

No. 876,250.

PATENTED JAN. 7, 1908.

H. WIEDEMAN.  
LOOSE LEAF BINDER.  
APPLICATION FILED MAY 2, 1907.

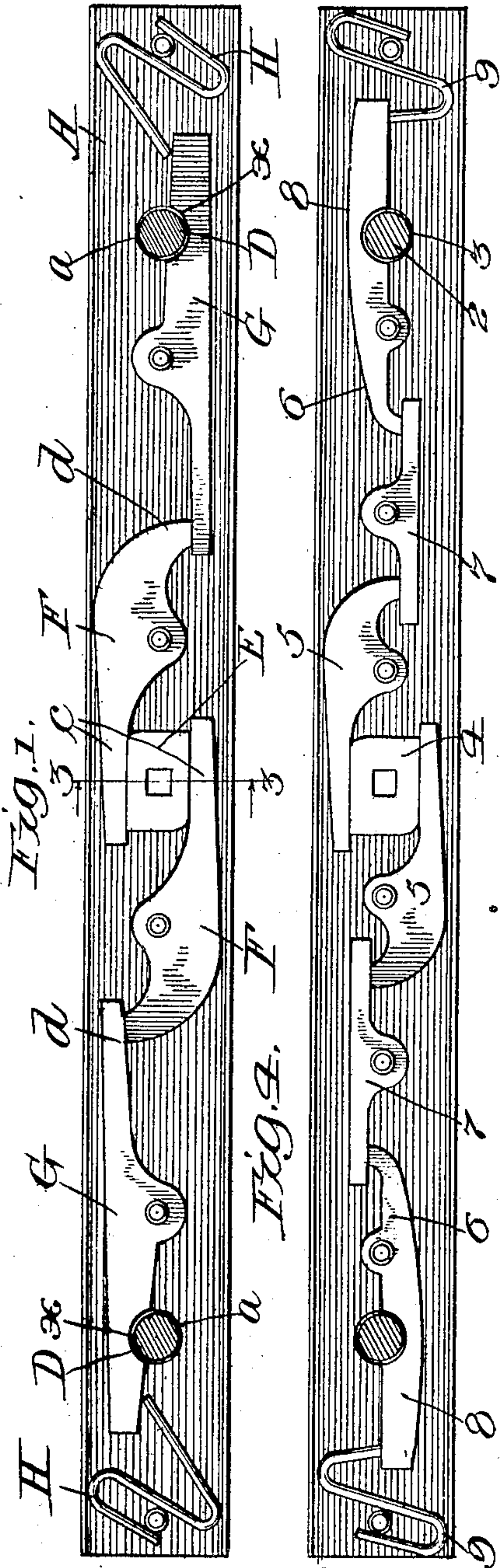
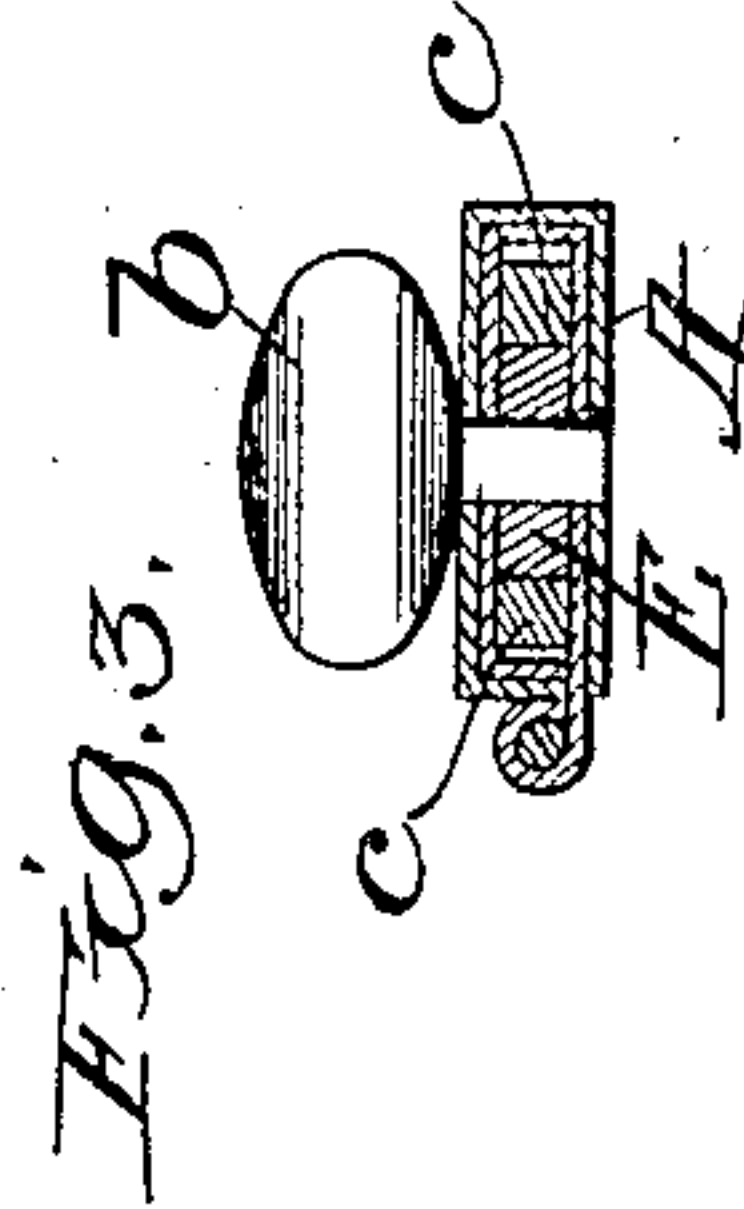
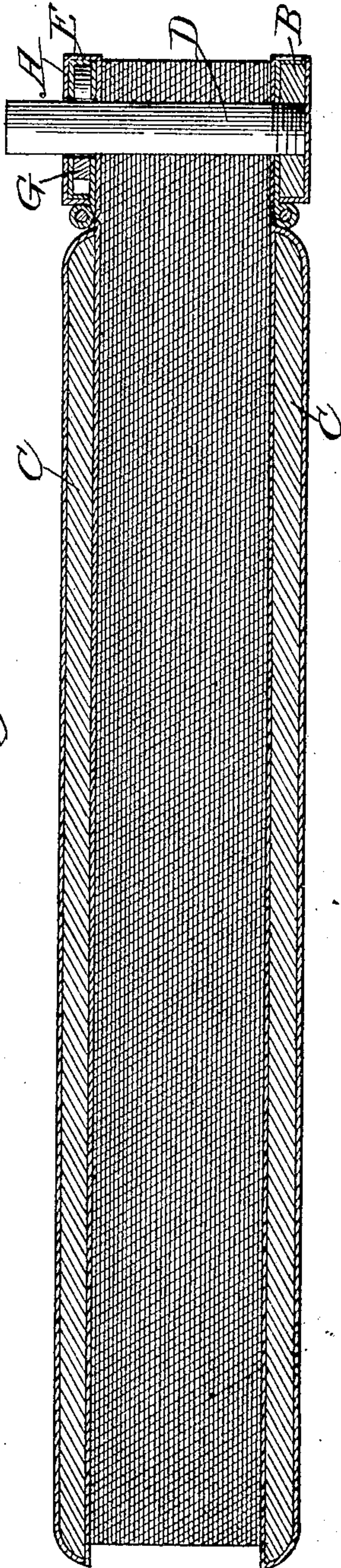


