

No. 741,673.

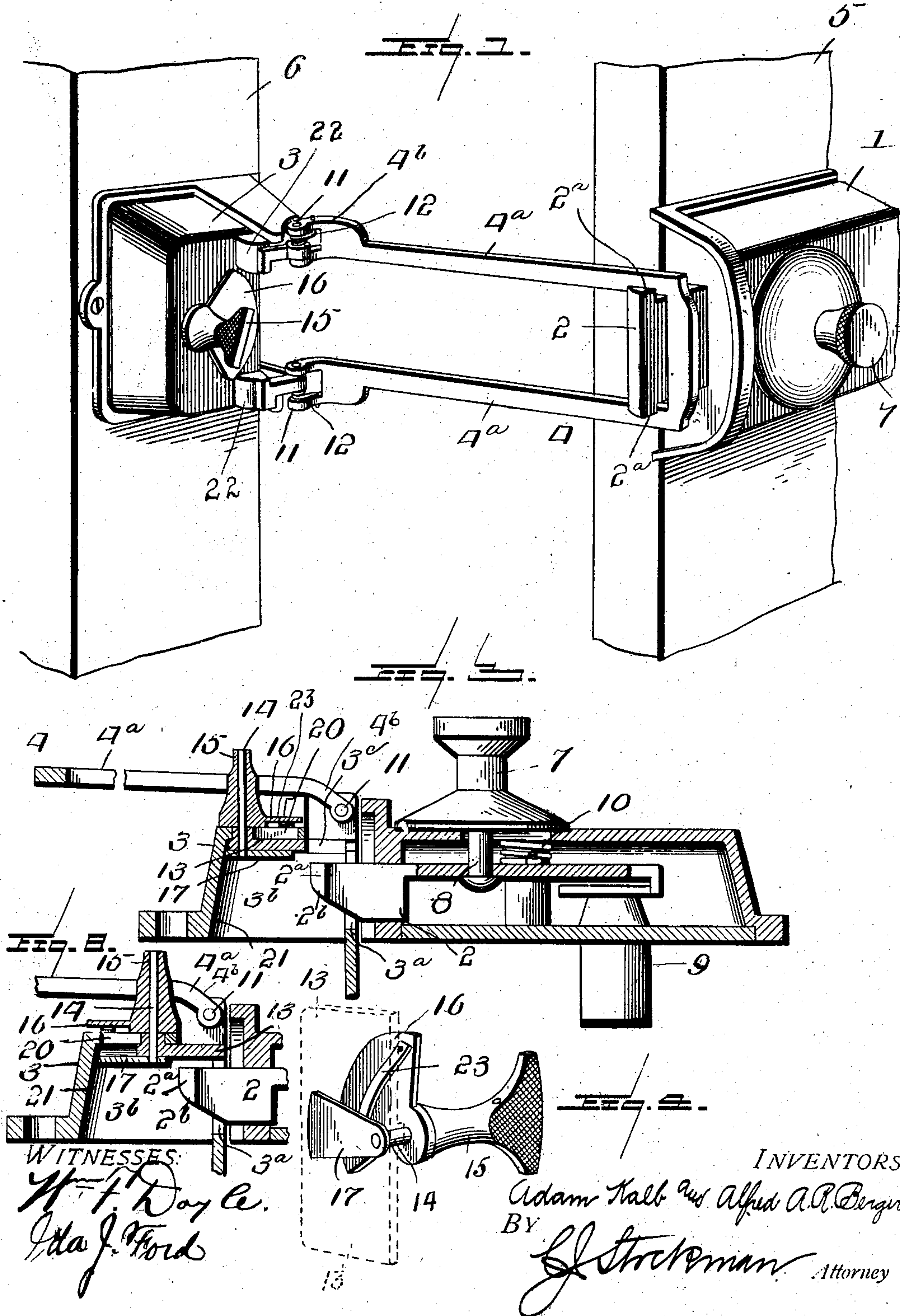
PATENTED OCT. 20, 1903.

