

No. 759,133.

PATENTED MAY 3, 1904.

L. E. SCHOCH.  
LEDGER BINDER.

APPLICATION FILED JAN. 26, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

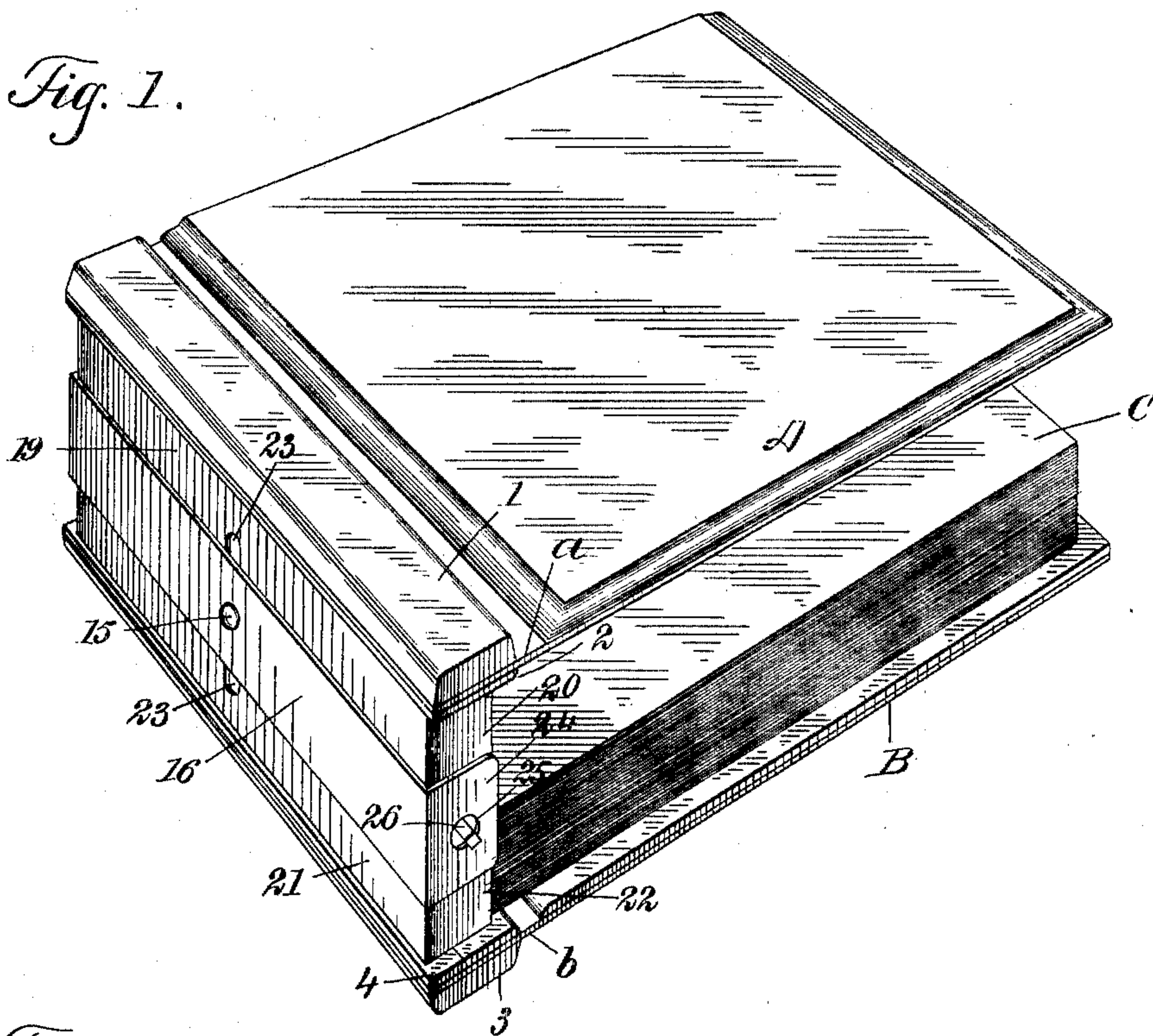
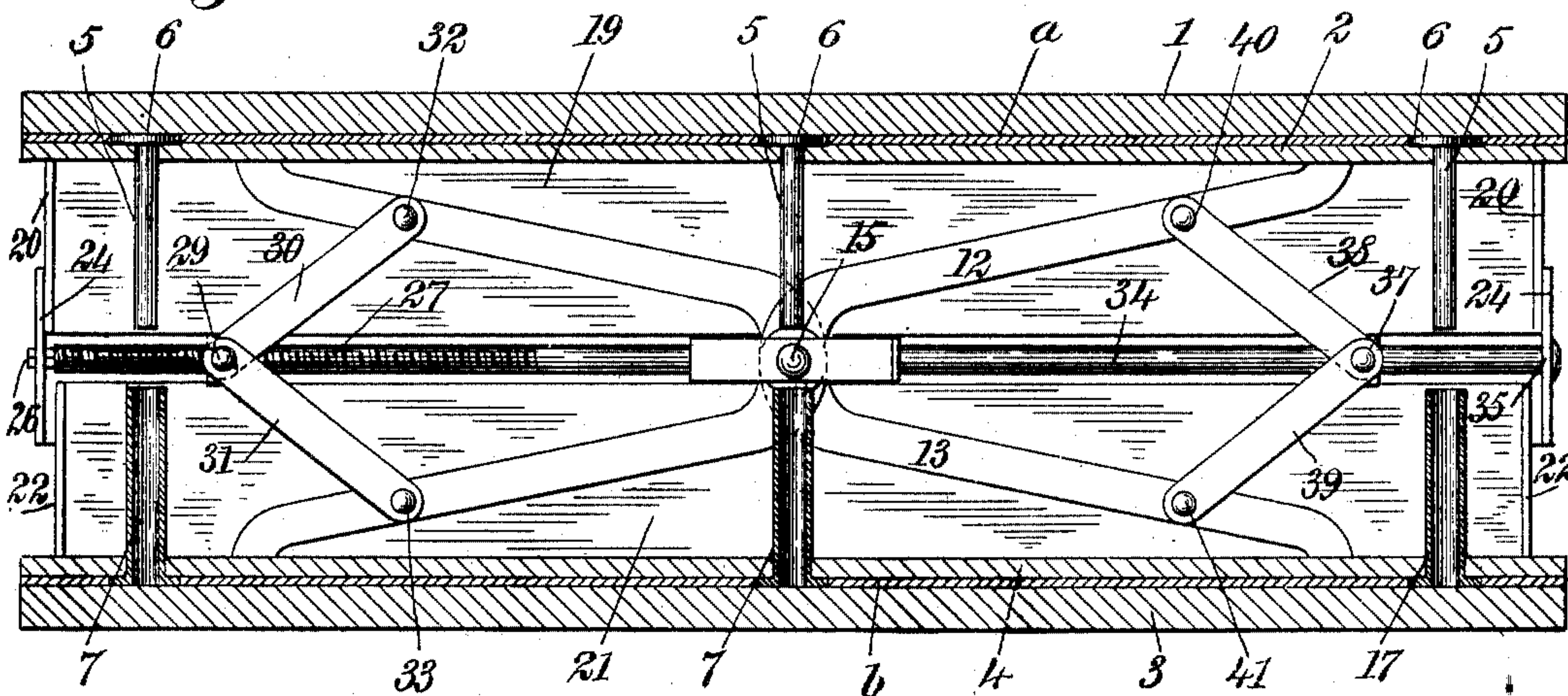


Fig. 2.



