(No Model.)

P. McMAHON.

DOOR CHECK.

No. 535,768. Patented Mar. 12, 1895.

Fig. 1.

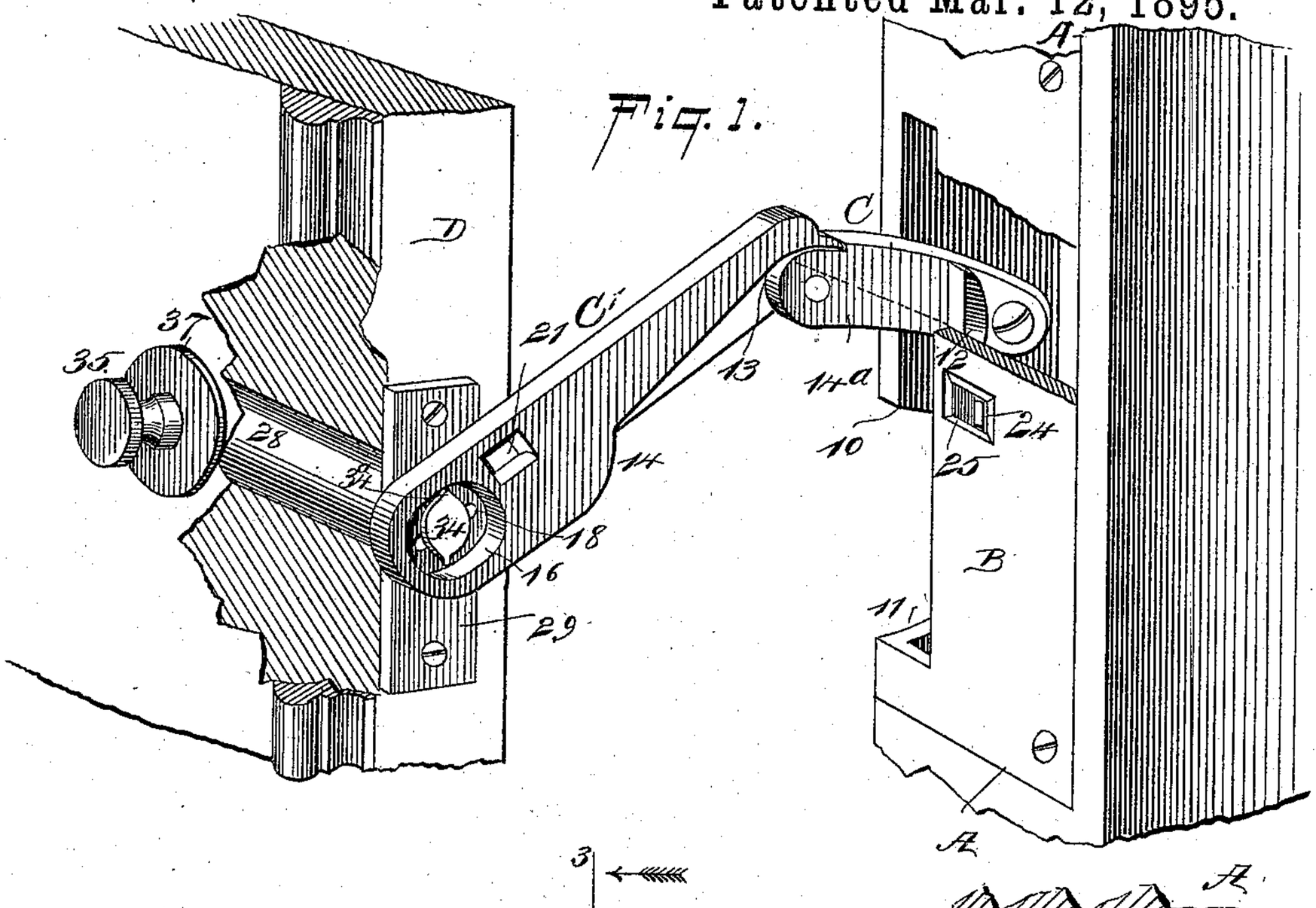


Fig. 2.