A. KALB & A. A. R. BERGER.
DOOR CHECK AND FASTENER.

APPLICATION FILED SEPT. 11, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



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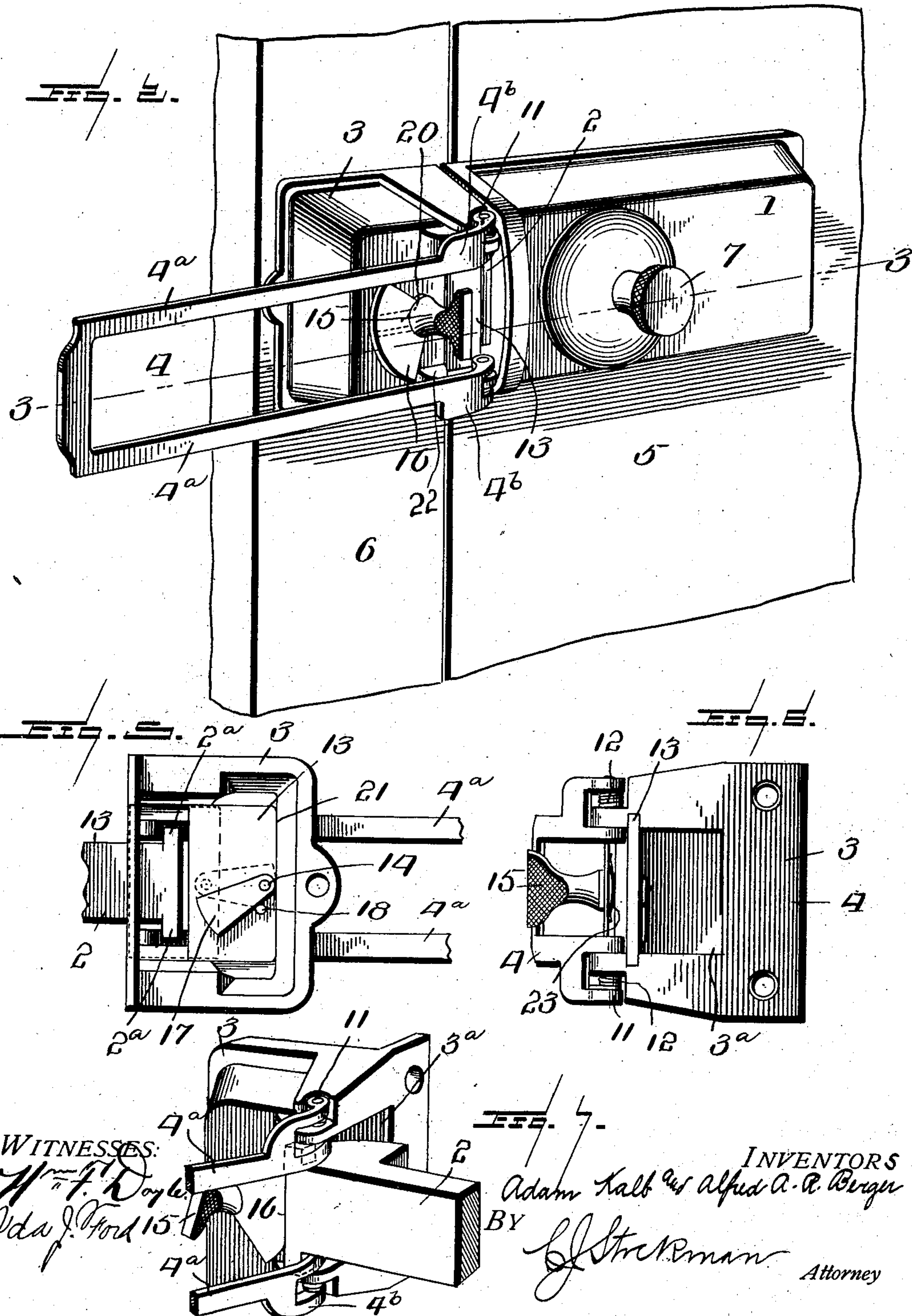
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3 SHEETS—SHEET 3.

FIG. 9.

