

No. 723,116.

PATENTED MAR. 17, 1903.

E. W. WOODRUFF.  
CARD HOLDER OR FILE.

APPLICATION FILED JAN. 25, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

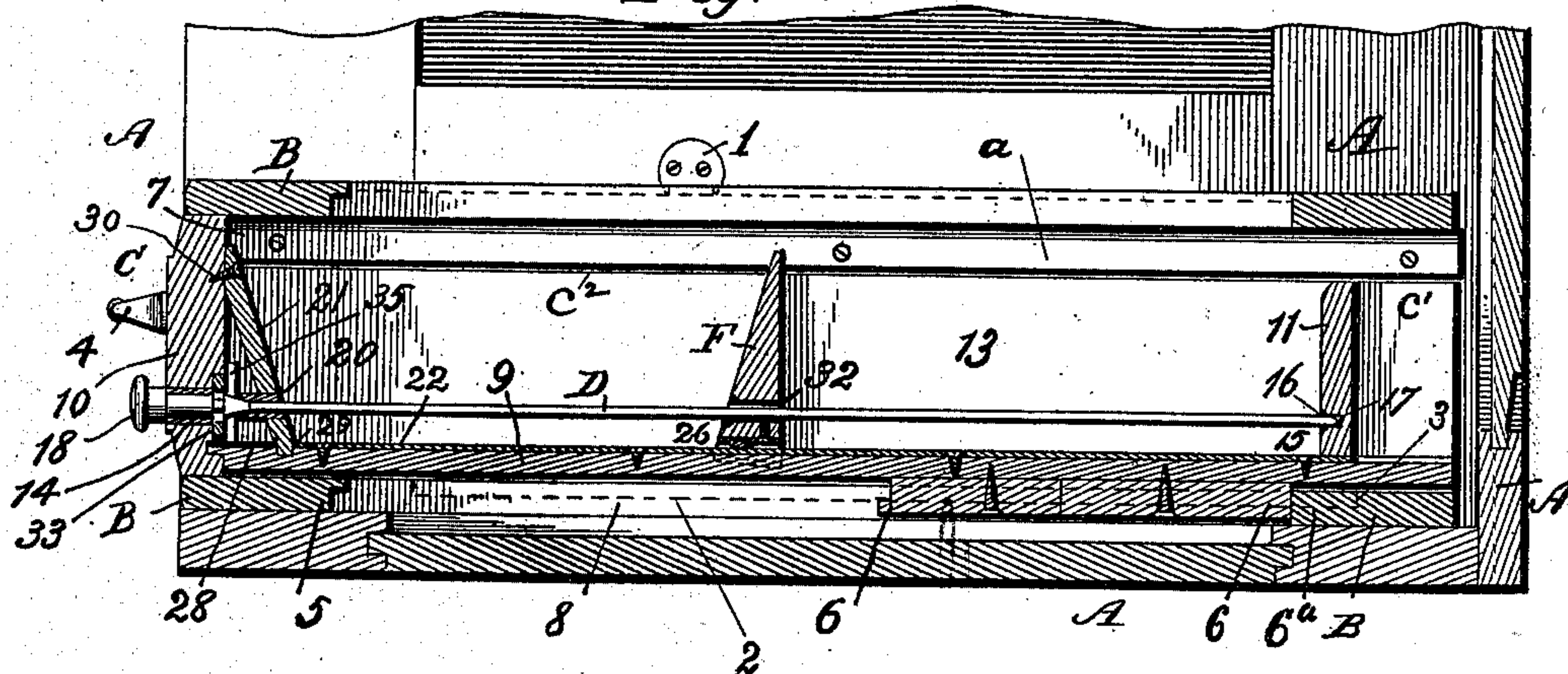


Fig. 3.

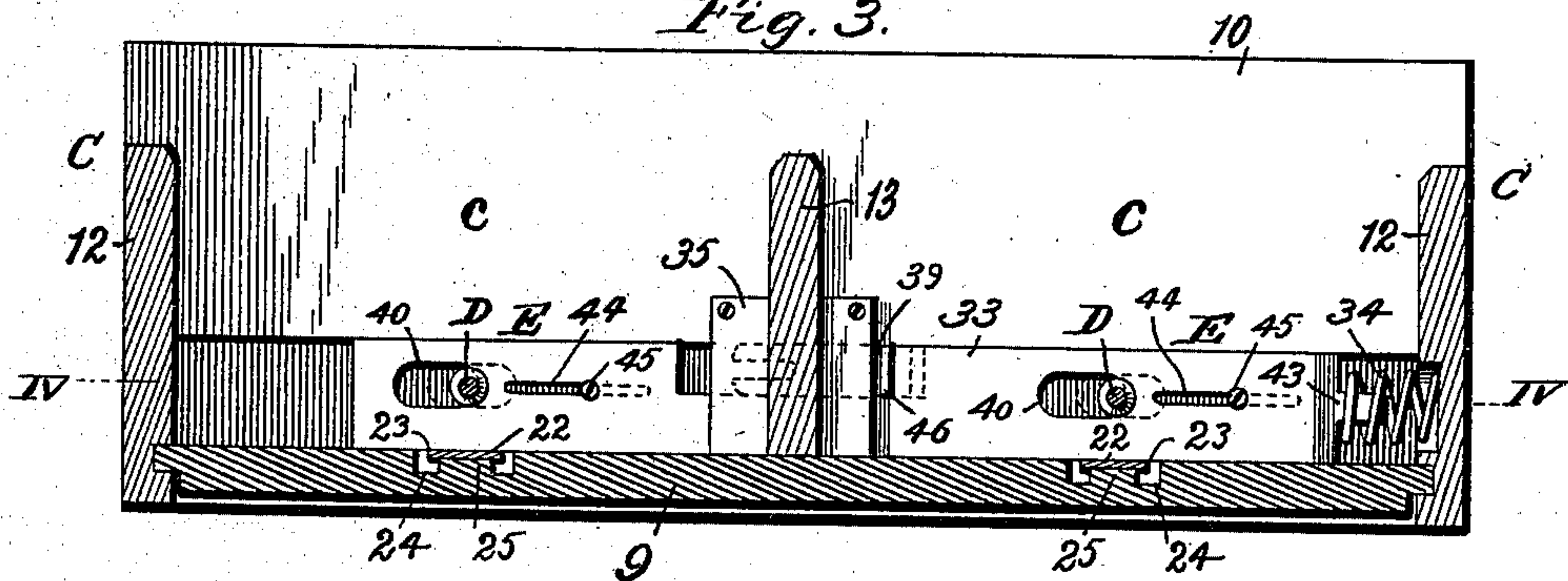


Fig. 4.

