

M. G. GRIFFIN.
 LOOSE LEAF BINDER.
 APPLICATION FILED APR. 24, 1909.

958,633.

Patented May 17, 1910.

Fig. 1.

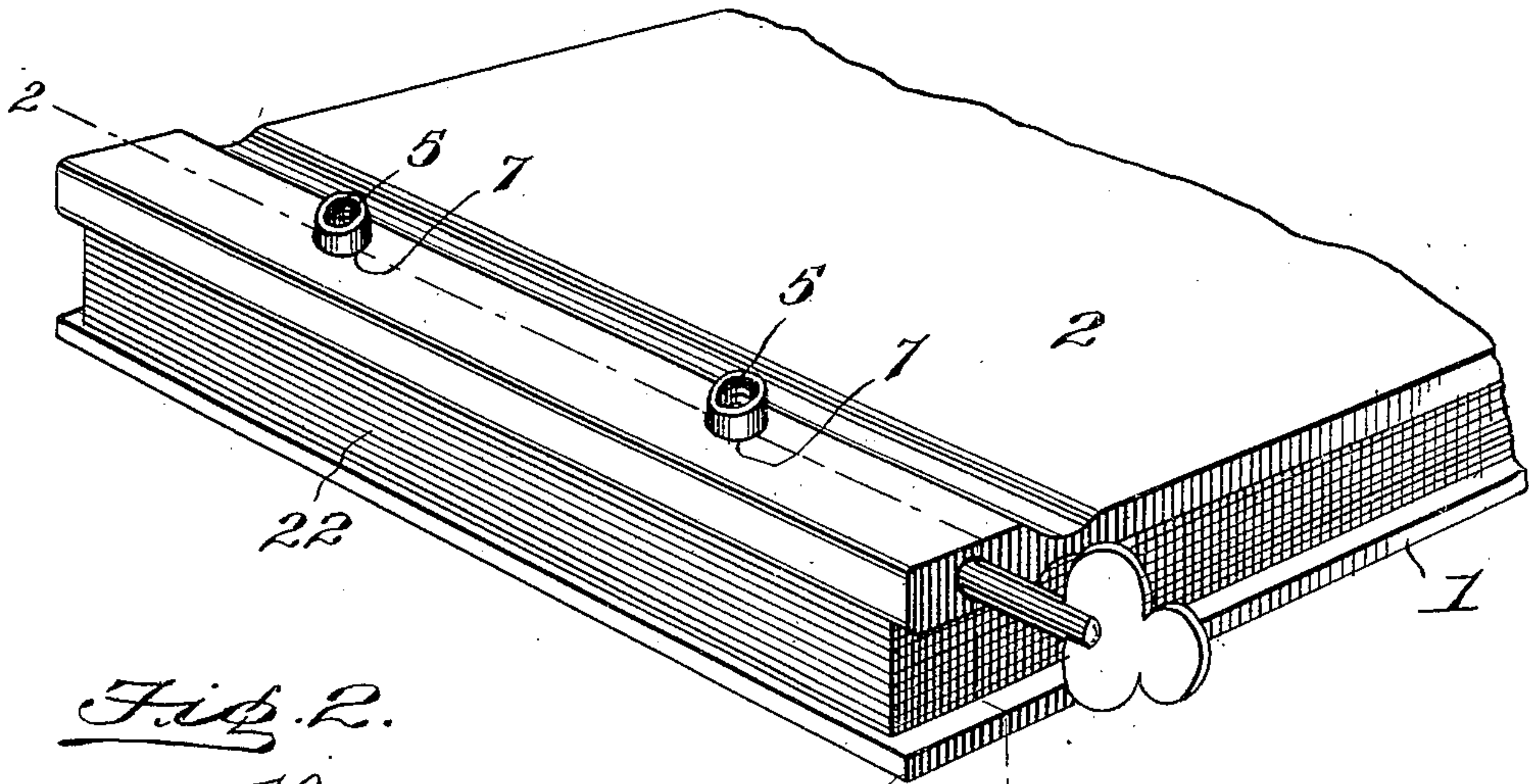


Fig. 2.