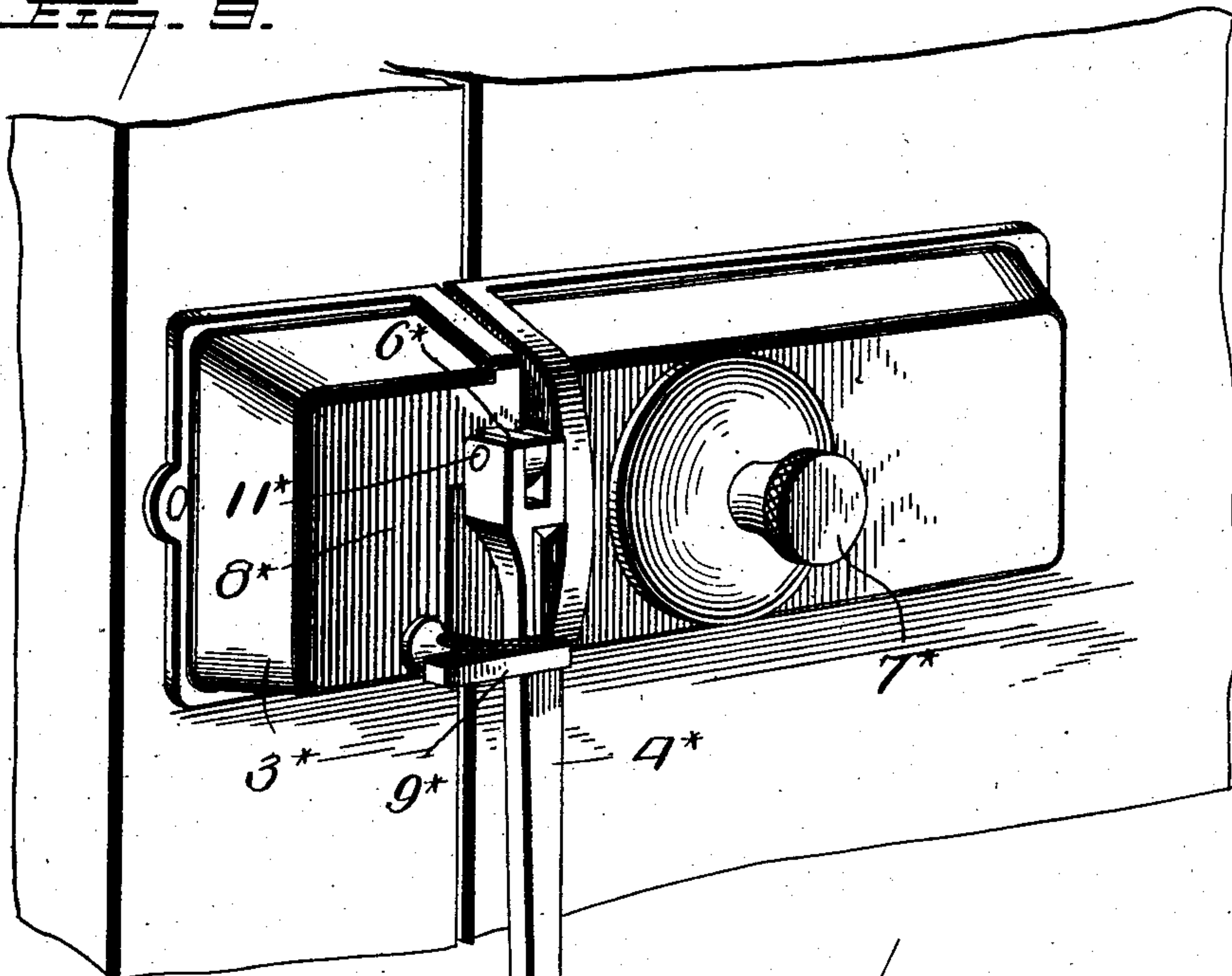


FIG. 10.

