

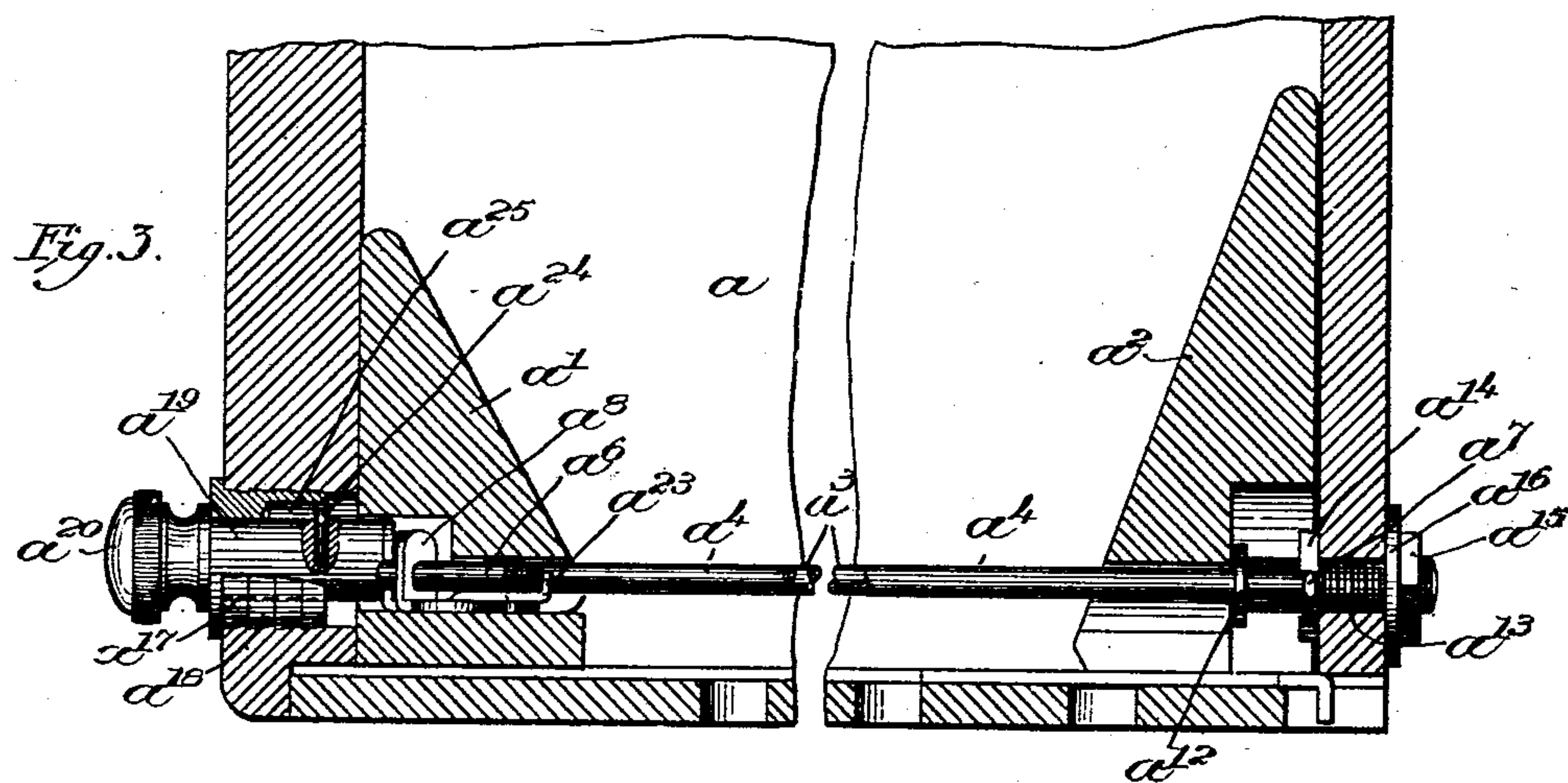
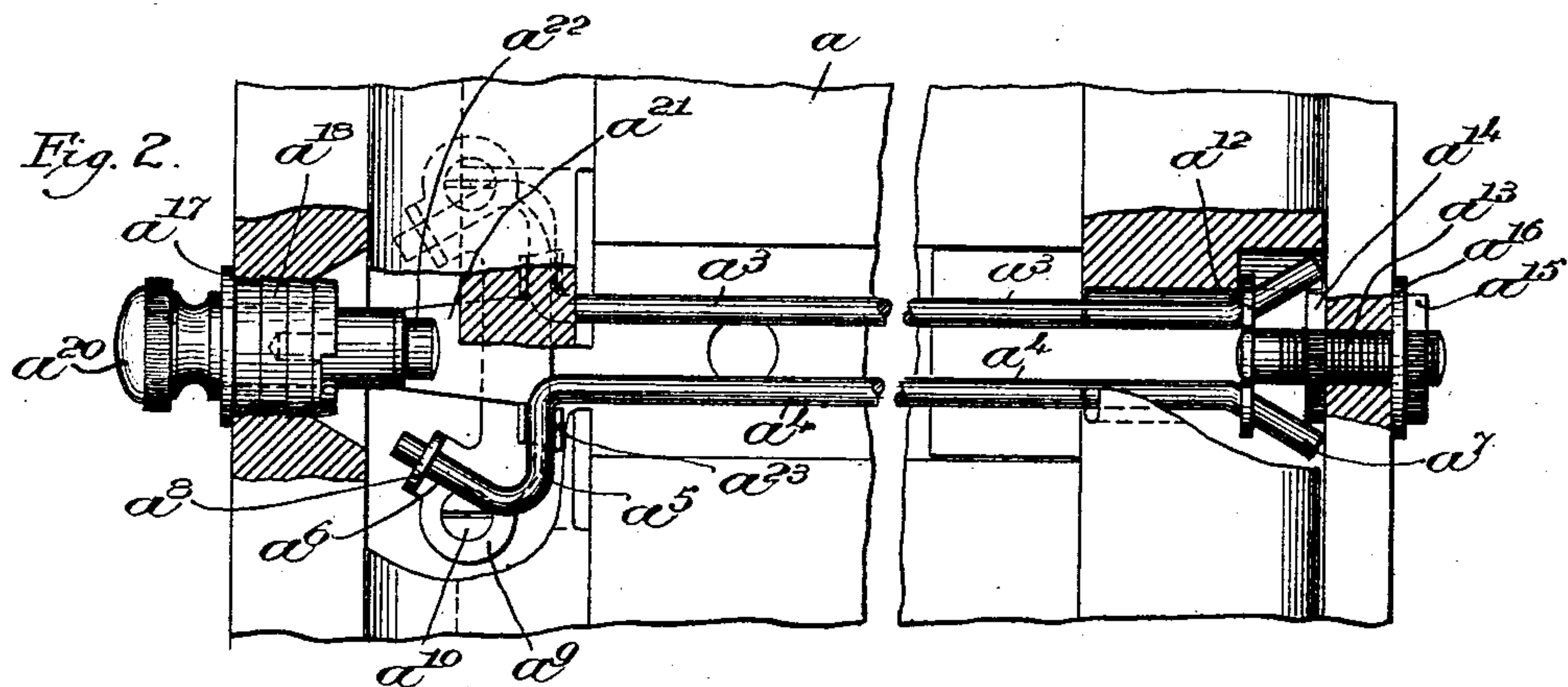