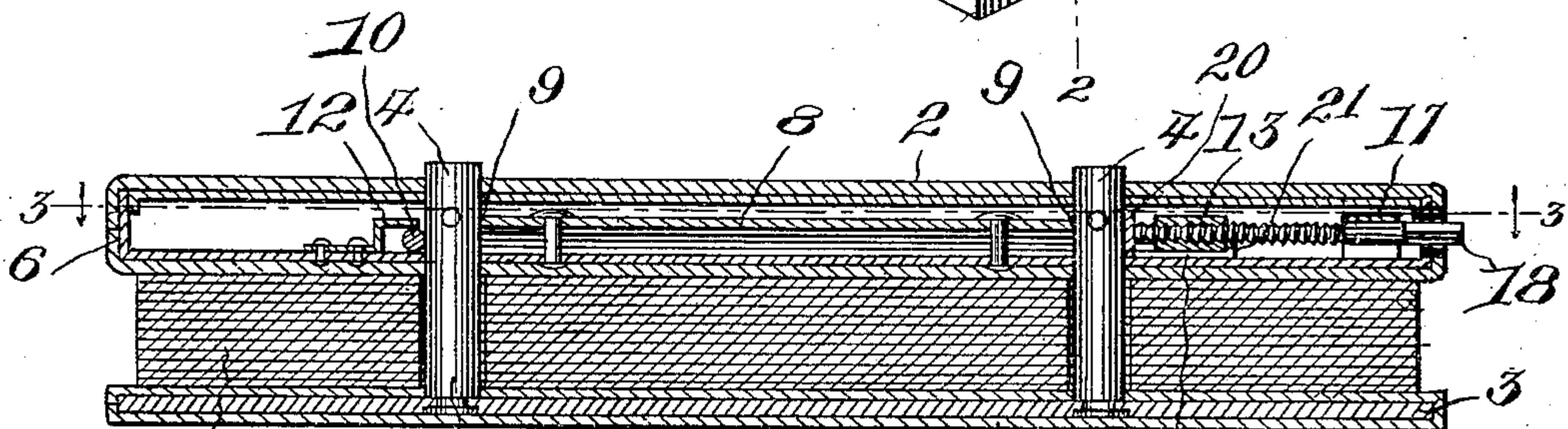


Fig. 3.

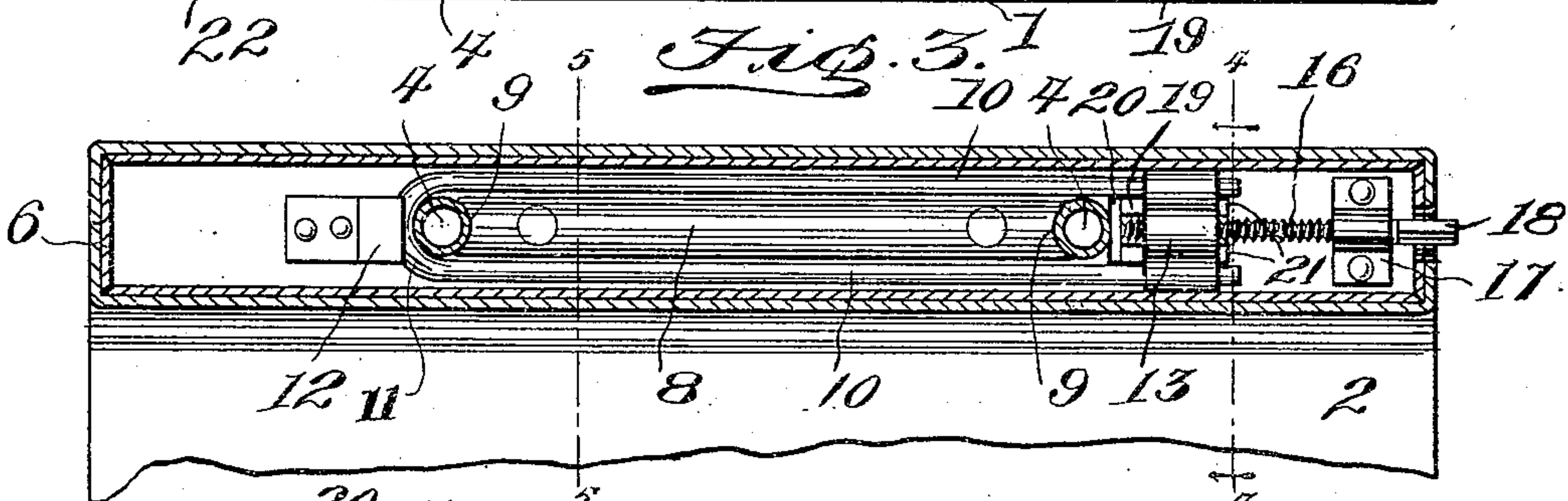


Fig. 4.