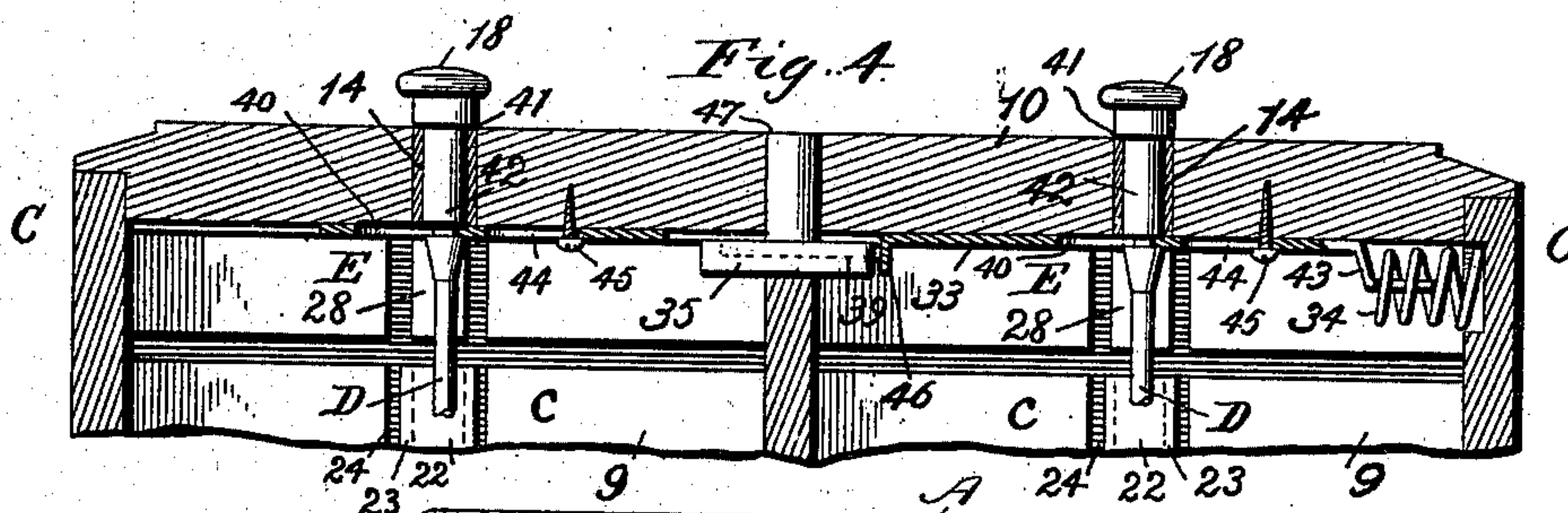
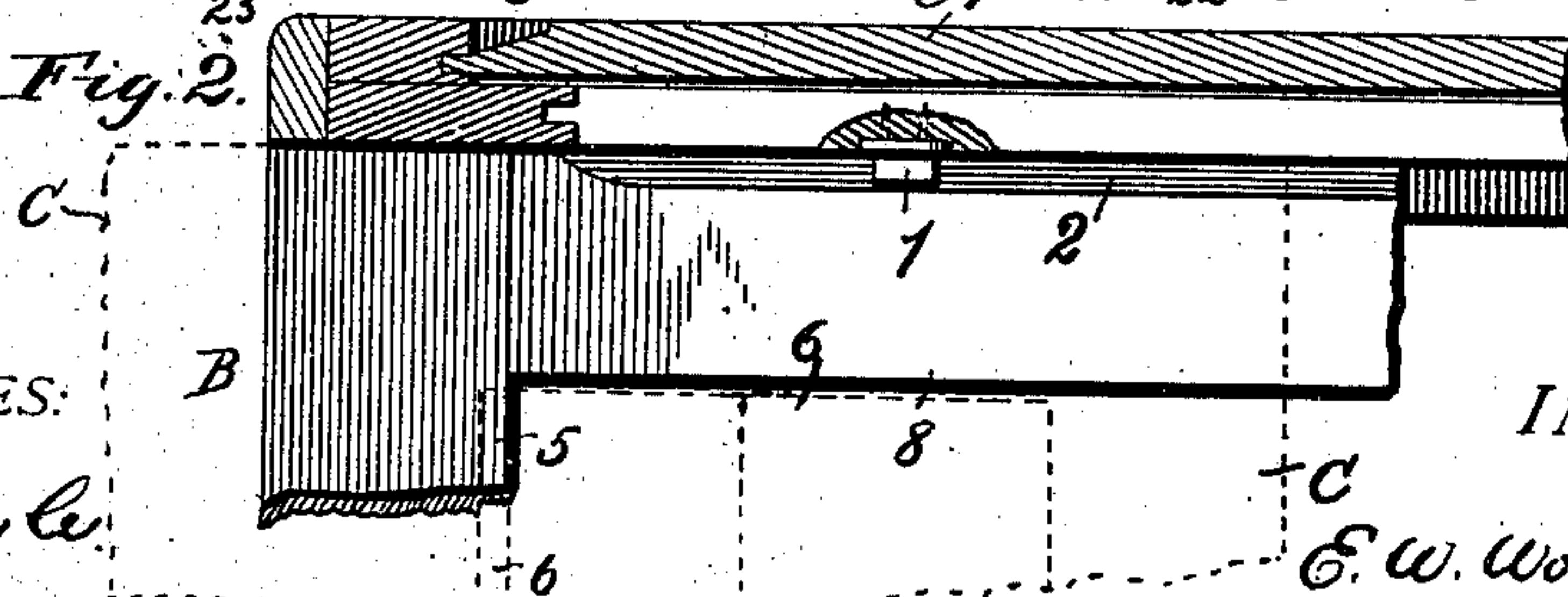


Fig. 2.