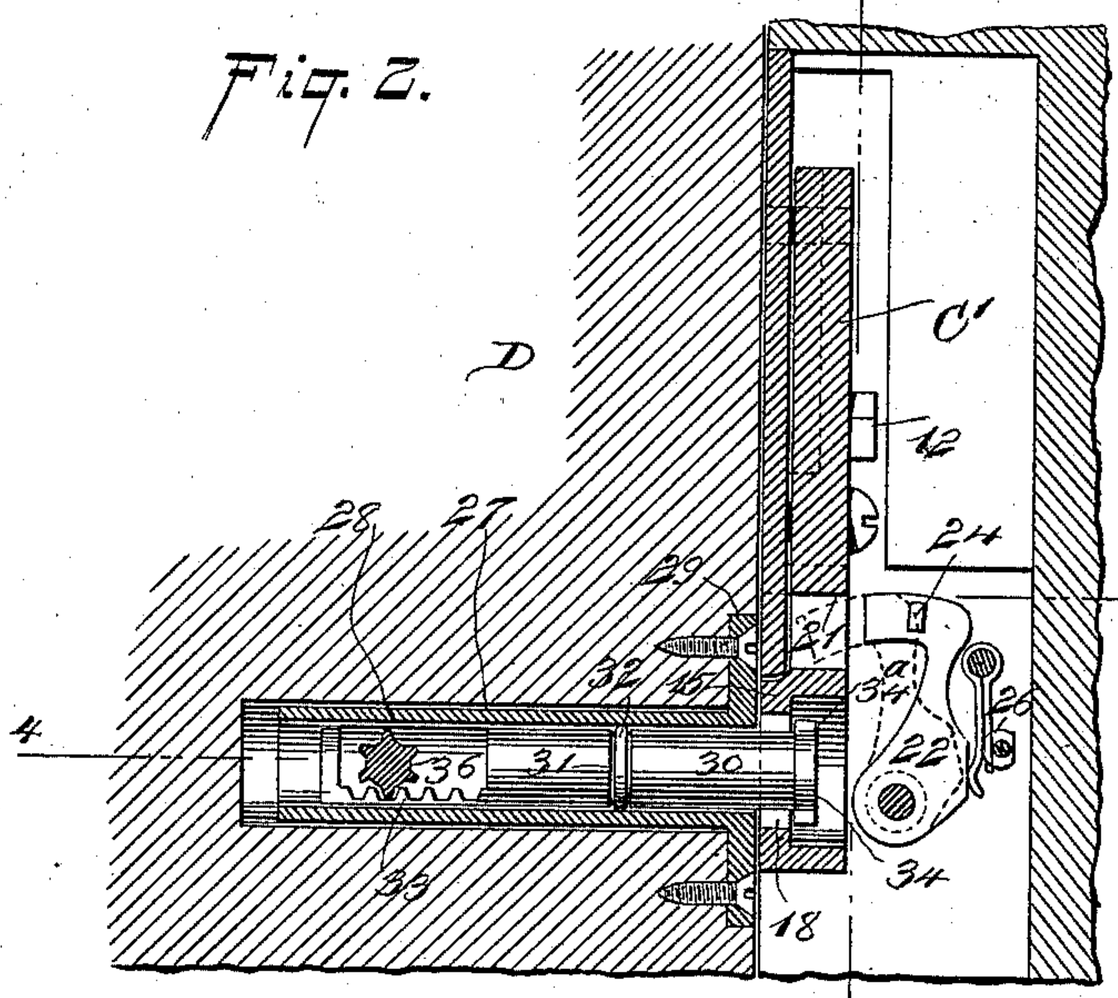


Fig. 3.