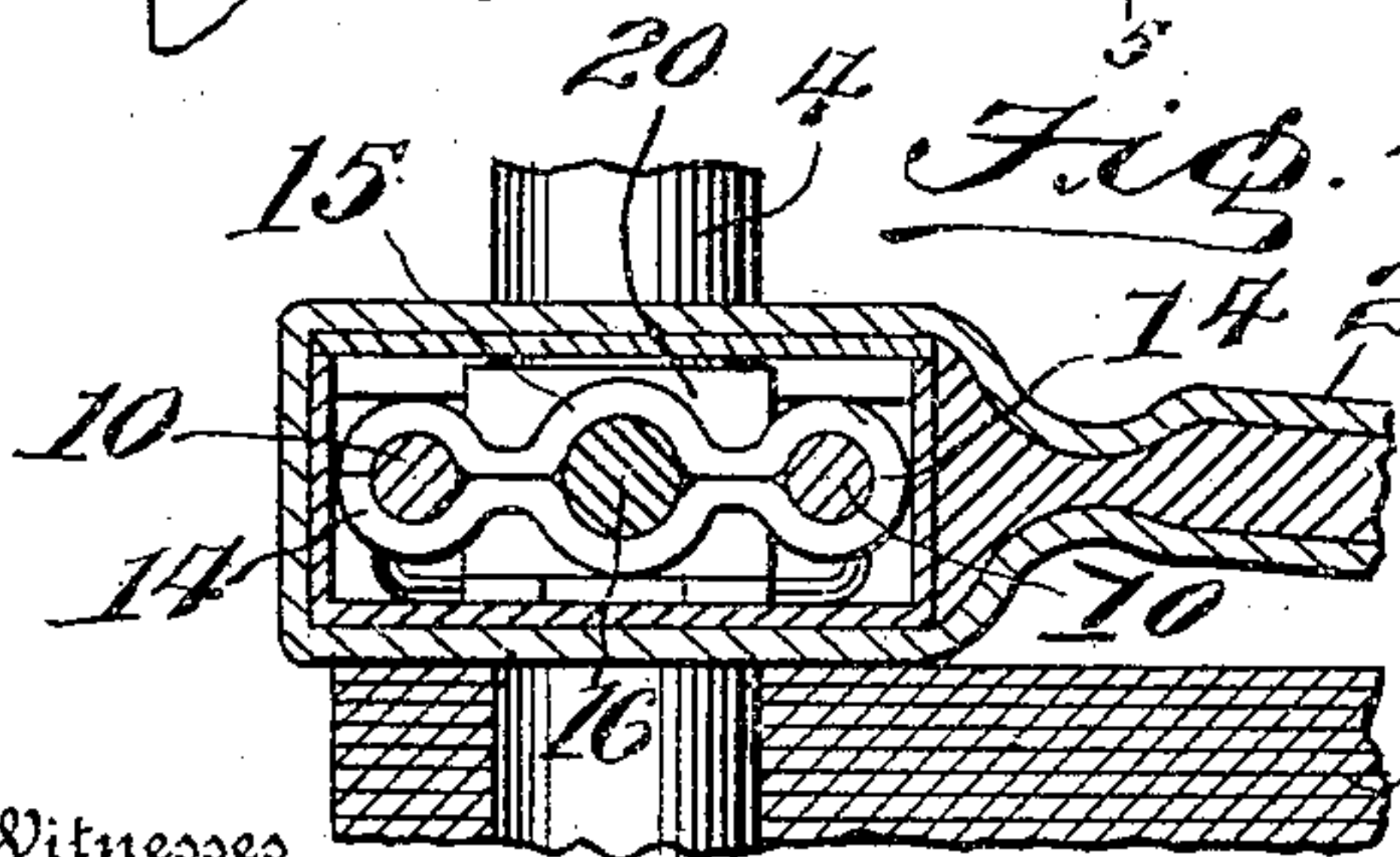
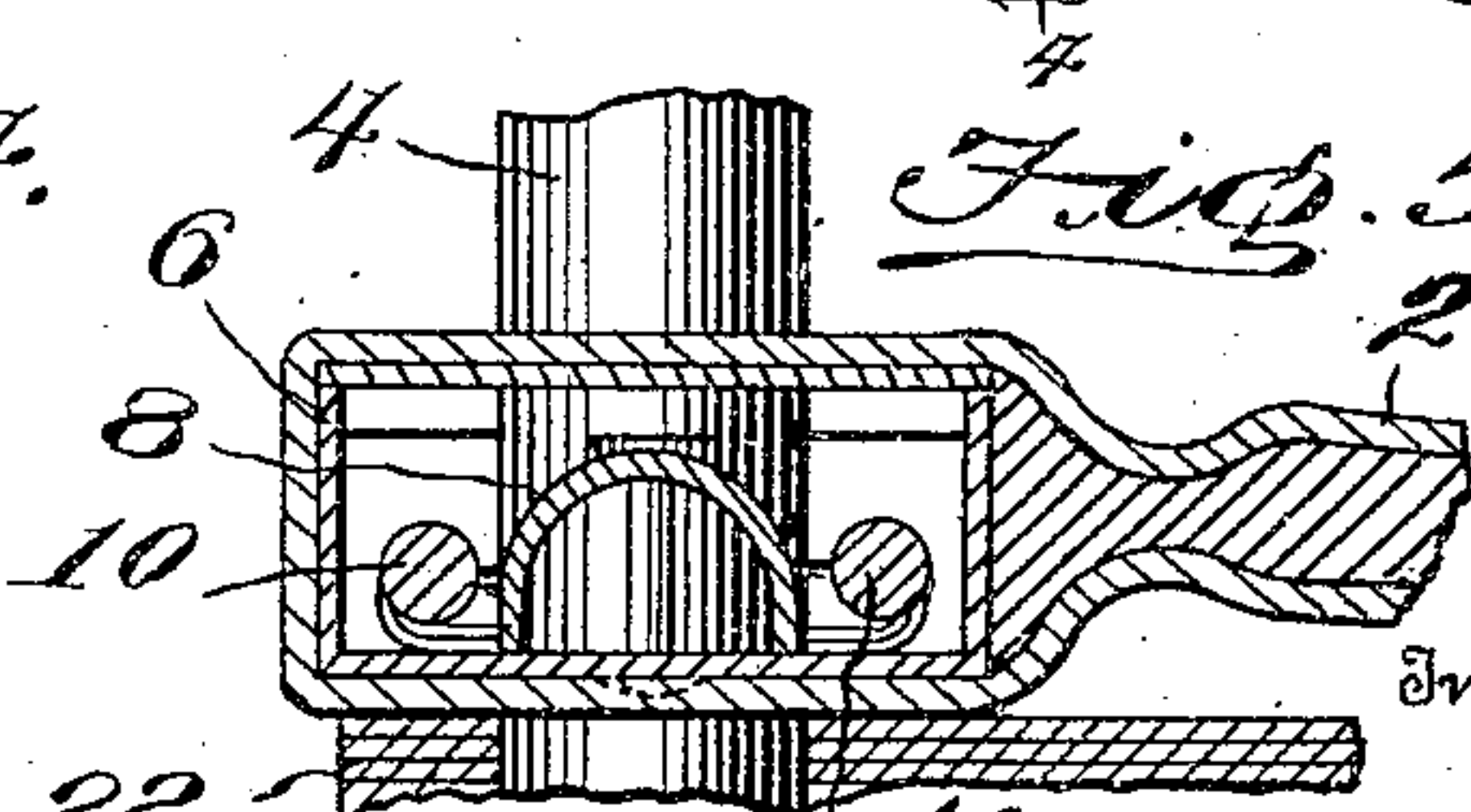