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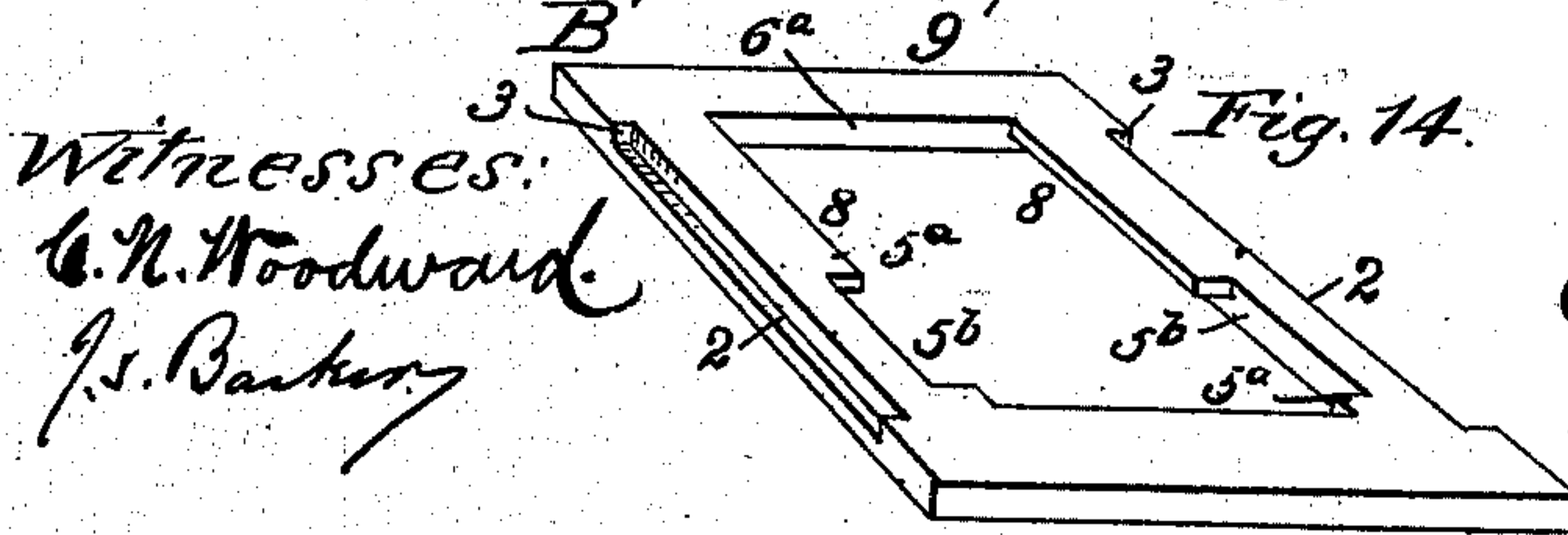
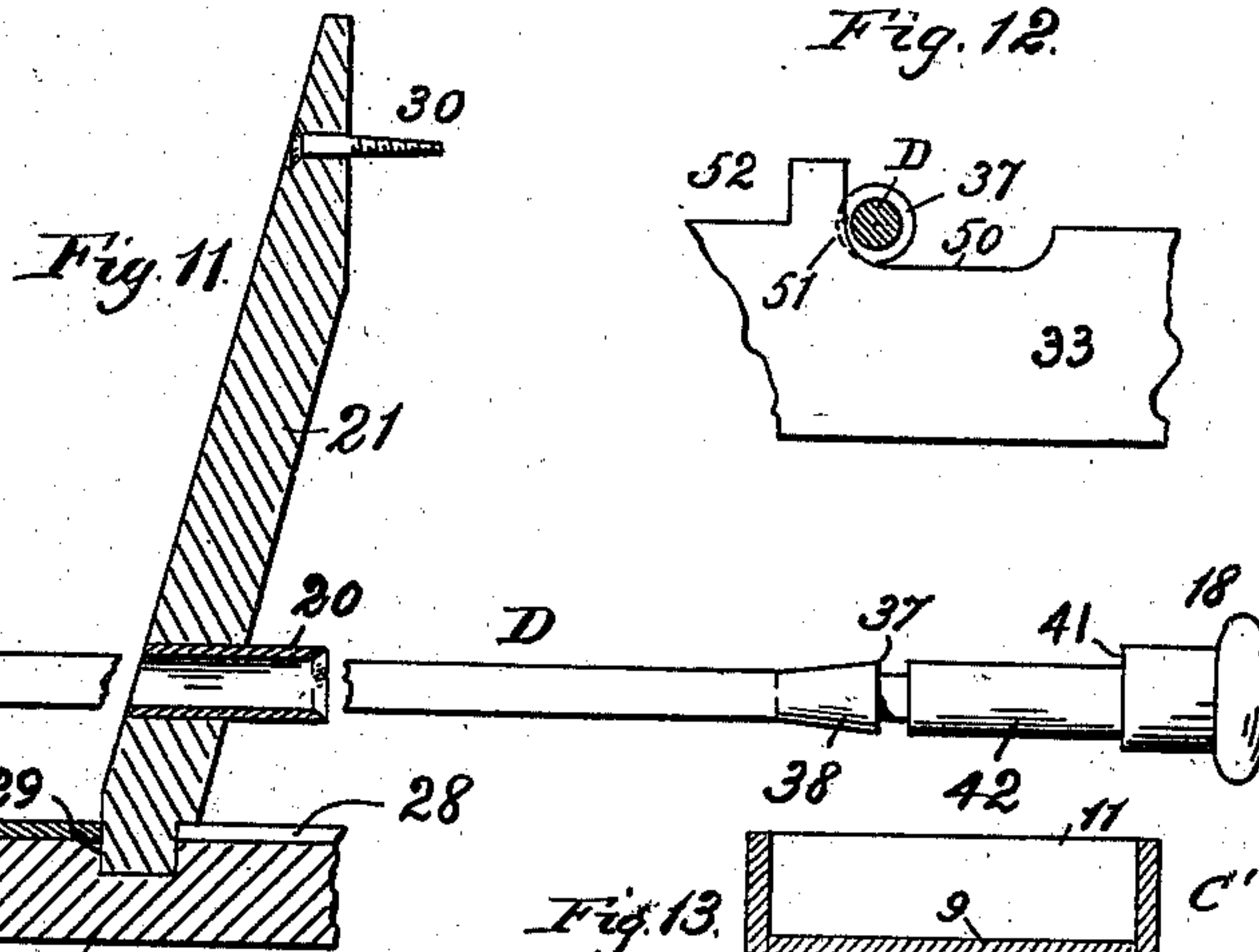
