

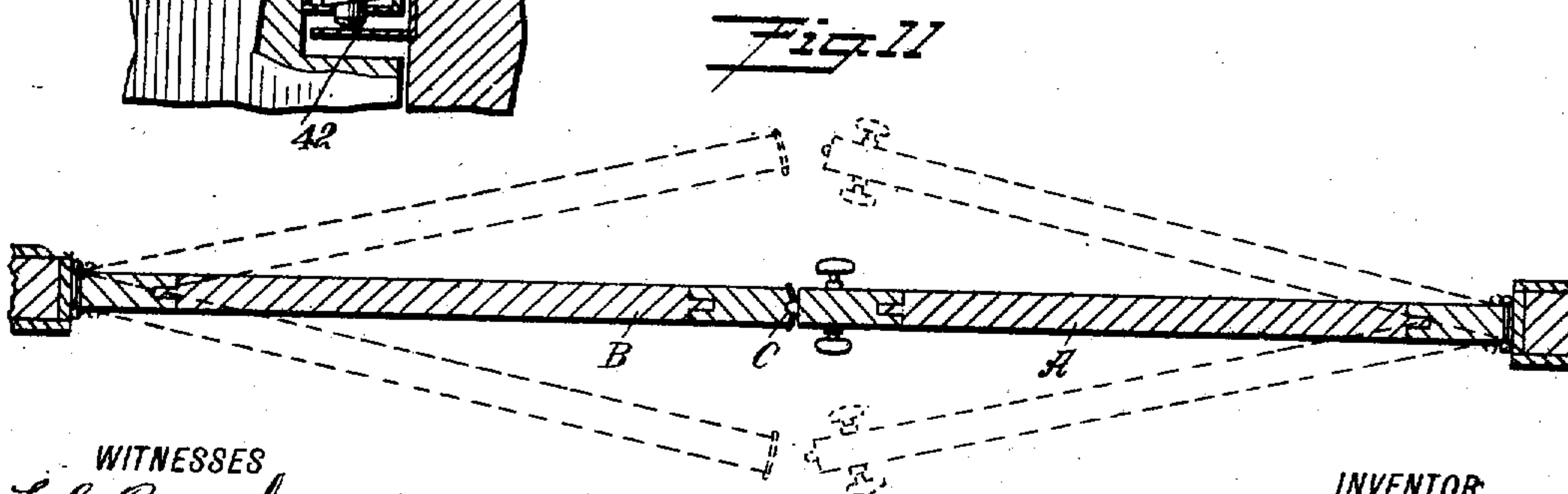