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INVENTOR

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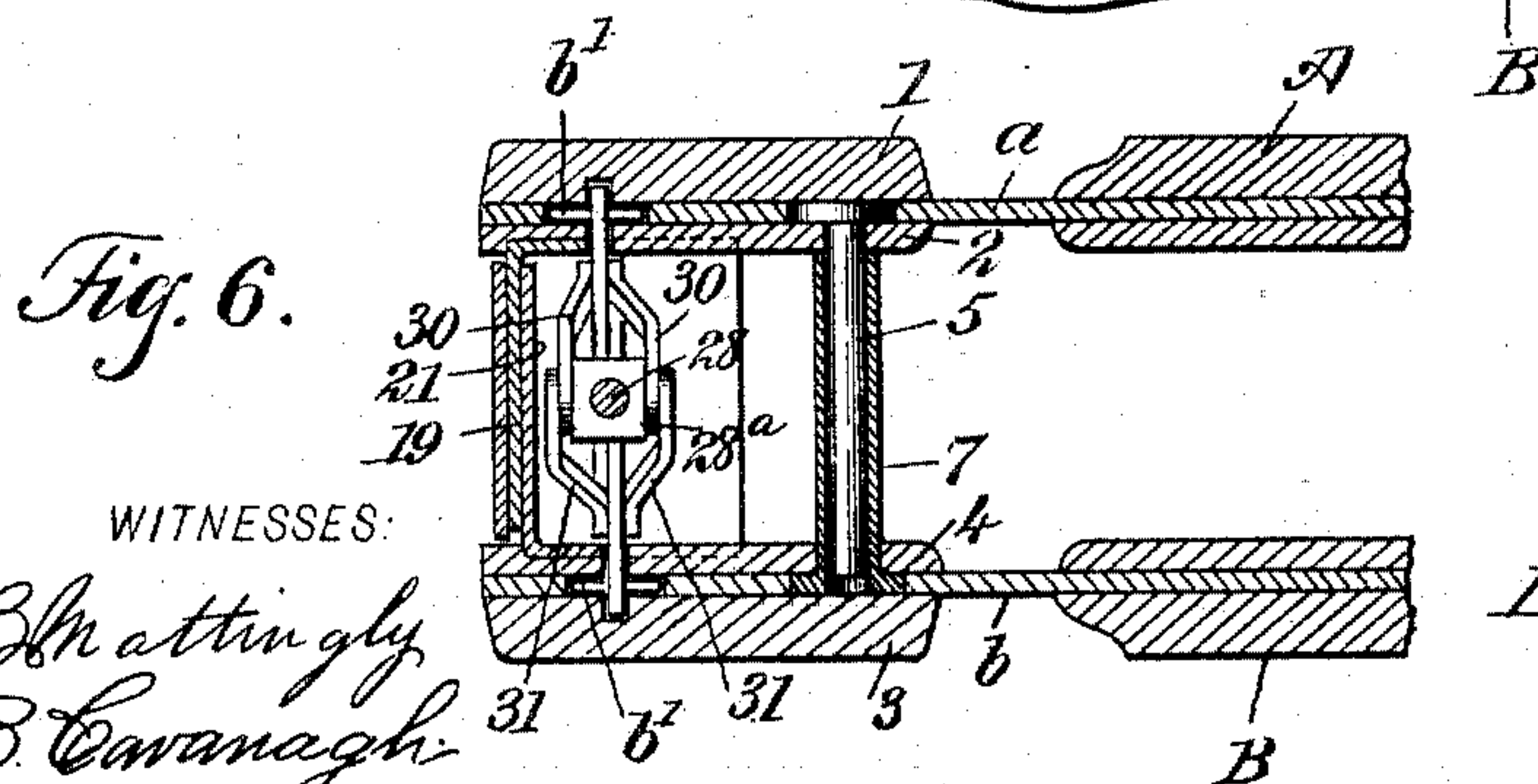
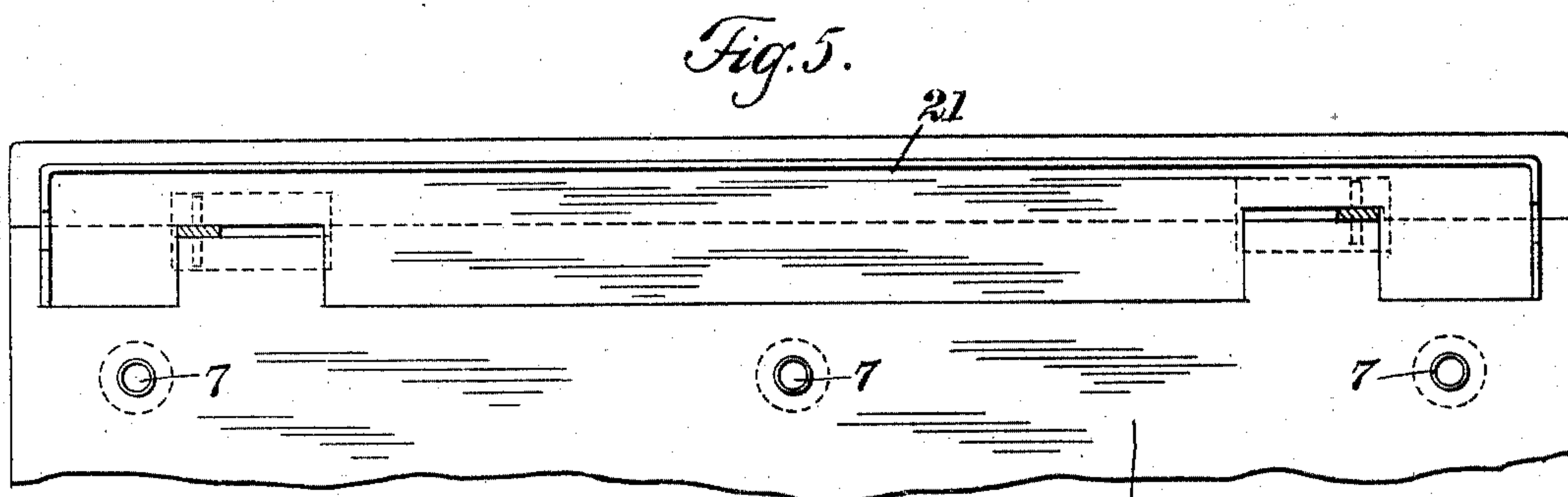
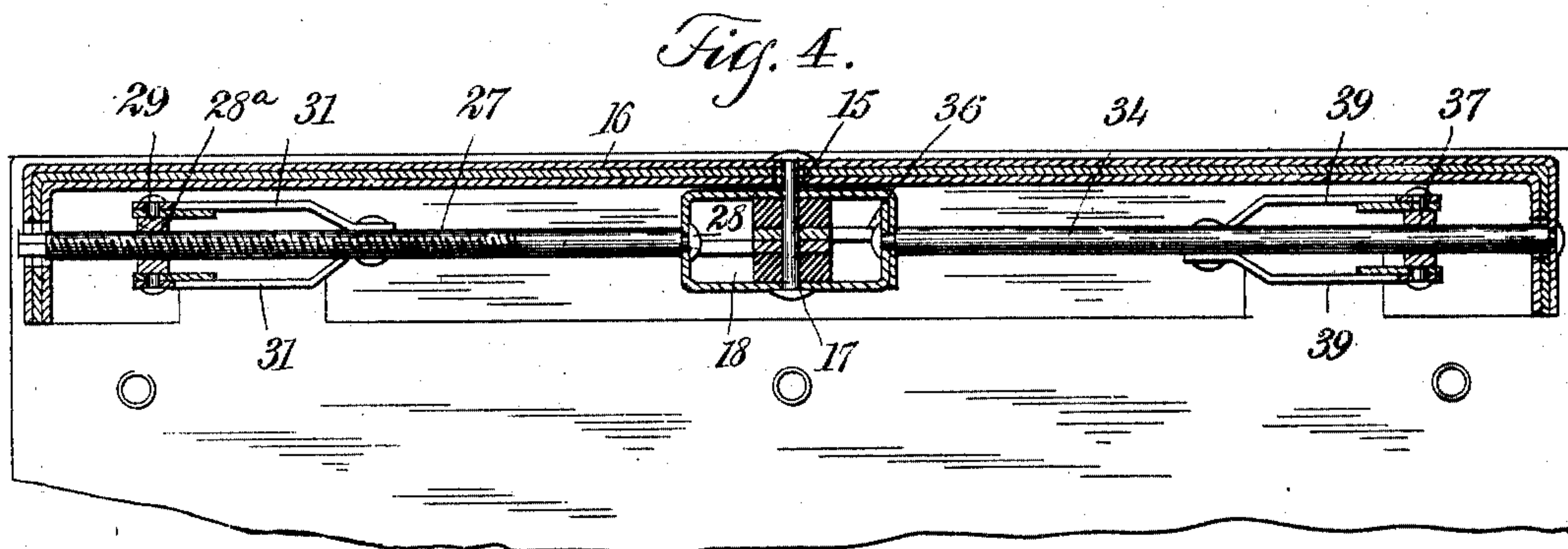
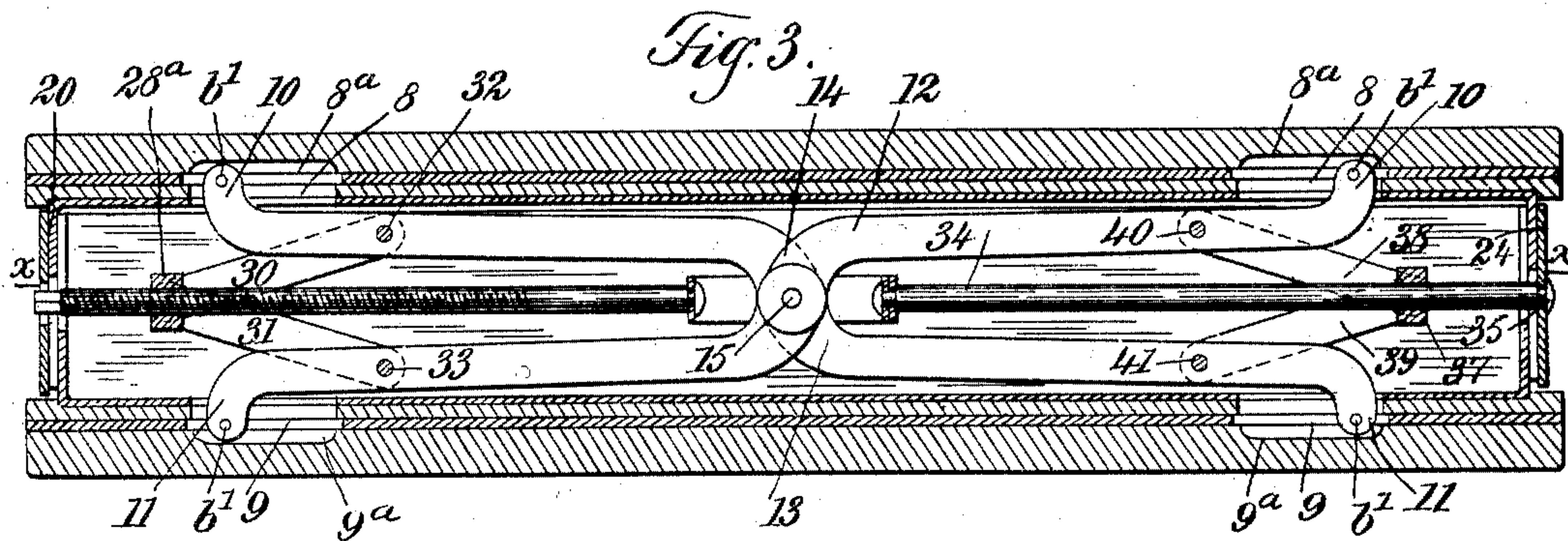
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2 SHEETS—SHEET 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

