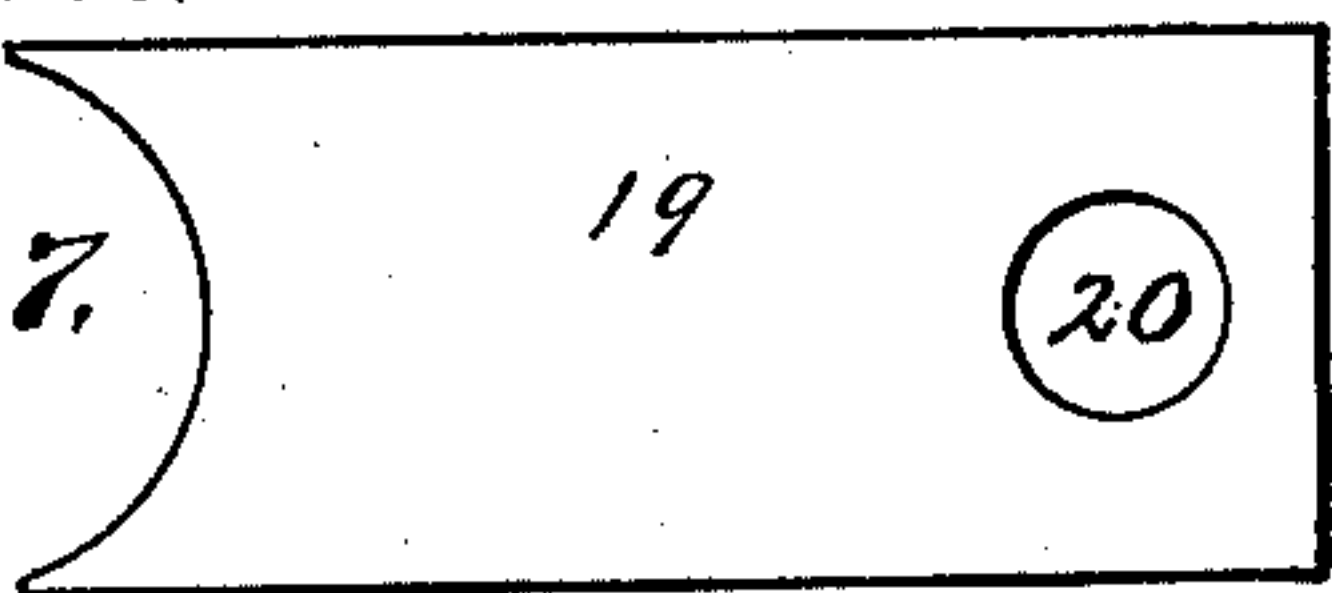


Witnesses:

John C. Sherwood
S. Mahlon Unger

Fig. 4.

Fig. 7.



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E. T. A. Akass,
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UNITED STATES PATENT OFFICE.

EDWARD T. A. AKASS, OF CHICAGO, ILLINOIS.

LOOSE-LEAF BINDER.

SPECIFICATION forming part of Letters Patent No. 752,747, dated February 23, 1904.

Application filed January 19, 1903. Serial No. 139,719. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. A. AKASS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

This invention relates to loose-sheet holders or binders in which the two covers of the binder and the sheets between them are held by posts seated in one of the covers and extending through perforations in the other; and the object of the invention is to provide a post in removable sections, whereby various lengths may be obtained by suitable additions or removals of said sections.

The object, further, is to provide a post without transverse holes to mar the appearance and weaken it, and to provide a post which will present a plain smooth surface when the several parts from which it is made are assembled.

A third object of the invention is to provide means for loosening the joints should they become stuck by rust or otherwise.

A further object of the invention is to provide a strong and secure lock to hold the movable cover at any given position on the posts and to provide a lock that will be compact, so as to present a neat appearance on the binder, and to provide a cheap lock to manufacture and one that will be simple and convenient.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a file embodying my complete invention; Fig. 2, a section on the line 2 2 of Figs. 1 and 3; Fig. 3, a detail in top view and partial section of the locking mechanism detached from the binder; Fig. 4, a top view of the plate which holds the movable parts of the lock; Fig. 5, a top end view of one of the post-sockets; Fig. 6, a side view of the key for manipulating the lock and binding-posts; Fig. 7, a detached view of one of the locking-plates, and Fig. 8 a top view of one of the leaves of the binder.

Like characters of reference indicate like parts throughout the several views of the drawings.