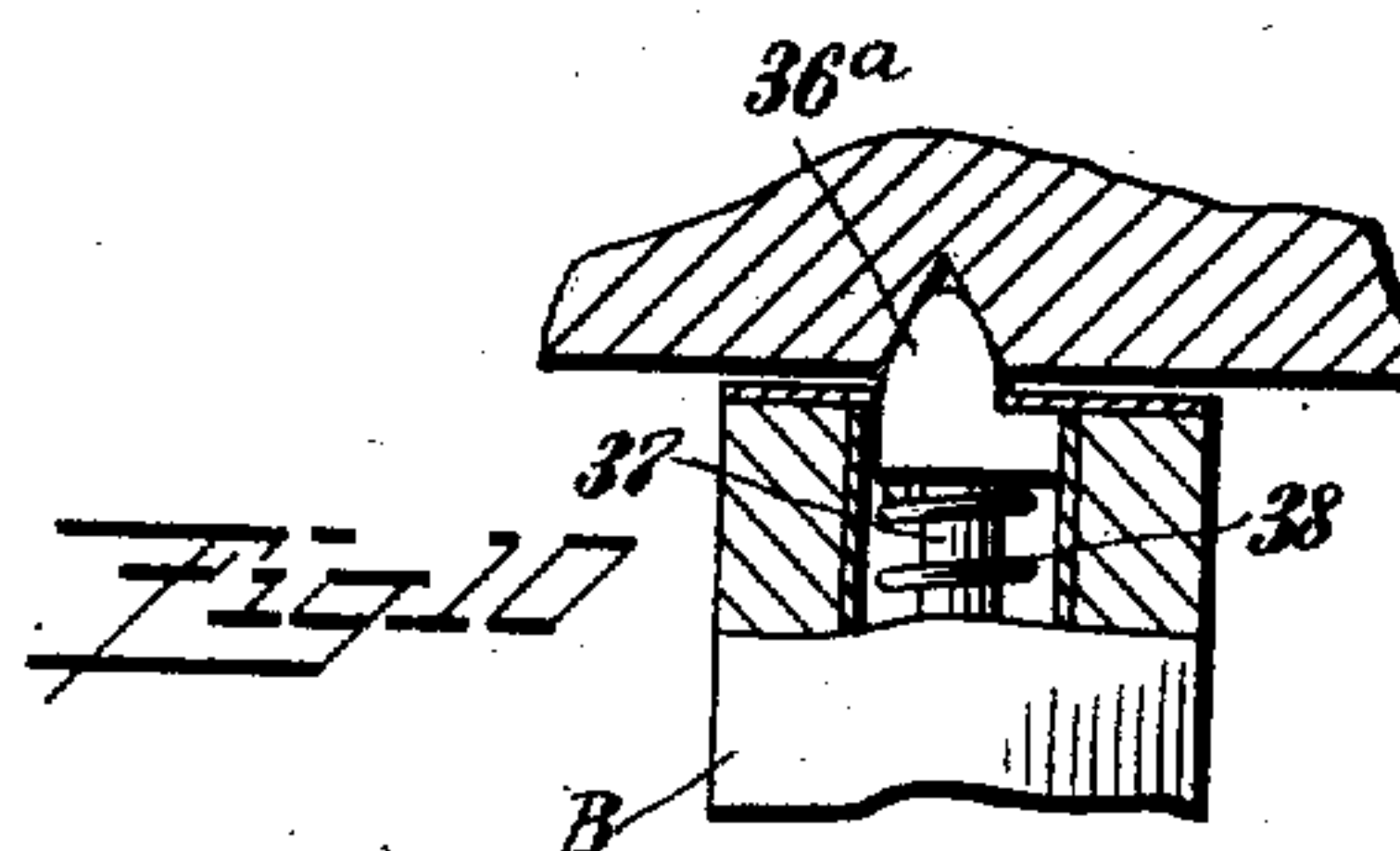