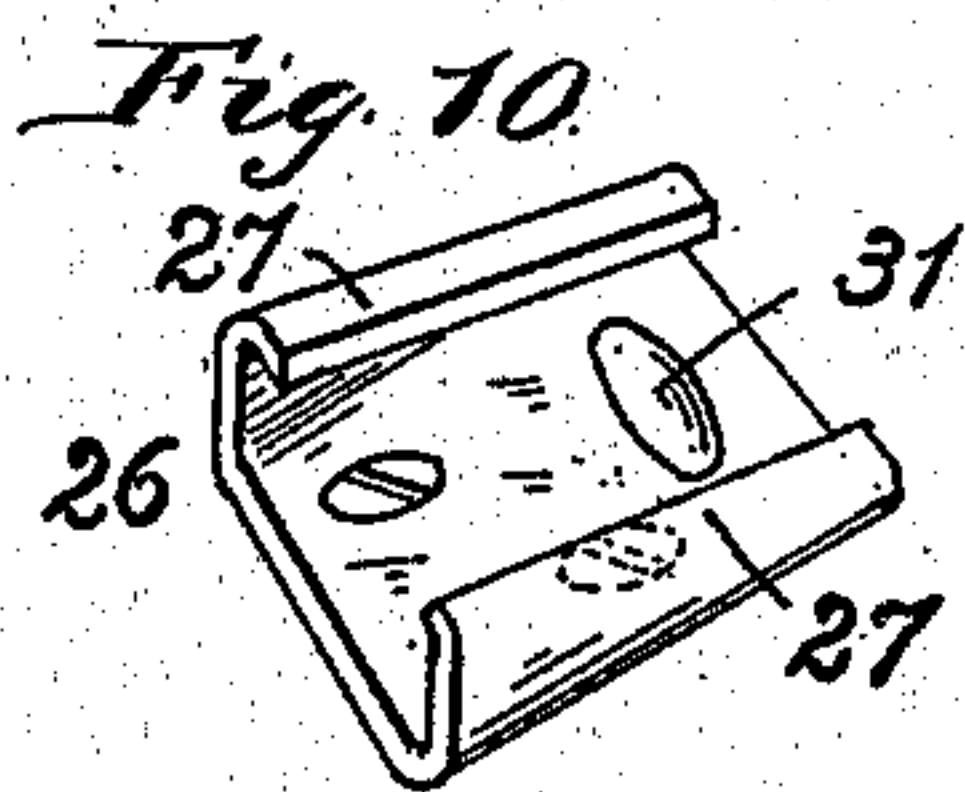
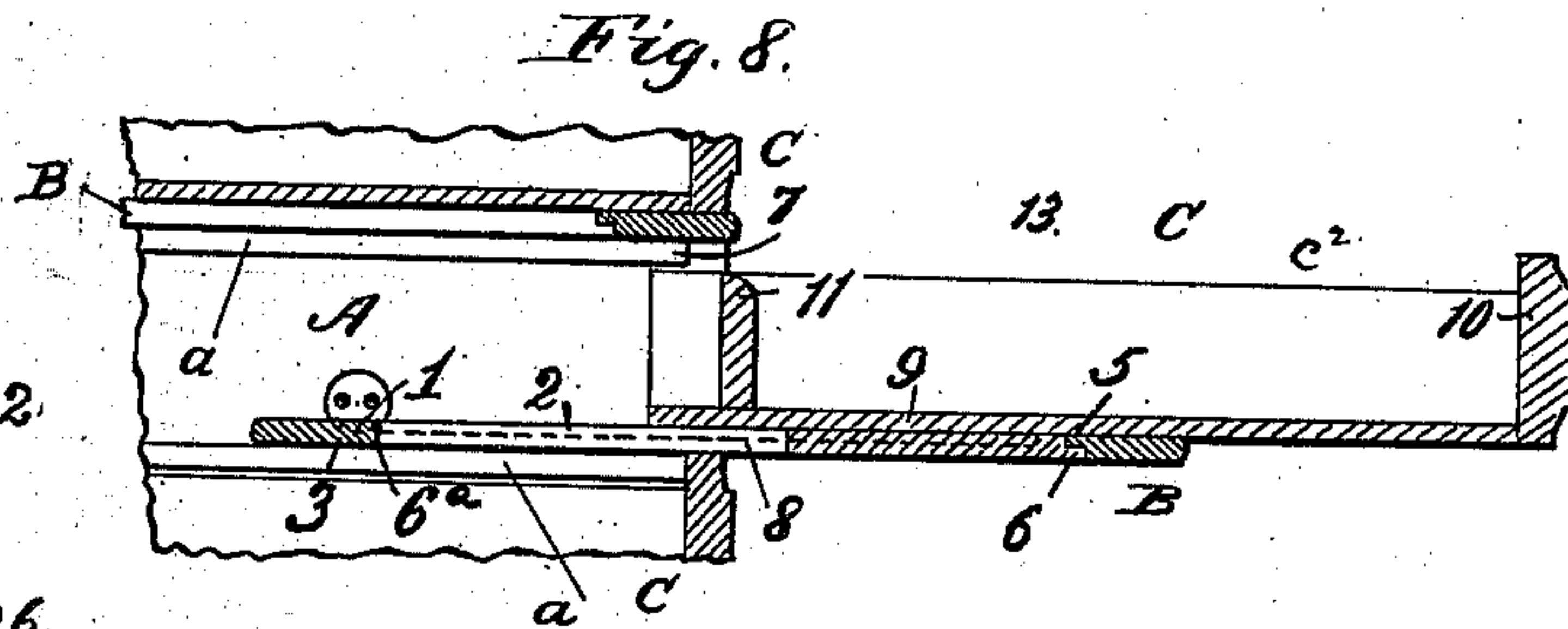
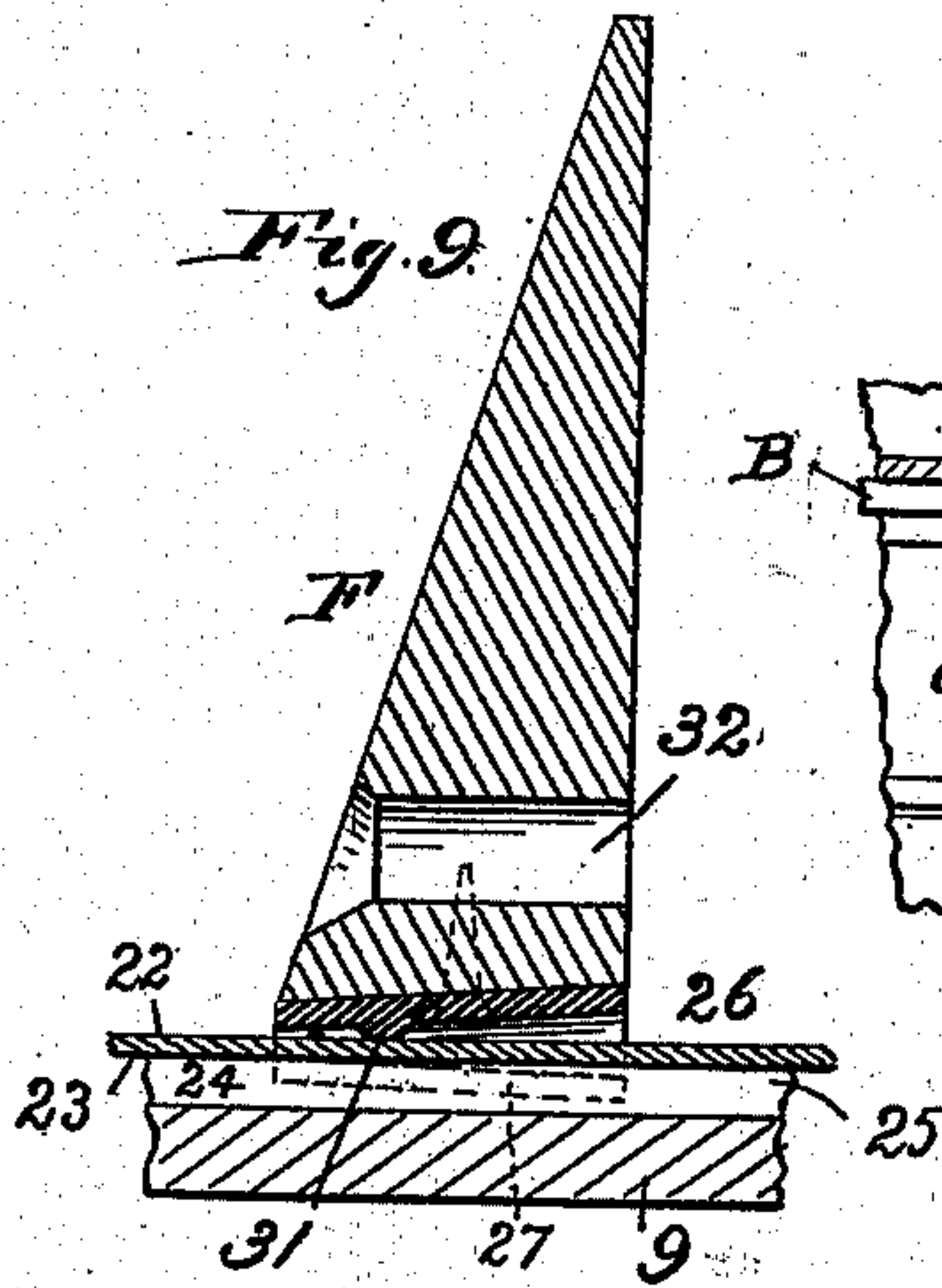