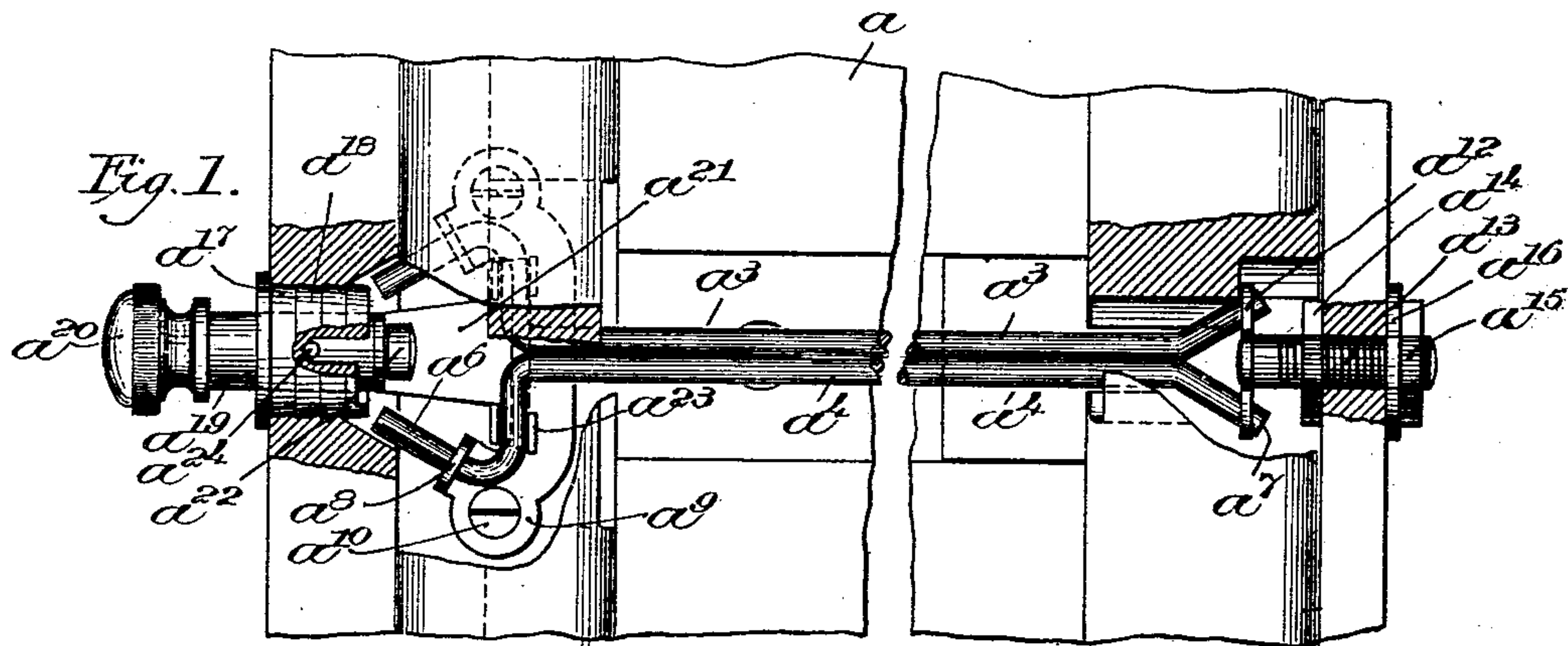
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Patented Dec. 25, 1900.