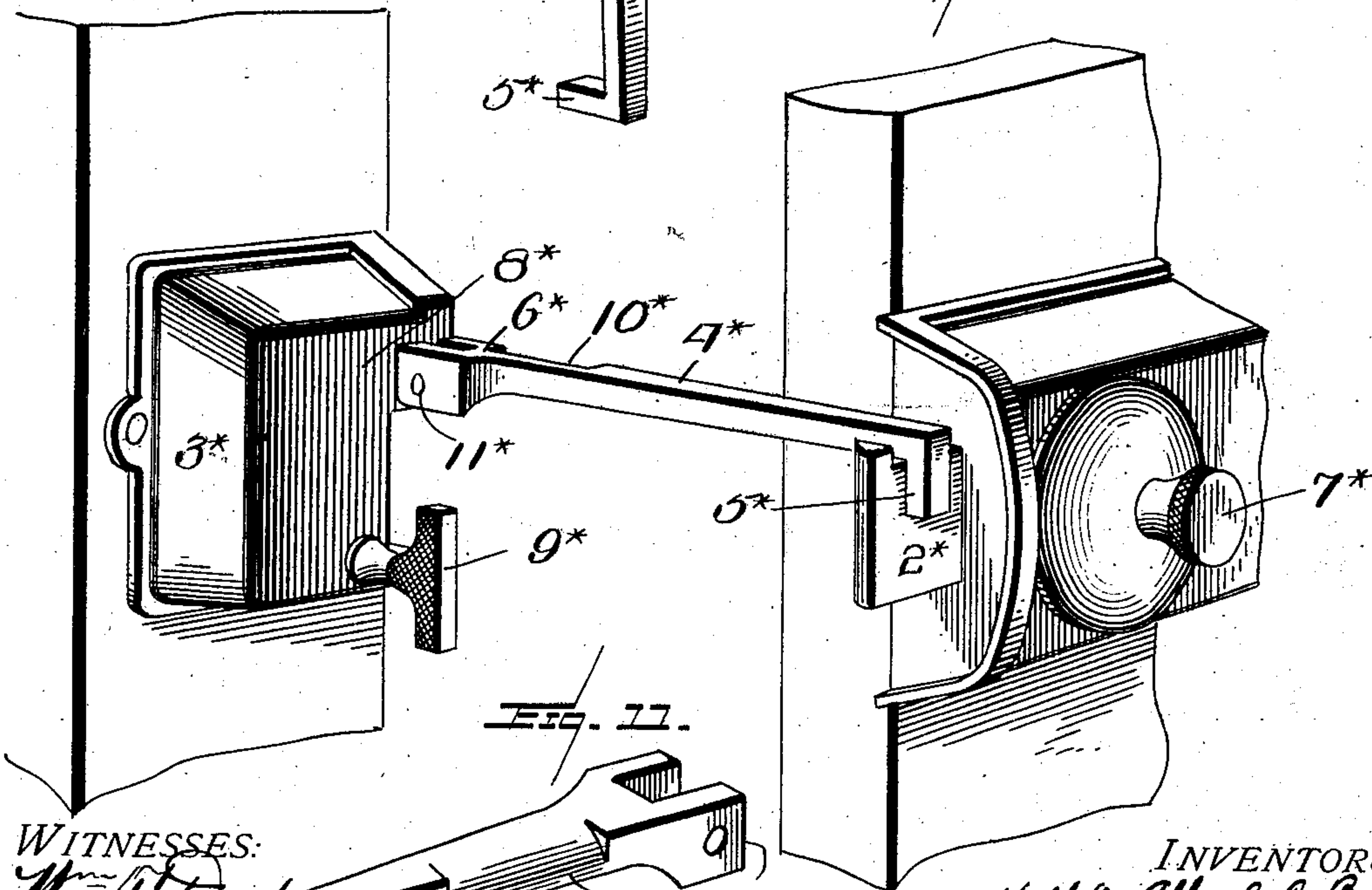


FIG. 11.

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UNITED STATES PATENT OFFICE.

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DOOR CHECK AND FASTENER.

SPECIFICATION forming part of Letters Patent No. 741,673, dated October 20, 1903.