Fig. 5.



Witnesses

J. T. L. Wright.
R. M. Smith.

By

Michael G. Griffin

Victor J. Evans
 Attorney

UNITED STATES PATENT OFFICE.

MICHAEL G. GRIFFIN, OF CINCINNATI, OHIO.

LOOSE-LEAF BINDER.

958,633.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed April 24, 1909. Serial No. 491,920.

To all whom it may concern:

Be it known that I, MICHAEL G. GRIFFIN, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

This invention relates to loose leaf binders, the object of the invention being to provide a simple, convenient and reliable binder for loose leaves adapted to be operated by a key which is detachable from the binder, thus preventing unauthorized persons from tampering with the binder and extracting one or more of the leaves.

The invention has special reference to the means for securely clamping the parts of the binding mechanism together so as to form a thorough and effective lock thereby guarding against accidental slipping of the parts and the release of the leaves bound therein.

With the above and other objects in view, the invention consists in the novel construction, combination and arrangement of parts hereinafter fully described, illustrated and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a portion of a complete loose leaf binder embodying the present invention. Fig. 2 is a vertical longitudinal section through the binding portion of the device. Fig. 3 is a horizontal section through the upper section or clamping bar. Fig. 4 is a vertical cross-section on the line 4—4 of Fig. 3. Fig. 5 is a similar section on the line 5—5 of Fig. 3.

1 designates a bottom section or board of the loose leaf binder and 2 the cover or top thereof. Within the upper end portion of the bottom 1 there is arranged a stationary bar 3 to which is secured two or more upstanding filing pins 4 and under the preferred embodiment of this invention these filing pins are socketed in their upper ends and internally threaded, as shown at 5 so that extension pins may be inserted therein when it becomes necessary to increase the capacity of the loose leaf binder as a whole.