D. E. HUNTER.
LOCK ROD FOR CARD HOLDERS.

(Application filed Jan. 20, 1900.)

(No Model.)



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LOCK-ROD FOR CARD-HOLDERS.

SPECIFICATION forming part of Letters Patent No. 664,753, dated December 25, 1900.

Application filed January 20, 1900. Serial No. 2,121. (No model.)

To all whom it may concern:

Be it known that I, DAVID E. HUNTER, a citizen of the United States, residing at Cambridge, county of Middlesex, State of Massachusetts, have invented an Improvement in Lock-Rods for Card-Holders, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like
10 parts.

My present invention is an improvement in card-holders, having special reference to the holding or retaining device provided for engaging the cards as the latter are placed in a
15 suitable drawer or other receptacle such as is commonly provided for card-indexes, records, &c.

In the last few years great activity has sprung up in the employment of cards for a
20 great variety of purposes in connection with library and mercantile records, indexes, &c., and in view of the importance of the records preserved by these cards and the great danger of losing individual cards various devices
25 have been invented for holding the cards locked in position against removal from the drawer, while still permitting the cards to be readily moved back and forth in and longitudinally of the drawer for purposes of inspection. Many of the said inventions in this
30 line are practical, and the present trade competition is not so much directed to the movement or operation of the devices as it is to their economy of production or manufacture, and accordingly one main object of my present invention is to produce an exceedingly
35 simple and serviceable device, fulfilling all the most exacting requirements and yet capable of production at a very low cost.