Application filed September 11, 1902. Serial No. 122,973. (No model.)

To all whom it may concern:

Be it known that we, ADAM KALB, of the borough of Manhattan, and ALFRED A. R. BERGER, of the borough of Brooklyn, in the city of New York and State of New York, both citizens of the United States, have invented certain new and useful Improvements in Door Checks and Fasteners; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of devices which are employed to permit a door to be partially opened and prevent the complete opening thereof and which comprise a member to be secured to the door having a bolt and means for operating the said bolt and a second member to be secured to the door casing or frame and having a pivoted holding device so related to said bolt that in the operation of opening the door when the bolt is not retracted said bolt will be engaged by said holding means, and thereby prevent full opening of said door.

One of the principal objects of the present invention is to provide said devices with means adjustable to render the holding device inoperative by the bolt, whereby said door cannot be opened at all until said bolt is retracted.

Another important object of the present invention is to provide a most simple, practical, and durable construction of device for the purpose stated in which the pivoted holding member thereof will be normally horizontal and yet in the path of the bolt when the latter is projected, thus causing said holding device to be swung outward into locking engagement with said bolt automatically by the movement of the door and bolt, said holding member also having means by which it is automatically returned to its normal position during the closing of the door.

To these and other ends the invention consists in certain novel combinations of elements and in certain peculiarities in the

construction of parts, substantially as hereinafter described, and particularly set forth in the subjoined claims.

In the accompanying drawings we have shown two different constructions of means for permitting a partial while preventing a full opening of the door, in each of which the parts may be disengaged by the operation of a suitable key inserted from the outside of the door and in each of which the device is automatically set into locking position by the closing of the door. Moreover, in each of said constructions means are provided by which, so to speak, the holding member is rendered inoperative, the means for said purpose in one construction operating to accomplish its purpose by being adjustable across the path traversed by the projection or bolt in that movement of the latter which brings it into engagement with said holding member and the means for said purpose shown in the other form accomplishing its object by engaging said holding member and locking it against pivotal movement.

In the drawings, Figure 1 is a perspective view of a part of a door and its frame provided with the preferred form of locking means, the door being shown as opened as far as permitted by said locking means. Fig. 2 is a perspective view showing the position of the parts when the door is closed. Fig. 3 is a longitudinal section on the line 3 3 of Fig. 4. Fig. 4 is a detail view of a device which is adjustable into the path of said projection to prevent engagement of said projection with said holding means. Fig. 5 is an inverted plan view of that part of the device which carries said holding means, showing the end of said projection therein, said view also showing in full lines the position of the parts when said projection may engage said holding means and in dotted lines the position of parts when adjusted to prevent engagement of said projection and holding means. Fig. 6 is a view of that part of the device which is provided with said holding means looking into the side thereof which faces the companion member of the device. Fig. 7 is a perspective view showing the end of said projection engaged with said holding means, the parts being shown in the position

they occupy in the first stage of the movement of the door. Fig. 8 is a sectional view showing means adjusted to prevent engagement of the projection with the holding means. Fig. 9 is a perspective view of a part of a door and its frame provided with a modified form of our device, showing the position of the parts when the door is closed. Fig. 10 is a perspective view of a door and its frame provided with the said modified form of the device, showing the door partly opened. Fig. 11 is a detail view of a part of the holding means of said modified form.

The same reference characters designate the same parts in the several views.

1 designates one member of our device, having a projection 2, the outer end of which is provided with lateral extensions 2^a and the under surface of which is beveled, as shown at 2^b, and 3 designates the outer member of the device, provided with a holding means 4, which is designed to engage said projection 2 and through its engagement therewith to permit a door to be partly opened and prevent it from being fully opened for the purposes hereinabove stated. In the present examples of our invention we have shown the member 1 as secured to a door 5 and the member 3 as secured to the door-frame 6. While this arrangement is greatly preferred, yet on doors which open outward the part 3 may be secured to the door and the part 1 may be secured to the frame, and this arrangement may be made without departing from the spirit of the invention.