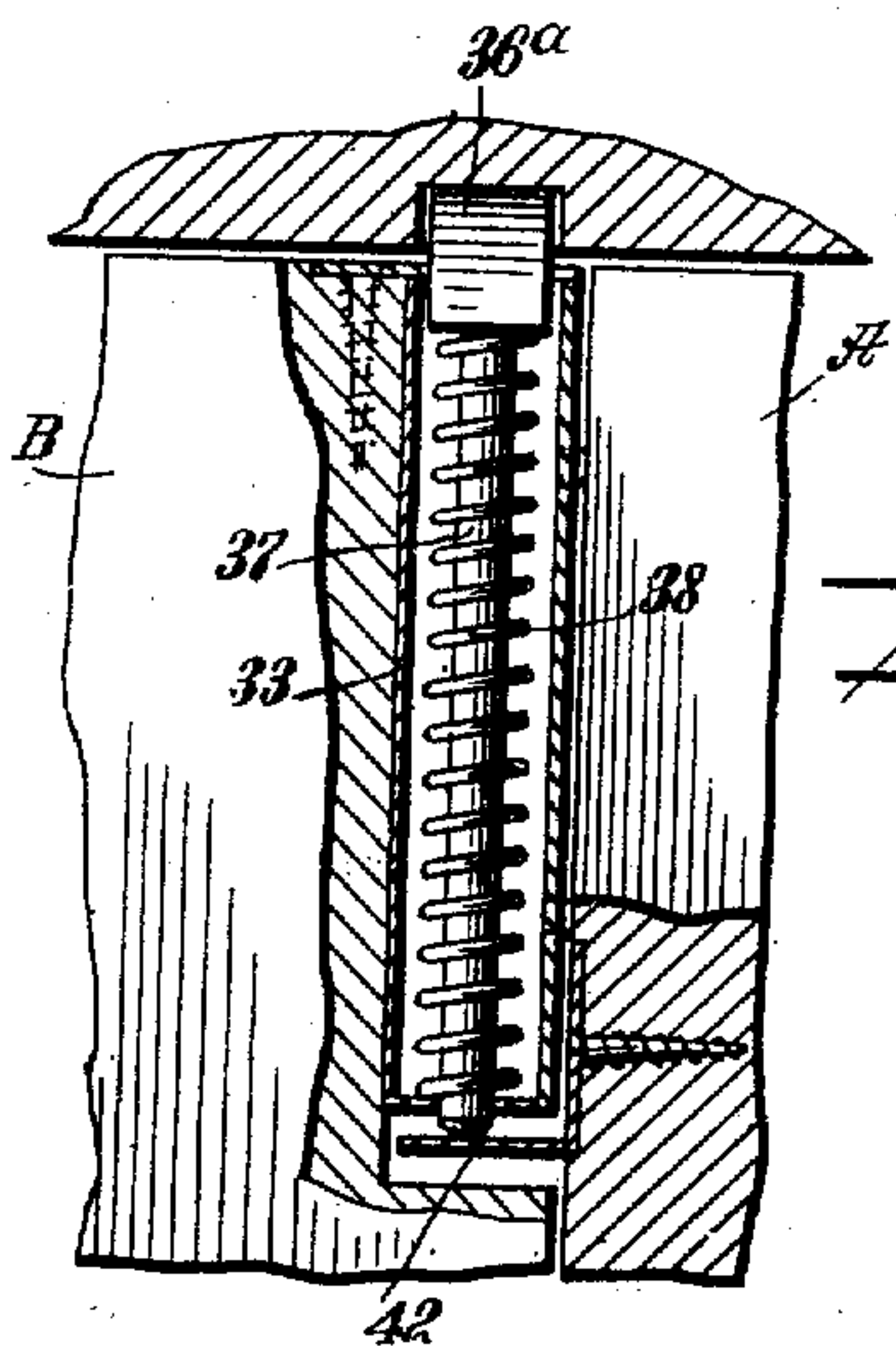