Fig. 2.



Witnesses:

On. Vermick  
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# UNITED STATES PATENT OFFICE.

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## LOOSE-LEAF BINDER.

No. 876,250.

Specification of Letters Patent.

Patented Jan. 7, 1908.

Application filed May 2, 1907. Serial No. 371,436.

*To all whom it may concern:*

Be it known that I, HERMAN WIEDEMAN, a citizen of the United States, and a resident of 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 clear, full, and exact description.

My invention relates to loose leaf binders, and particularly to that class of binders the backs of which comprise two clamping-plates, one of which has posts projecting therefrom toward and through suitable openings in the other plate, that are locked by means carried by the plate having said openings, to maintain said clamping-plates at any desired distances apart. Heretofore this class of loose-leaf binders could only be applied to comparatively narrow books, because the means for locking the filing posts could not be depended upon to clamp said posts and convey the movement of the actuating devices to said posts when located any comparatively long distance from the actuating devices, which latter for convenience of operation were generally located at about the center of width of the clamping-plates, and simultaneously locked both posts when operated by one effort of the manipulator.

The object of my invention is to transmit the motion of the actuating devices to clamping-posts located at more distant points than has heretofore been considered possible, and thus render my invention applicable to books of much greater width than has heretofore been considered possible. This I accomplish by the means hereinafter fully described and as particularly pointed out in the claims.

In the drawings:—Figure 1 is a horizontal section through the clamping-plate in which the openings are made for the passage of the filing posts. Fig. 2 is a longitudinal section of a book taken in the plane of one of the posts, having my improvements applied thereto. Fig. 3 is a transverse view through the center of length of the clamping-plate in which said post openings are made. Fig. 4 is a view similar to Fig. 1 showing a modified construction of my invention drawn to a smaller scale.

The loose leaf books to which my improvements are applied consist, as shown in the drawings, of an upper and a lower clamping-plate A and B to each of which a cover C is suitably hinged. The lower of these clamp-

ing-plates B has two filing studs D secured thereto and projecting therefrom near each end toward and through alining apertures *a* in the other clamping-plate. The upper plate, A, is made hollow throughout its length, and the apertures *a* therein through which said studs pass are located near the ends thereof.

At the center of length of the hollow clamping-plate A, a somewhat rectangular operating cam E is provided having two of its diagonally opposite corners truncated or rounded, and having a square opening in its center into which the shank of a suitable key *b* can be inserted for turning it. In its normal position the major axis of this cam is parallel with the longitudinal sides of the clamping-plates and it is placed between and its longer sides are engaged by the tail extensions *c* of rocking bars F, which latter are pivoted mediate their ends to the shell of said clamping-plate, about midway between the longitudinal sides thereof. One of these rocking-bars extend in one direction from said cam and the other in the opposite direction and the ends thereof opposite the tails *c* thereof are bent toward the longitudinal side of said plate opposite that adjacent to which their tails are located, and the extremities *d* of these curved ends of said bars F engage the adjacent branches of the longitudinally disposed clamping-jaws G at or near the extremities thereof. These clamping-jaws G are pivotally connected to the shell of the plate A mediate their ends and about midway between the longitudinal sides of said plate, and the branches thereof, opposite those engaging the rocking-bars, extend between the longitudinal sides of the clamping-plates and the posts D, and are recessed at *x* to form a curved engaging surface, which, when cam E is turned so that its major axis will be transverse to the length of the clamping-plate, will engage the cylindrical exterior of studs D, and clamp the same so tightly as to prevent the longitudinal displacement thereof on said post. In order to automatically return the clamping-jaws G and rocking-bars F to their normal positions, as shown in Fig. 1 of the drawings, when the cam is restored to the position shown in said Fig. 1, I have provided N-shaped springs H, which are suitably secured between the longitudinal sides of the interior chamber of said clamping-plate, and have one end bear against the end



of the arm of jaw G extending beyond the posts.