For reasons which will hereinafter fully appear the member 1 is preferably a night-latch, of which the projection 2 constitutes the bolt, said bolt being spring-pressed outward, as usual. As the construction of night-latches is well known and as a particular construction thereof is not essential to the present invention, we do not deem it necessary to enter into a detailed disclosure with respect thereto. As is well known, said night-latches have a knob 7 connected with the bolt and operated from the inside of the room to retract said bolt and also have a member 9, which extends through the door and is constructed to admit the key which is inserted to operate on the tumblers of the latch to thereby retract the bolt from the outside of the door. Said latches also have a spring which automatically projects the bolt when the latter is released from the pressure imposed thereon during the retraction thereof. The spring 10 shown in the accompanying drawings has one of its ends secured to a post, around which it is coiled, and its other end extends thence to the bolt and is suitably secured to the latter. The member 3 of the device constitutes the keeper and comprises a casing which has an opening 3^a, through which said bolt or projection extends into an opening 3^b in said member 3, and is also provided above said openings 3^a

and 3^b with a throat 3^c, adapted to be traversed by said bolt or projection while the door is being opened. As hereinbefore stated, said member is provided with the holding means 4, which is in the form of a U-shaped frame, the side arms 4^a of which are pivoted at 11 to said casing and located in the path traversed by lateral extensions 2^a from the bolt or projection 2 during the opening of the door. In operation the body of said bolt or projection traverses the open interior of the holding means, and the extensions 2^a engage the surfaces of said arms. In this way the holding means is automatically caused to turn pivotally until its closed end has been brought into engagement with the body of said projection. In the latter position of the parts the door is held in partly-open position, permitting the person within the room to see the one who seeks to enter and preventing entrance of said one until the door has again been closed and the projection or bolt retracted from the opening 3^b in the member 3 by proper manipulation of the knob 7 by the person within the room. It will be understood that when the bolt or projection 2 is not retracted within its frame the opening of the door will cause it to engage the holding means 4, and thus permit a partial and prevent a complete opening of said door, and that said bolt or projection 2 can be retracted when the door is closed and when retracted does not engage said holding means 4 while the door is being opened. It will also be understood that the retraction of said bolt is wholly under the control of the person within the room or of a person from the outside who has a proper key. It will thus be seen that the device effectively accomplishes the purpose of the ordinary chain door-fasts and is advantageous thereover in that the necessity for one within the room to open the door to the entrance of a person entitled to enter without question and who therefore is provided with a key for retracting the bolt to prevent it from being engaged by said holding means is obviated. It will also be seen that the necessity for one within the room to resecure the door is obviated by reason of the fact that the spring 10 operates automatically to project the bolt into position to be engaged by said holding means when the door is closed and also by reason of the fact that said holding means when released from said bolt is caused to assume its normal position (shown in Figs. 2, 3, and 7) ready to be reengaged by said bolt when an attempt is made to open the door prior to the retraction of said bolt or projection. In order that said holding means may be caused automatically to assume its said normal position, springs 12 are preferably employed, said springs being mounted on the pivots 11 of said holding means and engaging the member 3 at one end and the arms 4^a at their other ends, as shown best in Figs. 1 and 6. In closing the door the beveled sur-