My present invention is of the expansion lock-rod type, in which I employ, preferably, two wires or rods of any suitable shape in cross-section, said rods being shown as longitudinally movable and at the same time
40 capable of expansion and contraction in order to lock or unlock the cards within the drawer or box.

My invention also includes means for the accurate adjustment of the lock-rod, this being of great importance, inasmuch as the cards
50 usually employed are cut accurately and re-

quire a corresponding nicety of action on the part of the locking or retaining device.

The details of construction and operation of my invention will be more fully pointed
55 out in the course of the following description, reference being had to the accompanying drawings, illustrative of one embodiment thereof, and the invention will be more particularly defined in the appended claims. 60

In the drawings, Figure 1 is a top plan view of a fragmentary portion of the front and rear ends of a card-receptacle provided with my invention, parts being broken away and sectioned in order to show fully and clearly
65 the details of construction. Fig. 2 is a view similar to Fig. 1, showing the parts, however, in expanded or card-locking position. Fig. 3 is a central vertical longitudinal section thereof, showing the lock-rod in side elevation. It will be understood that the box or
70 drawer a , containing a front inclined block a' and a sliding block or support a^2 , may be of any usual or desired kind adapted for the purpose. 75

The lock-rod or card-locking device consists, preferably, of two members $a^3 a^4$, shown herein as identical in shape and each having an outturned neck a^5 and an obliquely and inwardly turned or bent head a^6 at its forward end and at its rear end provided with a deflected or bent portion a^7 , extending parallel to the part a^6 . These members, it will be observed, may be struck up at one blow and are therefore inexpensive in material and
80 labor. The last remark is substantially true of all the parts of my invention. 85

The heads a^6 of the locking members are mounted in perforated ears a^8 , struck up at the opposite ends of a plate a^9 , secured to the
90 bottom of the box by suitable means, as by screws a^{10} , and the rear ends a^7 of the locking members are similarly held in perforations provided in the ends of a tailpiece a^{12} , riveted or otherwise secured on the inner end of a
95 bolt or adjusting member a^{13} , held in any suitable part of the box and preferably extending through the end thereof, as shown in the drawings, being held in position by opposite
100 nuts $a^{14} a^{15}$, a washer a^{16} being shown as interposed between the latter and the end of the box. This provision is for the purpose

of enabling the members $a^3 a^4$ to be adjusted into absolute parallelism irrespective of the irregularities which are bound to exist in the lengths of different drawers or boxes.

5 It will be readily understood that if the members $a^3 a^4$ were not exactly parallel the cards at one end of the box would be held so tightly that they would soon be worn out or mutilated or else the cards at the other end
10 of the box would not be properly retained, whereas by providing the inexpensive and yet accurate adjustment above explained the members $a^3 a^4$, no matter how long they may be, can be quickly adjusted with extreme ac-
15 curacy, so that they will be perfectly parallel.

At its forward end the box a is simply bored with a proper hole to receive a socket-piece a^{17} , said socket-piece being of special construction, having, as is clearly shown in the
20 drawings, a series of annular inclined ribs a^{18} , each smaller at its inner end than at its outer end and the latter having a sharp edge, so that no other retaining means is necessary, this socket being simply driven tightly into
25 the hole provided therefor and embedding itself in the wood, so as to be practically non-removable therefrom without special independent securing means. The socket-piece a^{17} contains a spindle a^{19} , provided with a
30 knob a^{20} or other hand device, and at its inner end the spindle a^{19} carries a plate a^{21} , which may be secured thereto in any suitable manner, as by a screw a^{22} or a rivet. The plate a^{21} is preferably of substantially
35 T shape, having one end turned up to be secured to the spindle a^{19} , as stated, and its other ends struck up into U shape, as clearly shown in Fig. 3, to form eyes a^{23} , receiving the necks a^5 and permitting the latter to move
40 back and forth freely therein, according to the requirements of operation. Preferably the spindle has also a pin a^{24} , adapted to work in an L-shaped groove a^{25} , formed in the socket-piece a^{17} , for the purpose of locking
45 the spindle against outward movement when the lock-rod is in expanded position.