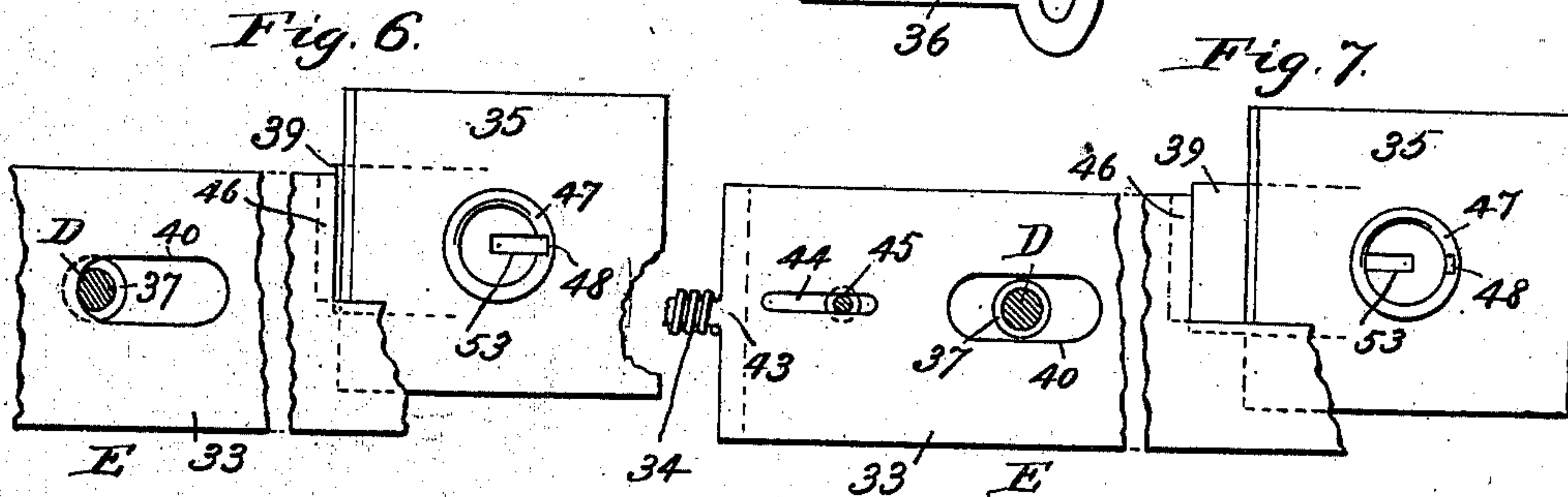
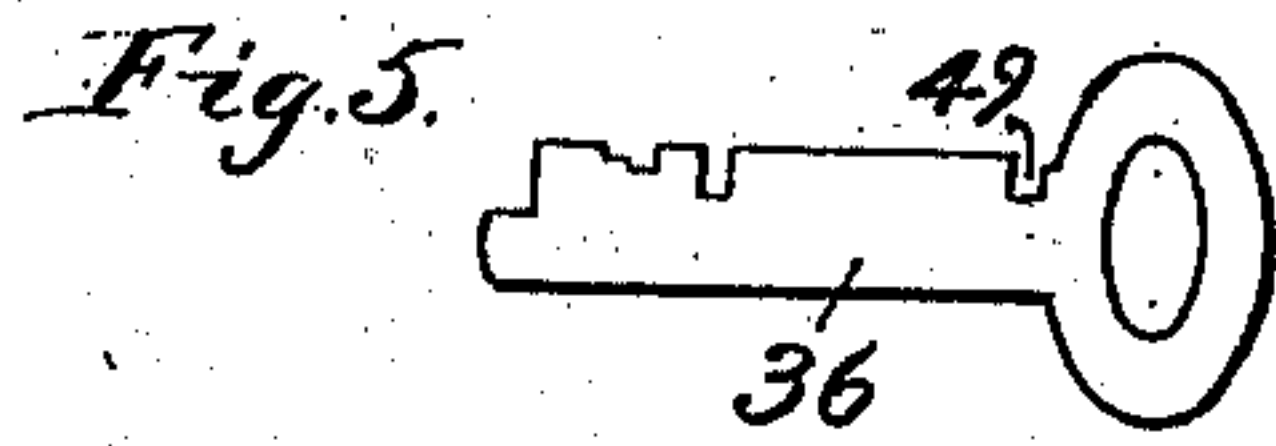
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