face 2^b of the lateral extensions from the bolt or projection 2 engages the longitudinally-rounded ends 4^b of the arms 4^a of the holding means and glides freely rearward thereon against the tension of its spring 10 until it has passed said holding means, when it is automatically forced outward by the spring 10 into the opening 3^b and into position to engage said arms 4^a, it being seen that said holding means meanwhile has been adjusted into position to be engaged thereby. Our invention also contemplates, as hereinabove stated, the provision of means adapted to be projected into the space between said bolt or projection 2 and said holding means to thereby lock the door against being opened at all until said bolt has been retracted. The means shown in the accompanying drawings for said purpose consists of a plate 13, provided with a pin 14, having at its upper end a head 15 for turning it. Said pin 14 is mounted to have axial movement, and fixed upon its upper portion is a cam or projection 16, while its lower portion, which extends below said plate 13, carries a cam or projection 17. The plate has a stop-pin 18 to engage the side of said cam or projection 17 when said plate is withdrawn. The upper surface of the member 3 is formed with a slot 20, through which said pin 14 extends. When said plate is withdrawn out of the path of the bolt or projection 2, the cam or projection 17 occupies the position shown in full lines in Fig. 5 and the cam or projection 16 is in the position shown in full lines in Fig. 2. In order to adjust said plate across the path of the bolt, the user turns the pivot-pin 14 axially, thus bringing the free end of the projection or cam 17 into engagement with the rear wall 21 of the member 3, so that further axial movement of said pin will force said plate 13 outward, said pin 14 in said movement traversing the slot 20 from the rear to the front ends thereof. This position of the parts is shown in dotted lines in Fig. 5 and in full lines in Fig. 8. To again retract said plate 13, the pin 14 is turned axially in the opposite direction from that above referred to, thus first carrying the free ends of the cam or projection 17 out of engagement with said wall 21 and the cam or projection 16 into engagement with a projection 22, which rises from the member 3, so that the next movement will cause the pin to move rearward in the slot 20 to carry said plate with it, thus opening the space between the bolt or projection 2 and the arms 4^a. A spring 23 is provided between said cam or projection 16 and the upper surface of the frame or member 3 to hold the parts in their proper positions. It will be understood that when the plate 13 is adjusted to its forward position over the bolt or projection 2 the device will operate in the ordinary manner and serve the functions of an ordinary night-latch.

In Figs. 9, 10, and 11 a modified construc-

tion of the device is disclosed, said modification consisting in the use of a single arm 4* instead of a U-shaped holding-frame. Said arm is pivoted at its upper end, so as to normally depend in line approximately with the edge of the door and in position to be engaged by the bolt or projection 2* when attempt is made to open the door prior to the retraction of said bolt or projection, and in the opening of said door said bolt or projection engages the under surface of said arm and raises the latter, and the door is moved outward until the downward extension 5* from said bolt or projection 2* engages the face of said bolt, as shown in Fig. 10. The upper edge 6* of said arm is approximately square, and when said arm is turned on its pivot 11* approximately to horizontal position said upper edge is thereby caused to engage the front face 8* of the member 3* and operate to prevent further upward movement of said arm. It will be understood that when the door is closed the bolt or projection 2* is in front of the same—that is to say, is located between said arm and the outer surface of the door—and that it can be retracted either by the knob 7* from within the room or by the insertion of a key from without said room. It will also be understood that the arm 4* will fall by gravity to its normal position when not supported by said bolt 2*. To lock said arm against being elevated by movement of the door, and hence prevent the door from being opened at all until the bolt or projection 2* is retracted, a headed pin 9*, pivoted to project across the path of said arm, may be employed. The edge of the arm 4*, near its pivot 11* is rounded, as shown at 10*, to permit the bolt to freely pass the same in the operation of closing the door when said arm is not in its normal depending position. In this construction, as in the other, the keeper has an opening in its front face through which the bolt when projected may move in the partial opening of the door into engagement with the checking-arm, the latter being pivoted to the casing of the keeper and arranged on the front face of the latter and over said opening.

The construction, operation, and advantages of our device have been fully set forth and need not be further stated.

We wish it understood that the invention is not restricted in all respects to either of the detail constructions thereof disclosed in the accompanying drawings and hereinabove referred to; but as said details constitute the best embodiment of our invention known to us we have made them the subject-matter of specific claims.

Having thus described the invention, what we believe to be new, and desire to secure by Letters Patent, and what we therefore claim, is—

1. A means for preventing full and permitting partial opening of a door, said means hav-

ing two members designed to be secured to the door and its frame respectively, one of said members having an adjustable projection provided with a head and with means
 5 for retracting it, and the other of said members comprising a casing constituting a keeper for said projection and having in its front face an opening so related to said projection
 10 that the latter is free to move therethrough when projected, an approximately horizontal holding device pivoted to said other member and so related to the opening in the front face thereof as to be in the path of movement
 15 of said projection when the latter is projected to thereby cause it to be turned pivotally and horizontally by the opening of the door, and means operating to return said holding device automatically to its former position during the closing of the door.