Within the cover or top 2 there is arranged a metal housing 6 while extending through said housing and also through the upper and lower portions of the top or cover 2 are holes 7 for the passage of the filing pins 4. Within the housing 6 is arranged a fixed abutment strip 8 which is half round

or arched in cross section and if desired this strip may be of hollow construction or concavo-convex in cross-section as indicated clearly in Figs. 2 and 5. This fixed abutment strip 8 is riveted or otherwise secured fixedly within the housing 6 and the opposite extremities thereof are concaved as shown at 9 to abut snugly against the adjacent faces of the filing pins 4, thus providing a bearing which extends substantially half way around each of said pins.

In connection with the binding pins 4, I use a bail-shaped sliding clamp embodying the oppositely arranged parallel portions 10 and the integral end connecting portion 11 which is substantially semi-circular and passes around one of the filing pins 4 as best illustrated in Fig. 3, the said half round end of the sliding clamp being adapted to slide beneath and being held in place by a lip or keeper 12 secured within the housing 6 as shown in Figs. 2 and 3. The opposite ends of the parallel portions 10 are secured together by means of a combined yoke and nut 13 best illustrated in Figs. 3 and 4, wherein it will be seen that the yoke comprises oppositely arranged eyes or sleeves 14 which are secured permanently to the ends of the parallel parts 10 of the sliding clamp, the yoke also comprising a circular intermediate portion 15 which is internally screw threaded for engagement with a clamp screw 16 which is journaled in a bearing 17 fastened upon the inner side of the housing 6, the said clamp screw being provided with a squared extremity 18 to which a suitable key may be applied for turning the clamp screw to operate the two members of the clamp. The other clamp member indicated at 19 is arranged to slide under the yoke 13 and is provided at opposite sides of the yoke with upturned legs or flanges 20 and 21 which provide for a limited movement of the clamp member 19 relatively to the yoke 13 and therefore relatively to the other sliding clamp 10, the lip or flange 20 bearing directly against one of the filing pins 4 as best shown in Figs. 2 and 3, and being backed up and thrust toward and hard against the adjacent pin 9 by the screw 16.

From the foregoing description, it will be seen that when the clamping bar is placed over the filing pin and pushed downwardly securely against the intervening loose leaves shown at 22, and the clamp screw 16 turned by means of the key, the two clamp members

10 and 19 will be simultaneously forced in opposite directions until both are pressed to the desired degree of tightness against the filing pins, whereupon the upper clamping
5 bar will be securely anchored to and frictionally held against the filing pins and any movement thereof prevented. This is due to the fact that the screw 16 is threaded through the yoke 13 and bears against the
10 part 20 of the clamp 19 and as the yoke 13 is fastened on the part 10 of the other clamp, the latter is moved in opposition to the clamp 19 so that both clamps act on the binding pins. By turning the clamp screw 16 in
15 the opposite directions the tension on the sliding clamps is relieved and the clamp bar together with the top or cover of the binder as a whole may be slipped off the upper end of the filing pins to allow the leaves to be
20 removed therefrom or other leaves impaled thereon.

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

25 1. A loose leaf binder comprising oppositely arranged bars, one of which is provided with filing pins and the other with holes to receive said pins, a fixed abutment strip of concavo-convex shape in cross section carried by one bar and having its op-
30 posite ends concaved to partially embrace and bear against the filing pins, a bail-shaped sliding clamp embracing both pins

and adapted to bear against one of them, a combined yoke and nut fast upon one end of said sliding clamp, a second clamp having
35 a sliding engagement with said yoke and adapted to bear against the other filing pin, and a clamp screw having a threaded engagement with the yoke and bearing at its extremity against the second sliding clamp for
40 simultaneously moving both clamps in opposite directions.

2. A loose leaf binder comprising oppositely disposed bars, one of which is provided with filing pins and the other with
45 openings for receiving the pins, an abutment strip on one of the bars arranged to engage the pins, a bail-shaped clamp consisting of a double bar embracing both pins and surrounding the abutment strip, a fixed lip ar-
50 ranged to engage the double end of the clamp and under which the latter has a limited sliding movement, a yoke on the opposite end of the clamp, a screw threaded in the yoke, and a slidable clamp disposed be-
55 tween the yoke and adjacent the filing pin and movable independently of the yoke and separate from the screw.

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

MICHAEL G. GRIFFIN.

Witnesses:

F. W. STEVENSON,

A. F. DUHME.