In Fig. 4 I show a modification of my invention which is adapted for use in connection with books of greater width than that for which the mechanism shown in Fig. 1 of the drawings is adapted. In this modification I employ clamping-plates similar to A and B shown in Fig. 2 of the drawings, and posts 2 projecting from one of said clamping-plates through openings 3 in the other. I also employ a centrally located cam 4, similar in construction to cam E hereinbefore referred to, and rocking-bars 5 which are similar to rocking-bars F. In addition to these I use longitudinally disposed clamping-jaws 6, but the branch thereof nearest the curved end of the rocking-bar is bent in the same direction thereas, and is not directly engaged thereby, but derives its movement from the longitudinally disposed lever 7 of the second class, which is fulcrumed mediate its ends, preferably, in the plane intersecting the fulcrums of the clamping-jaw and rocking-bar. The branch 8 of the locking-jaw farthest from lever 7 extends between the post 3 and longitudinal side of the clamping-bar opposite the part of the post which is shown to be engaged in Fig. 1, and the end portion thereof extending beyond the post 3 toward the end of the clamping-bar is engaged by the end of an N-shaped spring 9, which moves the clamping-jaw out of engagement with the post 3 and restores it, lever 7, and the rocking-bar 5 to their original positions when the cam 4 is moved back to the position shown in Fig. 4 of the drawings.

The operation of my improvement is obvious, and its application to comparatively large and superlatively large books by means of a train of one or more longitudinally disposed transversely rocking devices greatly expands the possibility of use of temporary binders of this class.

What I claim as new is:—

1. A lock for loose-leaf binders comprising an upper and a lower clamping-plate, posts projecting from said lower plate to and through openings in said upper plate, an elongated cam located in the interior of said upper plate mediate said openings and a plurality of rocking elements between said cam and each post for transmitting the motion from said cam to said post and clamping the same.

2. A lock for loose-leaf binders comprising an upper and a lower clamping-plate, posts projecting from said lower plate to and through openings in said upper plate, an elongated cam located in the interior of said upper plate mediate said openings, and a plurality of automatically returnable rock-

ing elements between said cam and each post for transmitting the motion from said cam to said post and clamping the same.

3. A lock for loose leaf binders comprising an upper and a lower clamping-plate, posts projecting from said lower plate to and through openings in said upper plate, an elongated cam located in the interior of said upper plate mediate said openings and a plurality of rocking elements between said cam and each post for transmitting the motion from said cam to said post and clamping the same, and a spring engaging the member farthest from said cam for automatically restoring said members to their original positions.

4. A lock for loose-leaf binders comprising an upper and a lower clamping-plate, posts projecting from said lower plate to and through openings in said upper plate, an elongated cam located in the interior of said upper plate mediate rocking-bars fulcrumed mediate their ends and having one end engaged by said cam, and longitudinally disposed rocking members fulcrumed mediate their ends and adapted to transmit the motion from said rocking-bars to said posts and clamp the same.

5. A lock for loose-leaf binders comprising an upper and a lower clamping-plate, posts projecting from said lower plate to and through openings in said upper plate, an elongated cam located in the interior of said upper plate mediate rocking bars fulcrumed mediate their ends, and having one end engaged by said cam, and longitudinally disposed clamping-jaws fulcrumed mediate their ends and adapted to transmit the motion from said rocking-bars to said posts and clamp the same.

6. A lock for loose-leaf binders comprising an upper and a lower clamping-plate, posts projecting from said lower plate to and through openings in said upper plate, an elongated cam located in the interior of said upper plate mediate rocking bars fulcrumed mediate their ends having one end engaged by said cam, and longitudinally disposed clamping-bars fulcrumed mediate their ends and have one end engaged by the adjacent rocking-bar, and the other end extended between one of said posts and the longitudinal side of the clamping-plate, and springs engaging said extended ends, substantially as and for the purpose specified.

In testimony whereof I have hereunto set my hand and seal this 17th day of April, A. D., 1907.

HERMAN WIEDEMAN. [L. s.]

Witnesses:

FRANK D. THOMASON,  
E. K. LUNDY.