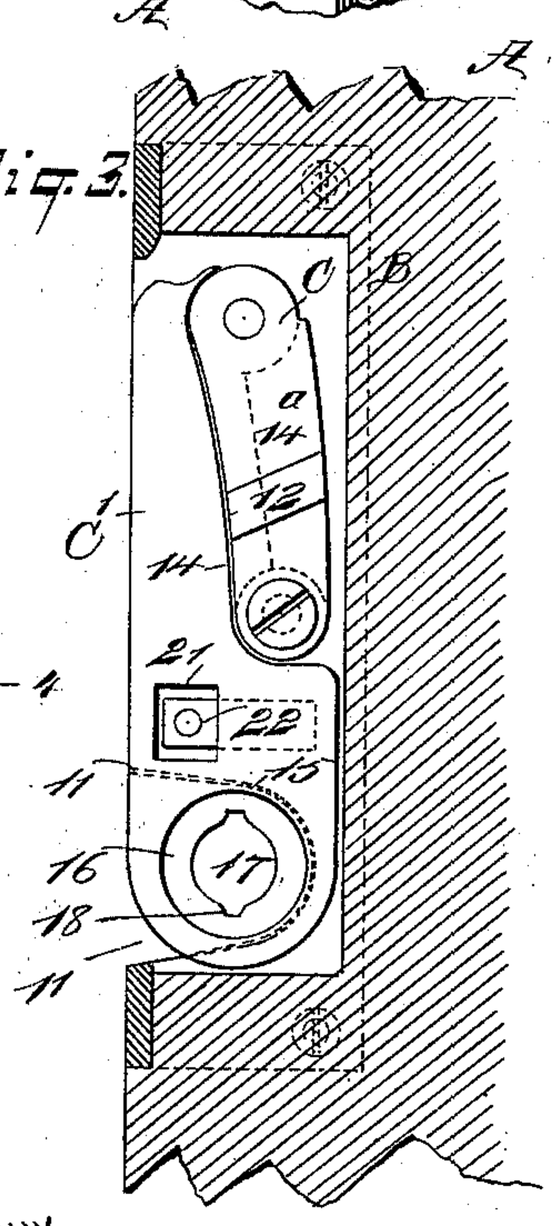
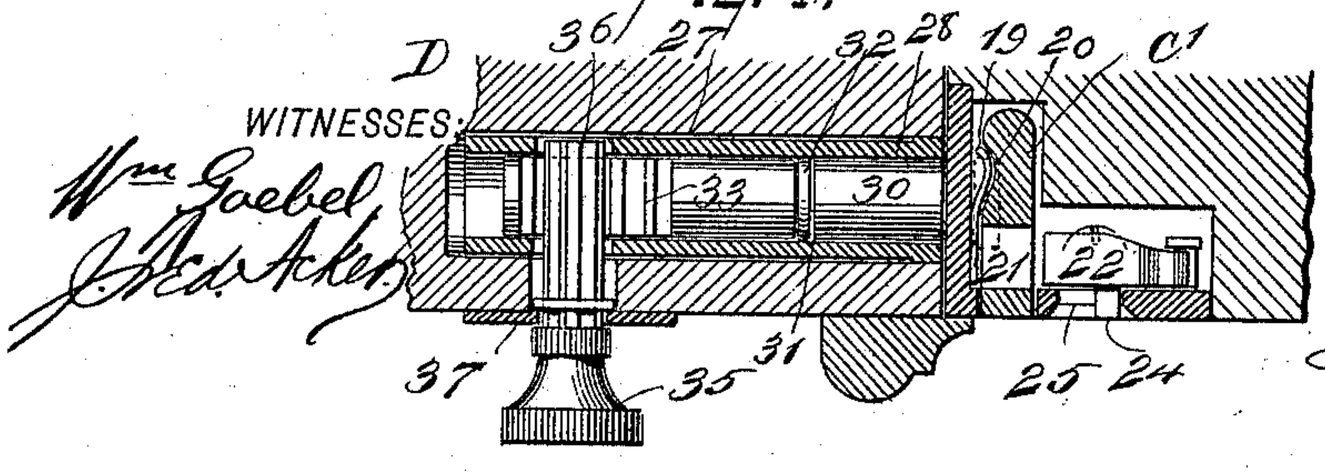


Fig. 4.



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DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 535,768, dated March 12, 1895.

Application filed May 11, 1894. Serial No. 510,889. (No model.)

To all whom it may concern:

Be it known that I, PATRICK MCMAHON, of Whitestone, in the county of Queens and State of New York, have invented a new and Improved Door Guard and Bolt, of which the following is a full, clear, and exact description.

My invention relates to an improved door guard and bolt, and it has for its object to provide a device adapted as a substitute for a chain bolt, and one wherein a greater degree of safety may be secured than by the use of the chain bolt.

A further object of the invention is to provide a door guard and bolt so constructed that the bolt may be expeditiously and conveniently disengaged from the guard when the door is closed, it being impossible to disconnect the bolt from the guard when the two have been attached and the door is opened.