EDMUND W. WOODRUFF, OF WASHINGTON, DISTRICT OF COLUMBIA.

## CARD HOLDER OR FILE.

SPECIFICATION forming part of Letters Patent No. 723,116, dated March 17, 1903.

Application filed January 25, 1902. Serial No. 91,254. (No model.)

*To all whom it may concern:*

Be it known that I, EDMUND W. WOODRUFF, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Card Holders or Files, of which the following is a specification.

My invention relates to cases, drawers, or filing devices especially adapted for card indexes, but certain features of which are capable of other useful applications in cabinets or where file cases or drawers of convenient construction are desired; and it consists in the parts and combinations thereof herein-after set forth and claimed.

In order to make the invention more clearly understood, I have shown in the accompanying drawings means for carrying it into practical effect without limiting my improvements in their useful applications to the particular constructions which for the sake of illustration I have delineated.

In said drawings, Figure 1 is a vertical longitudinal section of a small cabinet or portion of a larger cabinet embodying my improvements as adapted for a card-index. Fig. 2 is a plan view showing a part of the slide and drawer drawn out. Fig. 3 is a rear view of the front piece with the covering-plate removed, showing the rod-locking means. Fig. 4 is a horizontal section of the same on line IV, Fig. 3. Fig. 5 is a view of the key. Fig. 6 is a front view of a portion of the locking mechanism with the rod locked. Fig. 7 is a similar view with the rod unlocked. Fig. 8 is a sectional view, on a smaller scale, showing the drawer supported in extended position. Fig. 9 is a longitudinal sectional view, enlarged, of the follower. Fig. 10 is a perspective view of the follower-clamp detached. Fig. 11 is a longitudinal section, enlarged, showing the rod-guiding means. Fig. 12 shows another form of the locking means. Fig. 13 is a transverse vertical sectional view of a drawer and slide disengaged from each other, showing another form of their engaging means also embodying the invention. Fig. 14 is a perspective view of the slide shown in Fig. 13.

Referring to the drawings, A is a cabinet casing or support; B, a slide in or on the same; C, a sliding case or drawer; D, a card-

holding rod; E, a rod-locking means, and F is a card-supporting slide or follower.

The part A can be a frame or stack adapted for the support of a large number of the drawers C or may be a small desk-cabinet.

The slide B is fitted in its support to be moved in and out for a limited distance, determined by stops 1 on the support A, engaging in rabbets 2 on the slide. When the slide is drawn out to the proper distance for exposing the desired extent of the drawer, the stops 1 are engaged by the stops or shoulders 3 and the slide is arrested, Fig. 8. In this position the stops 1 hold the rear part of the slide from tilting and insure the support of the drawer. The slide is thus operated by pulling out the drawer by a handle 4, which first causes the drawer to move along the slide until a part 5 of the slide is engaged by a stop 6 on the drawer and then pulls out the slide. When the parts are fully drawn out and stopped, as described, the inner part of the drawer at *c'* is held down by the front portion of the support at 7, thereby preventing the drawer from tilting downward at its outer end. The stop 6 engages partly beneath the slide, as seen in Fig. 8, to hold the outer end of the drawer from upward displacement. The slide is held down by the stops 1. In order to guide the drawer on the slide and hold it from lateral displacement when drawn out, the slide is formed with longitudinal guides 8, against which the sides of the stop 6 fit for a distance sufficient for the purpose, Fig. 2. The slide is returned to position flush with the drawer-front by the rear end of the stop 6, which latter is made long enough for the purpose and which on the return of the drawer encounters a stop 6<sup>a</sup> at the rear part of the slide. To form the guides 8, stops 5 and 6<sup>a</sup>, and to fit the casing A the slide is made, by preference, in the form of an open rectangular frame. The drawer or case C is formed with a bottom 9, front and rear pieces 10 and 11, and side pieces 12 13. The drawer is preferably made with several card-holding sections *c*, in which case the piece 13 forms a partition between sections, and the bottom, front, and rear pieces are made to extend for the desired number of sections.