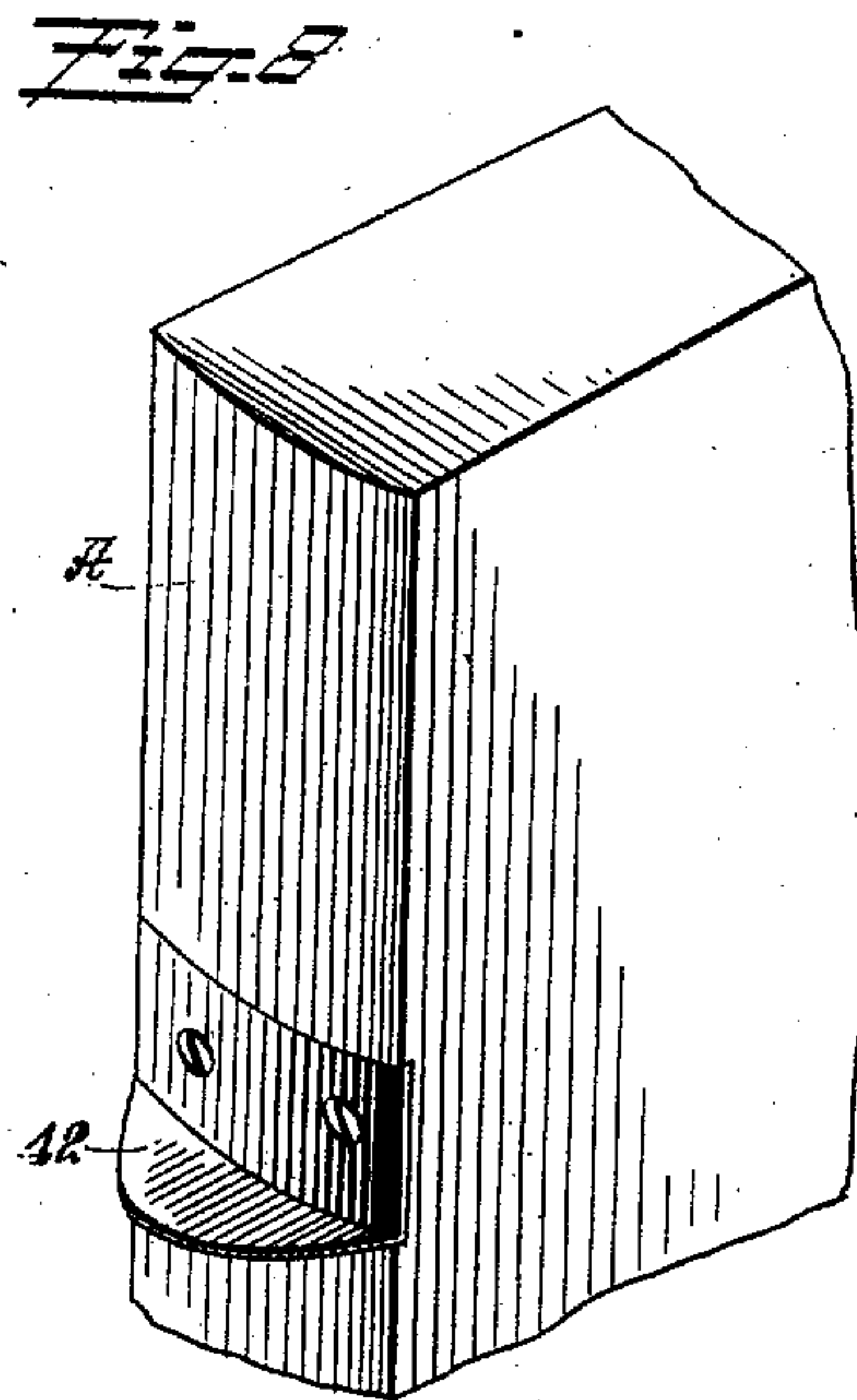