9 is a metal plate running longitudinally of the back of the book, to which the binding-posts 10 10 are secured in any substantial manner, such as by having its reduced end inserted through a suitable perforation in the plate and riveted on the opposite side or by having its reduced end screw-threaded and screwed into a threaded opening in the said plate. The posts are divided transversely into sections of any suitable or desired length, as one-half inch, one inch, two inches, and the several sections are provided with a screw-threaded socket at their outer ends and a reduced portion or shank 11, provided with a screw-thread to take into said threaded socket. The outermost section of this composite post is provided with the knob 12. Should the joints rust or become stuck from any cause, whereby the separation of the parts becomes difficult, I provide for the use of a key 13 by forming longitudinal inside channels 14 in the threaded bore of the post-socket, into which the squared end 15 of the key is inserted, and by means of the key the post-sections are easily unscrewed.

On the opposite side of the back from the plate 9 is the plate 16, the edges of which are bent at right angles and then again inwardly at right angles to form the flanges 17 17 parallel with the body of the plate. The body of the plate 16 will have the perforations 18 18 to allow the passage of the posts there-through, the latter making a close but not a tight fit in said openings. Placed on plate 16 between it and the flanges 17 are the two locking-plates 19, which have perforations 20, which register with the perforations 18 of the plate 16 and afford a passage-way for the posts. The adjacent ends of the plates 19 are concaved, and in the circular opening thus formed an elliptical disk 20^a is seated. The two locking-plates 19 and the disk 20 are held from lateral displacement by the plate 16 and its flanges 17, and longitudinal displacement is prevented by the posts. When the major axis of the elliptical disk is turned to a position longitudinally of the plate 16, the plates 19 19 will be pressed in opposite directions against the posts, thereby clamping the post between said plates and the far sides of the

openings in plate 16, as shown in Fig. 3. When the minor axis of the disk 20^a is turned longitudinally of the plate 16, the posts will be unlocked. For convenience in turning the disk 5 for the purpose of locking and unlocking it I provide the central perforation 21 with rectangular sides to receive the squared end 15 of the key 13, and to give a more extended bearing for the key I may increase the thickness of the disk around the opening 21, as 10 shown in Fig. 3. In order to center or anchor the disk while it is being rotated by the key, I provide the perforation 22 in the plate 16 to receive the cylindrical extension 23 of the key.

15 The front and back covers 24 and 25, respectively, of the binder comprise the usual binder's board covered with leather, buckram, or any of the usual and suitable materials 30. This covering material extends around the 20 respective plates 9 and 16 of the back in the manner shown in Fig. 2 and at the spaces 26 between the sides and backs form hinges on which the covers are turned in opening the binder.

25 27 represents the leaves, which have perforations 28 28 to receive the posts and slots 29 leading from the end of the sheet into the perforations, as shown in Fig. 8. These sheets are placed between the plates 9 and 16 of the 30 back and between the covers in the manner shown in Figs. 1 and 2. This construction can be applied to all sizes of binders for holding loose sheets for all purposes. Attention is also called to the fact that by the removal 35 of the knobs and post-sections down to the front cover the binder will have the appearance of a book, which will have no projections to scratch the furniture.

40 Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. In a loose-leaf binder having binding-posts, the combination with said posts of a plate having perforations through which the 45 posts pass, a pair of locking-plates also having perforations for the passage of said posts, an elliptic disk between the two locking-plates

acting eccentrically thereon when rotated, said disk provided with a key-socket and thickened around said socket and the plate below the 50 disk having a round hole opposite said key-socket, and a key having a squared portion and a cylindrical terminal part.

2. In a loose-leaf binder, a pair of binding-posts, a plate having perforations through 55 which the posts pass, a pair of locking-plates having perforations through which said posts pass, an elliptic disk between the adjacent ends of the two locking-plates to eccentrically move them, said disk being provided with a 60 key-socket, flanges to hold the disk and locking-plates formed by bending over the edges of said first plate and a perforation in the plate below the key-socket to receive a cylindrical extension of the key to center the disk, 65 and a key having an angular portion and a cylindrical terminal.

3. In a loose-leaf binder, a binding-post made of a plurality of separable sections, one section having a screw-threaded socket with 70 longitudinal grooves forming a squared receptacle for a key and the next section having a screw-threaded shank to screw into said threaded socket, a key, a pair of covers to the back of one of which said posts are fastened 75 and to the other of which the posts are locked by a suitable removable fastening.

4. In a loose-leaf binder, a binding-post made from a plurality of transversely-sepa- 80 rable sections which present a smooth unbroken surface when united, one of said sections at each joint having a screw-threaded socket and the next section mating with it having a screw-threaded shank and the socket having longitudinal grooves forming a squared re- 85 ceptacle for a key, and a key to enter the squared socket to unlock the sections.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 8th day of January, A. D. 1903.

EDWARD T. A. AKASS. [L. s.]

Witnesses:

JOSEPH A. MINTURN,
JOHN B. SHERWOOD.