The rod D, preferably having a knob 18 and rounded inner end 19, extends through a per-



foration 14 in the front piece 10 rearwardly a little above and along the bottom of and within the drawer into a socket 15 in the rear piece 11. The socket has a flaring open end 16 to guide the rod into place and a rear portion 17 fitting the rod closely. Difficulty is experienced in inserting the rod through a body of perforated cards where the perforation in the front piece is relied upon to properly center the rod and aline it with the card-perforations or where a supplemental bearing in the covering-plate has no material length. To remedy this, I provide a long accurate bearing for the rod at the rear of the front piece. This consists of a longitudinal thimble 20, supported immediately at the rear of the front piece in line with the perforation 14 and adapted to closely fit the rod, which accurately directs the rod through the card-perforations, Fig. 11. The thimble is conveniently held in the covering-plate 21 of the rod-locking means, into which plate it is tightly driven, extending forward therefrom toward the front piece and leaving the rear face of the plate 21 smooth against the cards. This plate is inclined forward, as shown, being fitted at its base into a groove 29 in the bottom 9 and attached to the front piece 10 above said groove, as by a screw 30. This thimble is especially desirable where the perforation 14 is made larger than the main part of the rod D for the passage of a rod-locking boss formed on the rod, as in that case such perforation will be an insufficient and inaccurate guide for the rod.

The follower F is mounted to slide in the drawer longitudinally on an undercut guide 22. The latter is preferably a metal plate the edges 23 of which overhang longitudinal grooves 24 in the bottom 9 and which is secured to the rib 25 of said bottom between said grooves. This rib is cut down slightly on top to bring the top of the guide or plate 22 flush with the bottom 9. The follower has means engaging beneath the guide, consisting of a base-plate 26, Figs. 9 and 10, secured to the bottom of the follower and having flanges 27 bent down and in to engage beneath the edges 23 of the plate 22. At its forward end the plate 22 is short of the front piece 10, leaving a space 28 beneath the covering-plate 21. By removing the rod D and the screw 30 and lifting the plate 21 from the groove 29 the follower may be slid forward and removed at the space 28. The flanges 27 are close to the plate 26 at the front edge of the latter and flare away from it rearwardly, allowing a tilting of the follower F on its front edge. A little to the rear of said front edge, but forward of the center of gravity of the follower, is a downward projection 31, adapted to rest on the top of the guide 22, between which projection and the front ends of the flanges 27 there is a bite or lock of the follower on and to the guide, which holds the follower from sliding. This lock, effected by the gravity of the follower, (in lieu of gravity

a spring could readily be employed,) is made more secure by the backward pressure of the cards resting on the follower. This latter is readily moved forward by hand and as readily slid backward, provided pressure be applied for that purpose at or near its lower front edge. The follower is perforated at 32 for the passage of the rod.

The rod-locking means E comprises a plate 33, actuated in one direction by a spring 34 and in the other direction by the bolt or other suitable moving part 39 of a key-operated lock 35. The key is shown at 36. One direction of movement serves to release the rod D and the other to lock it. I prefer that the spring-actuated movement shall effect the locking, as in that case the rod may be inserted and automatically locked when the plate 33 is in its locking position without use of the key. To this end the rod D is formed with a peripheral lock-shoulder 37 and a cone-shaped part or boss 38, extending inward from said shoulder. This boss will displace the spring-actuated plate 33 if in its locking position as the rod enters, moving the plate against the resistance of the spring 34 away from the bolt 39. An ordinary form of drawer-lock may thus be employed, requiring no attachment to the plate 33, and the rod on its insertion does not operate any part of the lock 35. The preferred construction of the plate 33 to engage the rod D consists in forming the same with a longitudinal slot opening or space 40 of the width of the boss 38. In the unlocked position of the plate the boss will pass outward freely through said slot. In the locked position the end of the slot is forced against the rod in front of the shoulder 37. The inward movement of the rod is arrested in proper position for this action by a knob or equivalent shoulder 41 on the rod. 42 is an enlargement of the rod adapted to fit the perforation 14 closely. The spring 34 is mounted on and held in place by an arm 43 of the plate 33. The plate is provided with a suitable guide, in this illustration consisting of slots 44, through which pass headed screws 45 into the rear face of the front piece 10. This form of rod-lock is well adapted for use with a plurality of rods, for each of which there will be a slot 40. I have shown it applied to two of such rods, the plate 33 passing along the front of the sections c through the partitions 13. The plate 33 may be provided at any convenient point with an arm or shoulder 46 to abut against the lock-bolt 39. This should be arranged so as to bring the keyhole central of the drawer. I combine with the rod a lock adapted to engage the key and hold it from removal when the plate 33 is in its rod-releasing position, Figs. 5, 6, and 7. For this purpose the outer part of the lock has a flange 47, having a space 48, and the key is formed with a notch 49. The key is inserted when the key-slot 53 registers with the space 48, the plate 33 then being in locking position.



When the key is turned to move the plate 33 to the unlocking position, the notch 49 engages the flange 47, and the key cannot be withdrawn until it is turned back, leaving the plate in locking position. I do not claim this feature broadly in a lock, but only in combination with the rod D.

In place of having the slots 40 the plate 33 may be formed in relation to the rod D and shoulder 37, as shown in Fig. 12, with a notch 50 to permit the said shoulder to pass and with a part 51 to engage said shoulder. An engaging arm 52 may also be used.