Another object of the invention is to provide a door guard and bolt of exceedingly simple, durable and economic construction, and one in connection with which a dead latch may be employed and which cannot be forced open beyond a predetermined extent by any one outside of the door.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of a portion of a door frame or jamb and a portion of a door, together with the improved door guard and bolt, the guard being in open position and portions of the door and jamb being broken away. Fig. 2 is a vertical section through the jamb and door, the latter being closed, and through the bolt and guard. Fig. 3 is a vertical section taken at right angles to that shown in Fig. 2, through the jamb and upon the line 3—3 of Fig. 2, illustrating the door guard as folded within the jamb and in side elevation; and Fig. 4 is a horizontal section, taken practically on the line 4—4 of Fig. 2.

In carrying out the invention the door jamb A′ is provided with a recess produced vertically in its front and inner side faces, the recesses connecting, and the said recesses are covered or closed by an angled face plate B, whereby an inner angular chamber is formed between the face plate and back wall of the recess. The outer member of the face plate B, is provided with a vertical slot 10 produced therein, preferably near the inner edge of that member, which slot at its lower end is in direct communication with a horizontal slot 11 produced in the inner member of the face plate, the latter slot being somewhat semi-circular or cylindrical, as shown in dotted lines in Fig. 3. The recess in the door jamb or frame is adapted to receive two limiting arms C and C′, the inner arm C being shorter than the outer one C′. The inner or shorter arm C, is provided with a lug 12 upon its inner face, as shown in Fig. 1, the said lug being adapted to limit the downward movement of the arm by engagement with the back of the face plate.

The shorter arm C, is passed through the upper portion of the slot 10 in the face plate, and at its inner extremity is pivoted in any suitable or approved manner to the inner face of the inner member of the said face plate, as is likewise shown in Fig. 1. The two arms C and C′, are connected by a rule joint 13, or a joint of similar character; and as the outer arm C′, is adapted to fold likewise within the chamber of the door jamb the said outer arm is provided with a recess 14 in the outer face of its under edge, adapted to engage with a correspondingly recessed portion 14ª, formed in the outer face at the lower edge of the shorter arm C, and the upper portion of the longer arm C′ is narrower than its lower or outer portion, and is made to conform practically to the outline of the shorter arm C in order that the two arms may be folded in close contact and will take up but a minimum of space, as shown in Fig. 3.

At the lower or outer extremity of the longer arm C′ a cavity or recess 16, preferably of circular form, is made in its outer face, and in the base wall of this recess or cavity an opening 17, is produced, which is likewise usually of circular form, and is provided with recesses 18 in its wall, located diametrically opposite one another, as shown in Fig. 3. The opening

17 extends through to the inner face of the said arm, which face is provided with a boss 15, in order that the boss may act as a stop for the said arm when folded within the chamber of the jamb, since the said boss, in which practically the opening 17 is produced, is of a shape corresponding essentially to that of the recess 11 in the inner member of the face plate; and when the boss contacts with the rear wall of this recess the outer edge of the outer arm C′ will be flush with the outer face of the outer member of the said face plate.

A spring latch 19, is secured upon the inner face of the face plate B, being adapted to enter a recess 20 produced in the outer surface of the longer arm C′, as shown in Fig. 4, the spring serving to maintain both of the arms C and C′ in their folded position, but said spring does not offer much resistance to the opening out of the arms.

Adjacent to the cavity 16 in the outer or longer arm C′, a slot 21, is produced, which preferably extends through from face to face of the arm; and this slot is adapted to receive the head of a dead latch 22, pivoted to the casing or face plate B upon the inner face thereof, as illustrated in Figs. 2 and 4; and this dead latch is operated through the medium of a stud 24, extending from its head through an opening 25 in the outer or front member of the face plate B, as illustrated in Fig. 1; and a spring 26 has such bearing upon the dead latch, as illustrated in Fig. 2 that it serves to hold the latch in whatever position it may be placed.

The door D is provided with a bore 27, so located that when the door is closed the said bore will be opposite the opening 17 in the outer limiting arm C′. This bore is adapted to receive the barrel 28, provided with a face plate 29 at its outer end, countersunk in the front edge of the door. Within the said barrel a bolt 30 is loosely mounted, being held to slide therein, the said bolt being held in whatever position it may be placed ordinarily through frictional contact of a portion of its surface with the barrel, and this contact may be obtained, as shown in Fig. 2, by producing a circumferential groove 31 in the bolt, and introducing into the groove a spring split ring 32, or its equivalent, the latter having engagement with the inner face of the barrel. The inner end of the bolt is provided with a recess, the bottom wall of which is provided with teeth 33, forming a rack surface; and the outer end of the bolt is provided with a head 34, which is practically circular, but provided with diametrically opposite extensions 34ª, and the head of the bolt is just capable of entering the opening 17 in the outer limiting arm, the extensions of the bolt head passing through the recesses 18 in the said opening, as shown in Fig. 2.