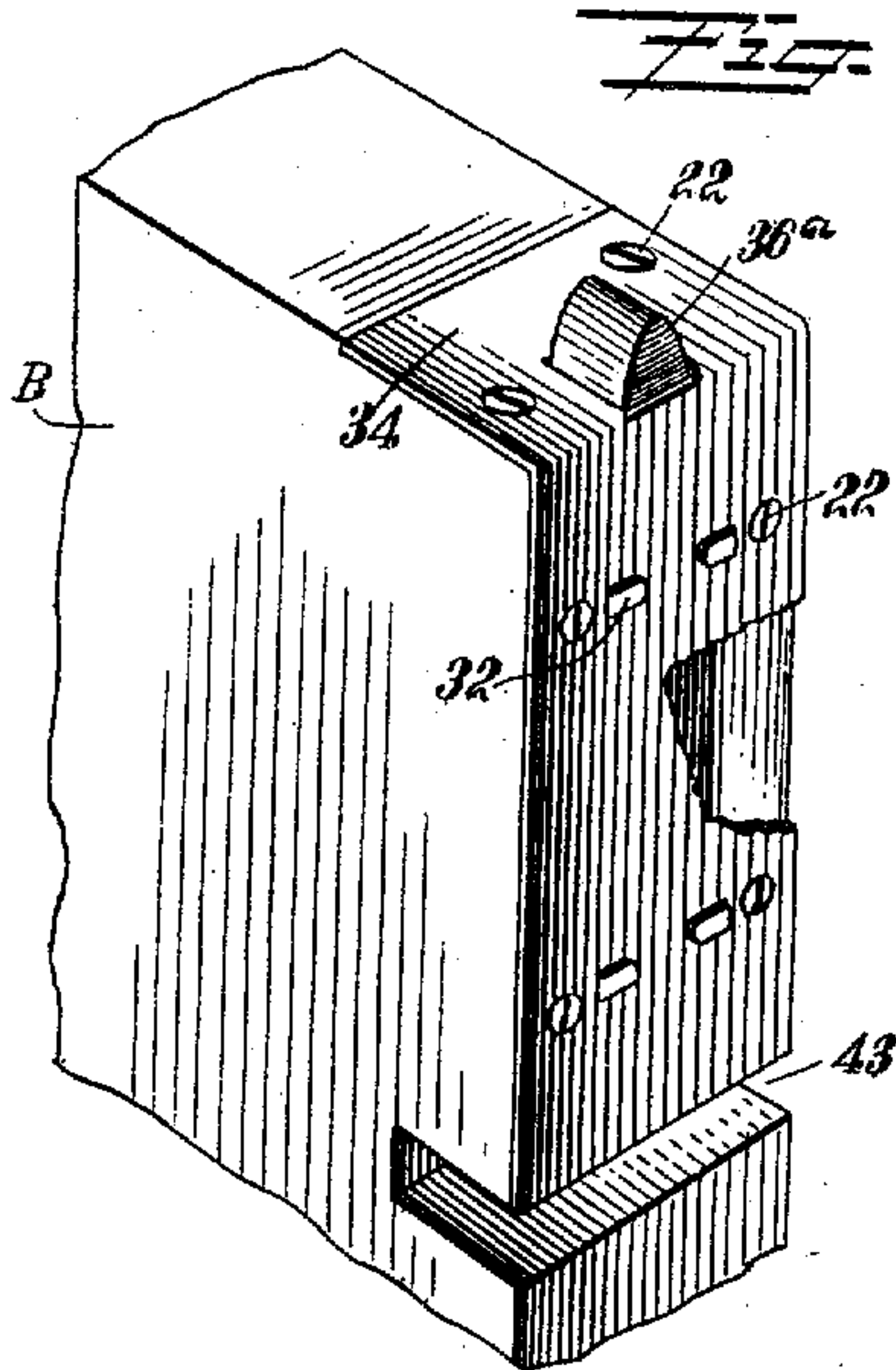