It is to be understood that the drawers, with their improvements, may be used in ordinary cabinets without the slides B, or as desk-trays.

Various means may be employed for supporting the slide B in the casing or frame A. I have shown for this purpose longitudinal sills *a*, fixed to said casing beneath and at the sides of the slides. In a construction like that illustrated comprising a vertical tier of alternating drawers and slides without shelves I make room for said sills and cover their front ends by cutting down the sides of the drawers, as shown at C<sup>2</sup>, to run in the vertical planes of and beneath said sills, the front piece 10 extending above said sides opposite the outer ends of the sills.

In Figs. 13 and 14 I have shown another means for embodying that portion of my invention which relates to the engagement of the drawers with the slides. In said figures the slide is shown at B', having longitudinal overhanging shoulders 5<sup>a</sup>, with which engage corresponding shoulders or stops on the stop-piece 6', the latter being attached to the drawer C'. After the drawer, with its slide, has been pulled out it may be disengaged from the slide by shoving it a little backward until the part 6' comes opposite spaces 5<sup>b</sup>, where the shoulders 5<sup>a</sup> are interrupted. The front end of the drawer may then be lifted up, and it may be pulled out over and away from the slide, leaving the latter in the casing.

I do not herein claim the drawer-supporting slide B and cooperating parts, the same being the subject in part of my application, Serial No. 143,102, filed February 12, 1903.

What I claim is—

1. In a card-index, the combination of a case, card-holding rods therein arranged in a common plane, and means for locking said rods consisting of shoulders on the rods, a plate movable transversely of the rods and in a direction parallel with the common plane of the rods and having longitudinal slots or spaces permitting the passage of the rods and shoulders adapted to interlock with the shoulders on the rods, a guide for said plate, and a bolt 39 independent of said plate for moving the plate on said guide, substantially as set forth.

2. In a card-index, the combination of a case, a card-holding rod therein, and means

for locking said rod consisting of a shoulder on the rod, a plate movable transversely of the rod and having a longitudinal slot or space permitting the passage of the rod and shoulder, a guide for said plate to keep the central line of the slot coincident with the center of the rod, a spring acting on said plate longitudinally in one direction, and a lock-bolt operable by a key for moving said plate against the spring.

3. In a card-index, the combination, with a case and card-receiving rod, of a key-operated bolt, a spring independent of the bolt, and a rod-locking plate engaged and movable in opposite directions by said springs and bolt to lock and release the rod.

4. In a card-index the combination, with a case and card-securing rod, of a lock comprising a key-operated bolt operable to cause the locking and release of the rod, and a key-engaging means holding the key from removal from the lock in the rod-releasing position of the latter.

5. In a card-index the combination, with a case and card-securing rod, of a lock comprising a key-operated locking means operable in its locking position by the insertion of the rod, and a key for operating said locking means, said key and lock having engaging stops for holding the key from removal in the rod-releasing position of the lock.

6. In a card-index a rod-lock consisting of the combination of a card-holding rod having a shoulder, a lock having a movable part or bolt, a plate movable transversely to the rod for engaging said shoulder, abutted by said bolt and otherwise separate from and independent of said lock and bolt, and a spring actuating the plate in opposition to said bolt.

7. The combination of a plurality of card-holding rods having shoulders 37 and arranged in a common plane, the laterally-sliding plate movable transversely of the rods and in a direction parallel with the common plane of said rods, having slots 40 and an arm 46, a guide for the plate, an actuating-spring for the plate and a key-operated bolt independent of the spring and engaging said arm to actuate said sliding plate, substantially as set forth.

8. In a card-index the combination of a case, a plurality of card-holding rods therein, and means for locking said rods consisting of shoulders on the rods, a plate movable transversely of the rods and in a direction parallel with the plane common to the two rods and having longitudinal slots permitting the passage of the rods and shoulders, a guide for said plate to keep the central lines of the slots coincident with the centers of the rods respectively, and means for moving the plate on said guide to cause the locking and release of the rods by the ends of said slots.

9. In a card-index the combination of a case having a front piece perforated for a card-holding rod, the said rod, locking means for the latter, a longitudinal thimble carrying



said rod, and the inlaid plate 21 covering said locking means and by which said thimble is supported at the rear of said front piece and in line with the perforation of the latter, and fitting the rod closely, whereby the rod as it is inserted is, caused to register with the perforations of the cards.

10. In a card-index the combination of a case having a front piece perforated for a card-holding rod, the said rod, a rod-locking means on the rear of said front piece, a covering-plate for said locking means connected with the front piece, and a thimble carried by the covering-plate, extending forward therefrom in line with the perforations of the front piece and fitting the rod closely.

11. In a card-index the combination of a case having in its bottom a groove 29 and a front piece perforated for a card-holding rod, the said rod, a rod-locking means at the rear of said front piece, and an inclined covering-plate for said locking means fitted at its base in said groove and attached to the front piece above said groove.

12. In a file or index the combination of a case having an undercut guide, and a follower having means engaging beneath said guide and slidable on the guide, and having a downward projection at the rear of said engaging means on which the follower tilts by gravity into position locking with the guide against longitudinal movement, the lock being ef-

fectured by the engagement of the guide by said engaging means and said projection.

13. In a file or index the combination of a case having an undercut guide, and the follower having a base-plate 26 having flanges engaging beneath said guide and the downward projection 31 at the rear of the engaging portion of said flanges and supporting the follower for tilting and locking on the base-plate.

14. In a file-box or index the combination with a guide-plate 22, of a follower having means for engaging the guide-plate, consisting of the base-plate 26 formed with the flanges 27 inclined rearwardly away from the body of the plate, and the projection 31 near the forward ends of said flanges, substantially as set forth.

15. In a card-index the combination of sections for cards, card-holding rods for said sections, a locking-plate extending along and transversely of said sections, engaging and locking said rods and movable horizontally in the direction of a line extending from one section to another, and a key-operated lock for actuating said plate.

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

EDMUND W. WOODRUFF.

Witnesses:

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N. CURTIS LAMMOND.