The bolt is manipulated ordinarily through the medium of a knob 35, the shank 36 of which is toothed and shaped as a pinion, as shown in Fig. 4, and the said pinion-shank of the knob is passed through an opening in the inner face of the door and through two openings in the barrel, as shown in Fig. 4, thus bringing the said pinion-shank in engagement with the rack surface 33 of the bolt. Therefore, by turning the knob 35 the bolt may be carried inward or outward as occasion may demand, and the movement of the bolt is limited in both directions by the end walls of the recess in which the rack is located. The knob is provided with the usual face plate 37.

In the operation of this device, when the door is closed as shown in Fig. 2, if the bolt is carried sufficiently far inward to remove its head from possible engagement with the limiting arms, the said arms being folded and concealed in the door jamb, the door may be opened in the usual manner without disturbing the said arms. When, however, the door requires a guard, the door being closed, the bolt is carried outward by means of the knob 35 until its head shall have passed through the opening 17 in the outer limiting arm C′ and into the cavity 16 of the said arm, the lugs of the head 34 of the bolt registering with the recesses 18 and the opening 17. When this arrangement is effected and the door is opened the bolt will carry out with it the outer arm C′, which in its turn will cause the inner arm C to extend outward from the jamb likewise, and when the arms have been carried out to their full extent, as shown in Fig. 1, the door cannot be farther opened, nor can the arm C′ be disconnected from the bolt 30 while the door is open, since the moment that the door is opened to any appreciable extent the outer limiting arm C′ will have so shifted as to bring the lugs of the head of the bolt over the base wall of the cavity 16, removing them from the recesses through which they entered, the extreme of this position being shown in Fig. 1. In fact, the disconnection of these parts can only be effected when the door is closed, at which time the lugs of the bolt head will register with the said recesses 18.

This device is exceedingly simple, it is durable and economic, and it cannot be tampered with in the manner in which it is possible to tamper with a chain bolt. It is much more safe, and the guard may be expeditiously and conveniently brought into working action with the bolt, or removed therefrom. When the door is closed and the bolt is in locking engagement with the guard, the door may be further locked by causing the dead latch 22 to enter the slot or keeper 21 in the outer limiting arm C′.

It will be understood that the guard may be provided with a box or case of such construction as to render the chamber or recess in the jamb unnecessary.

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

1. The combination, with a casing adapted for attachment to a door jamb, and limiting

arms pivotally connected, one of them being pivoted within the casing, the outermost arm being provided with a cavity in one face, the wall of which is provided with an opening extending through to the opposite face, of a bolt adapted to be located in a door, window, or transom, said bolt being provided with a head adapted to enter the opening in the outermost limiting arm, and likewise adapted for locking engagement with said arm, and means, substantially as described, for imparting end movement to the bolt, and a latch pivoted within the casing separate and independent of the bolt, and adapted to enter an opening in one of the limiting arms and lock them against outward movement whether connected with, or disconnected from the bolt, as and for the purpose specified.

2. The combination, with a casing adapted for attachment to a jamb, limiting arms pivotally connected, one of which is pivotally attached to the casing, all of them being capable of folding within the casing, the outermost limiting arm being provided with an aperture 21 and a cavity a wall of which has an opening produced therein having diametrically opposite recesses in its marginal wall, and stops, substantially as described, for limiting the inward and outward movement of the arms, of a bolt, a pinion having a rack connection with the bolt, whereby the latter is given end movement, the said bolt being adapted for location in an article adapted for engagement with the jamb, and a head located upon the bolt, provided with lugs, the said head being capable of passing through the opening in the outermost limiting arm only when its lugs register with the recesses in the margin of the said opening and a latch 22 within the casing to engage the aperture 21 and lock the arms against outward movement whether they are connected with or disconnected from the bolt, as and for the purpose set forth.

PATRICK McMAHON.

Witnesses:
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