20 2. A means for preventing full and permitting partial opening of a door, said means having two members designed to be secured to the door and its frame respectively, one of said members having an adjustable projection
 25 provided with lateral extensions and with means for retracting it, and the other of said members comprising a casing having an opening in its end presented to said projection and also having an opening in its front
 30 face so related to said projection that the latter is free to move therethrough when projected, an approximately horizontal holding device having arms pivoted to said casing at one end above and below the opening there-
 35 in and having a closed end remote from its pivots, the pivoted ends of said arms being arranged in the path of movement of said projection when the latter is projected, whereby said holding device is adjusted outward au-
 40 tomatically, and springs for returning said holding device to its closed position during the closing of the door.

3. A means for preventing full and permitting partial opening of a door, said means hav-
 45 ing two members designed to be secured to the door and its frame respectively, one of said members having a spring-pressed bolt with a lateral extension at its outer end and also having means for retracting it, said ex-
 50 tension having a beveled rear surface, and the other of said members constituting a keeper for said bolt and provided with an approximately horizontal pivoted holding means, said holding means having an arm
 55 the rear surface of the pivoted end of which is arranged in the path of the lateral extension from said bolt to thereby cause said holding means to be adjusted outward automatic-
 60 ally by said extension when the bolt is projected and while the door is being opened, and having the front surface of its said beveled end arranged to be engaged by the beveled under surface of said extension and
 65 formed longitudinally to press said bolt rearward, substantially as described.

4. The combination with the two members of a night-latch designed to be secured to a door and its frame respectively, one of said members having its bolt provided with a head and the other of said members constituting
 70 the keeper of said bolt and provided with an approximately horizontal holding device having one of its ends pivoted and its said pivoted end arranged in the path of movement of said bolt so as to be automatically adjusted out-
 75 ward horizontally by the movement of said bolt with the door while said door is being opened, said holding device cooperating with said bolt to confine the movement of the door to predetermined limit, and means for auto-
 80 matically returning said holding device to its closed position while the door is being closed.

5. A means for preventing full and permitting partial opening of a door, comprising two
 85 members designed to be secured to a door and its frame respectively, and each member having a casing and a part movable relatively to its casing: one of said members having a bolt constituting its said movable part and also
 90 having means for advancing and retracting said bolt: and the other member constituting a keeper and having its casing formed with an opening presented to said bolt and also, in its front face, with an opening through
 95 which the bolt when projected is adapted to move in the partial opening of the door, a holding device pivoted to said casing and overlying said opening in the front face there-
 100 of and arranged in the path of said bolt when the latter is projected, and automatically ad-justed thereby to check the door in partially-
 105 open position, said holding device constituting said movable part of its member, and means supported by said casing and adjustable relatively thereto into the path traversed
 110 by one of said movable parts in said partial opening of the door, to thereby prevent said automatic movement of said holding device.

6. A means for preventing full and permitting partial opening of a door, said means hav-
 110 ing two members designed to be secured to the door and its frame respectively, one of said members having a relatively adjustable projection and the other of said members hav-
 115 ing a holding device arranged in the path of said projection when the latter is projected, a plate and means operated for adjusting said plate across and away from the space between
 120 said projection and holding means, for the purpose specified.

7. A means for preventing full and permitting partial opening of a door, said means hav-
 125 ing two members designed to be secured to the door and its frame respectively, one of said members having a relatively adjustable projection and the other of said members hav-
 130 ing a holding device arranged in the path of said projection when the latter is projected, a plate and means operated for adjusting said plate across and away from the space between

said projection and holding means, said operating means comprehending, an axially movable pin connected with said plate and partaking of the movements thereof and projections from said pin having free ends arranged to engage relatively fixed parts of said other members for moving said plate forward and rearward.

In testimony whereof we affix our signatures in presence of two witnesses.

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ALFRED A. R. BERGER.

Witnesses:

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CHARLES M. NAGEL.