969,624.

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DOUBLE DOOR BOLT.  
APPLICATION FILED OCT. 30, 1909.

Patented Sept. 6, 1910.

2 SHEETS—SHEET 2.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

ALBERTES MARION HOES, OF ST. PAUL, NEBRASKA.

## DOUBLE-DOOR BOLT.

969,624.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed October 30, 1909. Serial No. 525,467.

*To all whom it may concern:*

Be it known that I, ALBERTES MARION HOES, a citizen of the United States, and a resident of St. Paul, in the county of Howard and State of Nebraska, have invented a new and Improved Double-Door Bolt, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide a lock for double doors, which is operated by one of said doors; to provide a lock for a series of hingedly connected doors, adapted to be held in locked position by one of said doors; to provide a locking bolt for one of said doors, carrying the striker of the common lock, which bolt will yield to opening pressure when the other door is removed; and to provide a construction of locking bolt and striker which is durable, efficient and economical.

One embodiment of the present invention is disclosed in the structure illustrated in the accompanying drawings, in which like characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a perspective view of a double door constructed and arranged in accordance with the present invention; Fig. 2 is a vertical section, shown in enlarged detail, taken on the line 2—2 in Fig. 3, the illustration being a fragment of the meeting doors and frame; Fig. 3 is a horizontal section taken on the line 3—3 in Fig. 2, the illustration being a fragment of the meeting doors; Fig. 4 is a perspective view of the upper corner of the bolt carrying door, having attached thereto a portion of the casing for the bolt; Fig. 5 is a perspective view of the upper corner of the bolt carrying door, showing the bolt and portion of the bolt casing not illustrated in Fig. 4, in place; Fig. 6 is a perspective view in detail of the bolt stop carried by the master door; Fig. 7 is a perspective view of the upper corner of the bolt carrying door of the modified form; Fig. 8 is a perspective view of the upper corner of the master door of the modified form employed in conjunction with the door illustrated in Fig. 7; Fig. 9 is a detail view in vertical section of fragments of the bolt carrying door, the master door and frame therefor of a modified form, illustrating the disposition of the bolt and stop when in locked relation; Fig. 10 is a detail view in

cross section of a fragment of the bolt carrying door and frame therefor, of the modified form, showing the disposition of the bolt and striker therefor; Fig. 11 is a cross section in plan of two way opening doors equipped with locks constructed in accordance with this invention.

The present application for patent constitutes a companion to a former application filed by me the 13th day of September, 1909, which application is entitled "Door fasteners," and has the Serial Number 517,388, to which reference is here made.

In the present instance I have provided a bolt carrying door which is so constructed that when the master door is removed it will yield to the pressure applied from the opening side, without manipulation of bolts or other form of lock. At the same time, while the door is so constructed and arranged as to thus freely yield to pressure from the desired direction when the master door is removed, when the master door is in position the bolt carrying door is held rigidly locked.

The form of door to which this invention is particularly applicable is that known as the "cupboard door." The disadvantages under which these doors have labored has been that the bolt carrying door has been so arranged that the bolt carried thereby has operated against the top or bottom of the cupboard, one or the other of which is inconveniently situated for operation by the housewife or domestic. The usual result of the inconvenience is that the bolt or latch which is inconveniently positioned is not used, resulting thereby in an unnatural strain upon the bolt carrying door in performing its function as a lock or stop for the master door. When this form of door is provided with a bolt shown in the accompanying drawings, the operation of opening the bolt carrying door consists in merely pulling upon the same.

The bolts referred to are mounted in casings formed substantially as shown in Figs. 2 to 5 inclusive of the drawings. A plate 21 is provided with perforations to receive screws 22, 22, and with perforations 23, 23 through which are passed and turned or riveted the tabs 24, 24 formed on the bend 25 of the cover plate 26. The cover 26 and plate 21 are of equal width, the extension 28 and the bend 25 thereof limiting the width of the faces of the said plate and cover. The



combined width, however, is designed to cover the full edge of the door.

The plate 21 is provided with a long extension 27 and the side extension 28. The end extension 27 is provided with perforations 29, 29 to receive screws for fastening to the body of the door. The extension 28 is provided with an out-turned extension 30, which forms the bottom of the complete casing. In the center of the out-turned end 30 there is formed a hole 31 for guidance of the shank of the bolt. The extension 28 is further provided with tabs 32, 32, which extend through slits similar to the slits 23 formed in the cover 26, to be turned or riveted upon the face of the same, as illustrated in Figs. 3 and 5 of the drawings. When the plate 21 and the cover 26 are thus joined there is provided a square box-like casing 33, the end 30 of the plate 21 of the extension 28 forming the bottom thereof. The top of the casing 33 is formed by an extension 34 of the cover 26. The edge of the extension 34, where the same protrudes over the casing 33, is formed so that the contracted end is formed for the abutment of the shoulder 35 of the head 36 of the bolt to strike under, as illustrated in Fig. 2 of the drawings.