LEONARD E. SCHOCH, OF CHICAGO, ILLINOIS.

## LEDGER-BINDER.

SPECIFICATION forming part of Letters Patent No. 759,133, dated May 3, 1904.

Application filed January 26, 1903. Serial No. 140,552. (No model.)

*To all whom it may concern:*

Be it known that I, LEONARD E. SCHOCH, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Ledger-Binders, of which the following is a full, clear, and exact description.

This invention relates to certain novel and useful improvements in binders, and has particular application to devices of the class mentioned commonly known as "loose-leaf" or "perpetual" ledger binders.

Primarily I have in view as an object the construction of a binder of the class described which may readily receive a large number of loose leaves and which may be locked securely in such manner that the leaves will be firmly clamped between the covers of the binder.

A further object of the invention is to form the ledger with a telescoping back, so that any number of leaves or papers may be accommodated, and provide an improved means whereby the telescoping portions may be expanded or contracted while the ledger is lying open on the desk, thereby avoiding the necessity of changing the position of the same, and consequently accomplishing a saving of time and labor, in addition to avoiding the strain and danger of breaking that is commonly incident to binders provided with side locks.

I also contemplate providing the binder with an improved telescoping back which, in addition to being ornamental, shall possess the necessary requisites of durability and simplicity.

I also have as an object the construction of a binder which shall be capable of being operated with ease and readiness, shall accomplish a saving of time and labor, and one which shall bind the leaves with great security and firmness and may be manufactured and sold at comparatively little expense.

With the above-recited and other objects of a similar nature in view my invention consists in the construction, combination, and arrangement of parts, as is described in this specification, delineated in the accompanying drawings, and set forth in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification,

in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a device embodying my improvement. Fig. 2 is a central longitudinal vertical sectional view taken through the back of the binder and showing the same in a position of expansion. Fig. 3 is a similar view showing the device in its telescoped or non-expansive position. Fig. 4 is a longitudinal transverse sectional view taken on the line *xx* of Fig. 3. Fig. 5 is a view of one of the side plates of the binder, showing the manner of attaching the cover of the ledger thereto; and Fig. 6 is a transverse vertical sectional view taken through a binder embodying my improvement and showing the manner of securing the ledger-covers therein.

Referring now to the drawings in detail, A and B designate the two covers of the ledger or book, which may be of any suitable character and at their rear longitudinal edges *a* and *b* are secured between longitudinally-extending bars or strips 1, 2, 3, and 4, which strips form what I shall hereinafter for the sake of convenience term the "sides" of the binder. Between the strips or bars 1 and 2, forming the upper side of the binder, I have secured a number of vertically-depending studs or pins 5 5 5, the head portions 6 6 6 of said studs or pins being clamped between the portions 1 and 2 and the stem or shank of the stud extending downward through suitable apertures formed through the lower bar or strip 2. Similarly between the lower strips 3 and 4 I have secured a number of upwardly-extending tubular shanks 7 7 7, said shanks being in alinement with and adapted to receive the vertical shanks of the pins 5.