In use the operator when he desires to unlock the cards takes hold of the knob a^{20} , the parts then being in the position shown in
50 Fig. 2, rotates the same slightly over to the left, so as to unlock it and render it capable of outward movement, and then pulls upon the same, thereby drawing the parts into the position shown in Fig. 1, the two obliquely-bent
55 portions $a^6 a^7$ of each member of the lock-rod sliding, respectively, in the perforated ears $a^8 a^{12}$ containing them, and thereby serving to contract or bring the members $a^3 a^4$ together into position, so that cards may be
60 taken out or put into the box or receptacle a . If the members $a^3 a^4$ do not come exactly together, but are slightly apart at their rear ends, the bolt a^{13} will be moved outwardly slightly.

65 It will be understood that various minor changes may be resorted to without departing from the spirit and scope of my invention,

and while I prefer to stamp out certain of the parts from sheet metal they may be made of wire or other material or may be cast or otherwise formed, and while I have spoken of the members being "bent" I wish it understood that by this phrase I do not restrict myself to actual bending or distortion, but merely mean that the parts shown have the shape
70 required.

It will be apparent that the leading parts of my invention, particularly the plates $a^9 a^{12} a^{21}$ and the members a^3, a^4 , and a^{17} , may be struck up into finished shape with one
80 blow of suitable forming-dies and that they thereafter require practically no manipulation to reach their finished form. Moreover, the box itself requires simply two holes, and it is therefore a mere nominal expense to provide my improved lock-rod in ordinary commercial card holders or boxes.
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Having described my invention, what I claim, and desire to secure by Letters Patent, is—
90

1. In a card-holder, a lock-rod comprising two members adapted to extend longitudinally of said holder, said members having their opposite ends bent away from each other, and the forward extremities of said
95 members being bent or deflected inwardly toward each other, the extremities of each member being in substantial parallelism.

2. In a card-holder, a lock-rod comprising a plurality of members movable toward and
100 from each other, said members having portions thereof extending obliquely to the general length of the members, a bearing-plate having perforated ears in which said oblique portions are mounted, and means for moving
105 said members longitudinally.

3. In a card-holder, a lock-rod comprising two members each having a portion thereof outwardly bent, and at the same end another portion obliquely bent, stationary bearings
110 for said oblique portions, and an actuating device having at its inner end arms slidingly engaged with said outwardly-bent portions, and at its outer end provided with means for moving it in and out.
115

4. In a card-holder, a lock-rod having locking members, combined with a plate having at its rear end opposite U-shaped parts embracing said members, and an operating device for said plate and members connected to
120 said plate.

5. In a card-holder, a lock-rod comprising a plurality of members having oppositely and obliquely bent portions, a stationary plate fixed in said holder and containing bearings
125 for said oblique portions, and means for adjusting said plate to bring said members into accurate parallelism.

6. In a card-holder, a lock-rod comprising two separable members, and means for adjusting said members into accurate parallelism of movement.
130

7. In a card-locking apparatus of the kind described, a lock-rod comprising a plurality

of members, and mechanism for contracting and expanding said members, said mechanism including two separated parts, one of said parts being provided with adjusting means for regulating the movement of said members.

8. In a card-holder, a lock-rod comprising a plurality of members having oppositely and obliquely bent portions, an adjusting member mounted in the end of the holder and provided with opposite bearings for the aforesaid members, and means for moving said adjusting member longitudinally along said members, relatively to the end of the holder.

9. In a card-holder, a lock-rod comprising a plurality of members having oppositely and obliquely bent portions, a threaded bolt having a head containing independent bearings for said members, and threaded means co-operating with said bolt for adjusting the same longitudinally of said members.

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

DAVID E. HUNTER.

Witnesses:

GEO. H. MAXWELL,

GEO. W. GREGORY.