Before introducing the bolt into the casing 33, the shank 37 thereof is provided with a spiral spring 38, which is adapted to force outward the head 36 of the bolt in locking position. The said spring is sufficiently strong to perform the work intended.

The bolt and casing are furnished to the market thus constructed, and to apply the same to a door it is necessary to form a recess in the upper and lower corners of the bolt carrying door, said recess being formed in the rabbet of the door. Screws 23 and 39 are passed through perforations in the plates 21 and 26 to hold the casing and bolt firmly in position within the door.

The bolt head 36 is extended through the casing 33 to rest in the striker recess provided for the bolt. The recess is preferably of the shape shown in cross section in Fig. 2 of the drawings, having an inclined side and a perpendicular side. The inclined side is held in contact with the rounded face of the bolt head 36, presenting an angle thereto which forces the bolt head to one side when pressure is applied upon the door on the opposite side thereof.

With a striker recess of the form shown, the perpendicular face opposite the inclined face above described prevents the bolt head from receding, and thus forms a sliding striker for the said bolt to prevent the same from yielding to pressure applied to the door on the outside, or the side opposite that above mentioned.

The shank 37 is formed of a length to extend slightly beyond the lower end of the

casing, or fall flush therewith. The shank is extended beyond the end of the plate to the same extent that the bolt head 36 is retracted into the casing 33. When the bolt is in locked position by reason of the master door A closing against the same, the bolt is held from being retracted by a stop 40, which is screwed upon the master door in such position as to extend under the casing 33, as shown in Fig. 2 of the drawings. The stop 40, being placed in the position illustrated in Fig. 2 of the drawings, the bolt head 36 cannot yield to pressure on the door to be retracted within the casing 33. In this position the bolt is rigidly locked to firmly hold the bolt carrying door B. The master door A is provided with any form of bolt C, the lock and socket D for which are carried by the master door A.

With doors thus equipped, the operation of closing the same is in all respects similar to doors provided with the ordinary locks, except that the bolt carrying door B is merely pushed to until the bolt heads 36 are held in their respective strikers. The master door A is then closed. In this position it will be found that the doors are held in position to resist all pressure. When, however, the master door is opened, any pressure applied from the outside will cause the inclined surface of the striker of the bolt 36 to depress the same within the casing 33, and thereby release the door B.

In the modified form of the bolt heads 36<sup>a</sup>, illustrated in Figs. 7 to 10 inclusive, provision is made for doors swinging in both directions and locking in the closed position. In the modified form the head 36<sup>a</sup> of the bolt is rounded on both faces, and the striker 41 provided therefor is provided with a double and oppositely inclined surface adapted to depress downward the head 36<sup>a</sup>. The master door A in this form is provided with a stop of the form illustrated in Fig. 8, having an outward extension 42, which is adapted to extend within and pass through a guide 43 formed in the door to extend beneath the casing 33. When the extension 42 is in position, as illustrated in Fig. 9 of the drawings, it is obvious that the bolt head 36<sup>a</sup> may not be retracted, and the doors in this position are rigidly held, as by a squared face and socket bolt.

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

A door lock comprising a door frame; two hinged doors adapted to close the opening formed by said frame; a plurality of elongated bolt casings rectangular in cross section fixedly mounted on one of said doors to form a flush surface on the edge of said door; bolts for said casings, said bolts being straight shanked and beveled headed and slidably mounted in said casings to extend

both ends from said casings; recesses disposed in the path of said bolt heads to lockingly engage the same when the doors are closed; springs surrounding said shanks to  
5 normally extend the said bolts; and extended bracket-like stop members fixedly mounted on the meeting edge of the door not carrying said bolts and arranged to extend into the path of and to the rear end of said  
10 bolts when the same are in locked engage-

ment with said recesses to prevent the retraction of said bolts.

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

ALBERTES MARION HOES.

Witnesses:

ROBERT SALING,  
T. T. BELL.