At points near the ends thereof the upper surfaces of the two strips 2 and 4 are grooved and apertured, as at 8 8 and 9 9, respectively, through which apertures extend the outwardly and laterally curved ends 10 10 and 11 11, respectively, of the arms 12 and 13, which arms are curved centrally and cross each other at 14. The lower or under surface of the upper and lower bars 1 and 3 are grooved, as at 8<sup>a</sup> and 9<sup>a</sup> 9<sup>a</sup>, respectively, which grooves are adapted to register or aline with the slots in the bars 2 and 4, and at the aforesaid crossed



arms are horizontally or laterally disposed pins  $b' b' b' b'$ , which pins rest upon the shoulders formed by a groove and slot in the bars 2 and 4, and thereby permit the ends to slide  
 5 freely in the slotted and grooved portions of the united bars when the arms are actuated, as hereinafter set forth. A pivot 15 extends through the arms at their point of crossing, said pivot finding a bearing at one end in the  
 10 centrally-arranged longitudinally-extending back-plate 16. The opposite or inner end of the pivot rests, as at 17, in one side of the supporting-bracket 18, which bracket is arranged approximately centrally of the longitudinally-  
 15 extending sides, as is clearly shown in Fig. 4.

From the edge of the strip or bar 2 there depends a back-plate 19, said plate being approximately equal in length to the center back-plate 16, this plate 19 being secured in any  
 20 suitable manner rigidly to the aforesaid strip 2 and has its ends 20 turned inwardly approximately at right angles to the main body of the strip. A similar back-plate 21 extends upwardly from the bar 4 and is bent in the  
 25 same direction at its ends 22 as is the upper plate 19, these two back-plates having slots 23 23 formed in alinement, which slots permit the plates to move past the pivot-pin 15 when the plates are being expanded or tele-  
 30 scoped through the means to be hereinafter described. The construction and arrangement of these back-plates and their relationship to the center back-plate 16 is clearly shown in Figs. 1 and 2.

35 As will be seen on reference to Figs. 1, 2, and 3, the upper plate 19 is slightly longer than the lower plate 21, so that its end portions 20 overlap the ends 22 of the lower plate when the binder is telescoped, and it will fur-  
 40 ther be noted that the centrally-arranged back-plate 16, which also has its end portions 24 bent at right angles in the same direction as the ends 22 22 of the plate 21, is slightly longer than either of said plates 19 and 21, so  
 45 that such end portions 24 overlap the ends 20, and consequently the ends 22 of the two main back-plates. The end portions 24 24 of the central back-plate are apertured, as at 25, and through one of said apertures 25 extends  
 50 the squared end 26 of the screw-rod 27, the opposite end 28 of said rod being revolvably journaled in the central bracket 18, so that said rod may be readily revolved by engaging the squared end 26 with any suitable device,  
 55 such as a wrench, key, or the like. A nut or block 28<sup>a</sup>, having its bore screw-threaded, is slidably mounted upon the threaded portions of the rod, so that when said rod is rotated the block or nut will travel along the same,  
 60 and pivoted at 29 to said traveling block are the links 30 and 31, respectively, the upper ends of said links being fastened, as at 32 33, to the cross-arms 12 and 13. A stationary non-threaded shaft 34 is supported at one end  
 65 35 by the bent portion of the center back-plate

and at its opposite end bears in the central bracket 18, as shown at 36. Upon this stationary shaft is a freely-sliding collar 37, having pivoted thereto short links 38 38 and 39 39, respectively, which links diverge and are  
 70 secured at their opposite ends to the arms 12 and 13, as is shown at 40 41.

From the construction thus far described it will be evident that when the parts are assembled if the screw-rod 27 be turned toward  
 75 the left the block 28<sup>a</sup>, traveling along the same toward the central bracket 18, will, through the medium of the links 30 and 31, push the arms 12 and 13 outwardly or apart, this causing the block 37 to be also moved in toward  
 80 the central bracket, and the expansion of the arms and links, or what may be called the "lazy-tongs" construction, will cause the expansion or widening of the telescoping back portion, this being permitted by the slots 23  
 85 in the back of the plates 19 and 21 to allow the plates to readily move past the pivot-pin 15.

From the above description, taken in connection with the accompanying drawings, the construction and operation of my improved  
 90 device may be readily apparent. The sides or covers of the binder are expanded or separated, and when the sheets or leaves C have been inserted therein the squared end 26 of the screw-rod is engaged by a suitable key or crank and  
 95 turned toward the right. This causes the block 28<sup>a</sup> to move outward toward the end of said rod and moves the links 30 and 31, inwardly, consequently also moving the cross-arms on their  
 100 pivot, so that the members thereof shall be brought closely together. The inward movement of the arm is permitted, as the small pins  $b' b'$  at the curved ends thereof will allow the longitudinal extension of the arms in the re-  
 105 cessed portions of the bars, and the studs or pins 5 will also move downward in the tubular shanks 7. The binder may be tightened to any desired degree, so as to grasp and retain the leaves securely in place, and the crank or  
 110 key may then be removed from the squared end of the screw-rod.

There are many advantages incident to my improved binder, which will be immediately apparent to those familiar with devices of this character. It embraces great simplicity of  
 115 mechanical construction, as there are no complicated parts, such as side locks or the like, requiring attention and presenting a liability of derangement. The key rod or post being at the middle and lower end of the binder-back is  
 120 practically the controlling-point, and it can be readily manipulated—that is, locked or unlocked—with the ledger lying open on a desk when in use without closing the back or changing its position. As is well known, binders pro-  
 125 vided with side locks are subjected to a great strain while opening and closing after the locks have been loosened and the backs separated for the purpose of inserting and removing the leaves, as the back must oftentimes be open so  
 130



that the leaves may be removed and placed in their proper position, after which the back must again be turned upon its side while expanded, so that it may be locked. Consequently the opening and closing of a heavy ledger in its expanded state subjects the same to a great and undesirable strain, which is entirely obviated in the present construction, where the key is placed at the end, so that the back may be unlocked and leaves removed and inserted without necessitating the raising of the ledger from the desk.

The parts of the ledger may be constructed of any desirable material, such as steel or the like, and when so formed the three-piece telescopic back presents a more durable and slightly construction than does the ordinary two-piece back ordinarily in use. In addition to protecting the edges of the telescoping back-plates the fixed central plate provides a surface for lettering or indexing.

While I have shown and described one particular embodiment of my invention, I wish it to be understood that I do not limit myself to all the precise details of the construction shown herein, as there may be modifications and variations in some respects without departing from the spirit of the invention or sacrificing any of the advantages thereof.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of two clamping-sections, a centrally-arranged back-plate therefor, means including cross-arms pivoted at their point of intersection for expanding and contracting said sections, a support for said expanding and contracting means, arranged between said sections, and a rod journaled in the support for actuating the expanding and contracting means, substantially as set forth.

2. The combination of two clamping-sections

having telescoping back portions, a rigid plate also forming a portion of the back, a support arranged between the sections, a pivot journaled between the support and the rigid back-plate, and cross-arms mounted on said pivot, adapted to be contracted or expanded relative to each other to contract and expand the clamping-sections, substantially as set forth.

3. The combination of telescoping back portion, a central plate for said back portion, side bars, studs carried by one of said side bars, tubular shanks carried by the opposite side bars, adapted to receive the aforesaid studs, a support arranged between the side bars, a pivot-pin, cross-arms secured to said pivot and bearing at their ends in said side bars, a screw-rod extending between the side bars, a shaft carried by the support and the end of the center plate, a block movable on the screw-rod, a collar sliding on said shaft, and links connecting the block and the collar with the pivoted arms, the construction being such that when the rod is turned the side will be expanded or telescoped, substantially as set forth.

4. In a binder, the combination with a telescoping back portion, and two side members, of arms pivoted between said side members, the ends of said arms lying in grooves formed in the side members, pins at the end of said arms, and means for moving the arms on the pivot to expand or contract the side and back sections relative to each other, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEONARD E. SCHUCH.

Witnesses:

HENRY A. CROCKER,

JOHN M. SPILLER.