

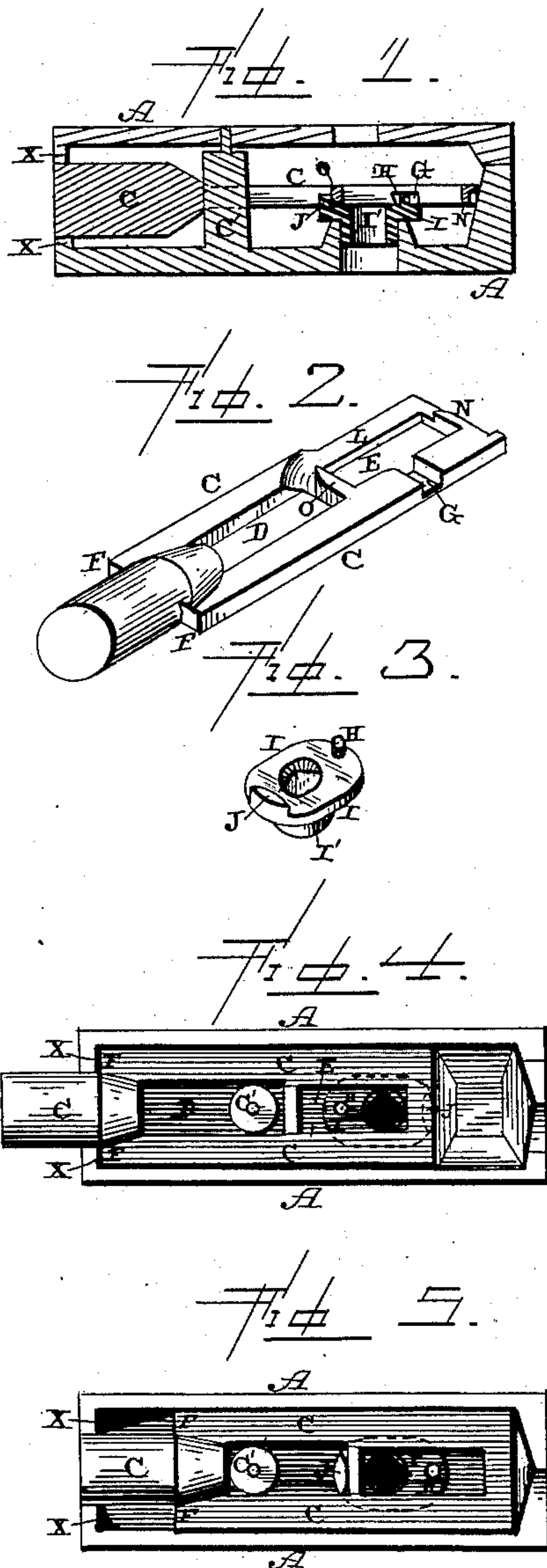
(No Model.)

E. F. W. ZARBOCK.

BOLT.

No. 374,229.

Patented Dec. 6, 1887.



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# UNITED STATES PATENT OFFICE.

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## BOLT.

SPECIFICATION forming part of Letters Patent No. 374,229, dated December 6, 1887.

Application filed September 12, 1887. Serial No. 249,466. (No model.)

*To all whom it may concern:*

Be it known that I, ERNST FRIDRICH W. ZARBOCK, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Door-Bolts; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in door-bolts; and it consists in the combination of a suitable inclosing-frame, an endwise-moving bolt which is placed therein and provided with a slot at its rear end for the key to pass through, and grooves and flanges to engage with the locking-plate, which is provided at one end with a key for moving the bolt and at the other with a flange for locking the bolt when moved either in or out its full distance, as will be more fully described hereinafter.

The object of my invention is to provide a locking-bolt in which the bolt is both moved endwise and locked in position by the same piece.

Figure 1 is a vertical longitudinal section of a door-bolt embodying my invention. Fig. 2 is a perspective of the bolt by itself. Fig. 3 is a perspective of the locking-plate. Fig. 4 is a plan view of the locking-plate and the bolt, the parts being shown in that relation to each other when the bolt is forced outward. Fig. 5 is a similar view showing the parts in that relation when the bolt is moved inward.

A represents the inclosing case or shell, which is preferably made cylindrical in shape, so as to be inserted in a hole which is bored with an auger. I do not limit myself to this precise shape, for it may be varied at will. This shell or case is made in two parts, so that the bolt and locking-plate can be inserted in position, and then the two parts are fastened together by means of the pillar or post C, which extends horizontally through the case and serves both to secure them rigidly together and as a stop to prevent the bolt from being withdrawn from the case in any manner until the two parts of the shell have been separated for that purpose.

The bolt C is preferably shaped as shown, and is provided with the slot D, through which the pillar or post passes. Through the inner end of the bolt is made a second slot or opening, E, through which the operating-key passes, the length of the slot being regulated by the distance that it is intended that the bolt shall move. The outer end of the bolt is made circular in cross-section and is provided with the shoulders F, which catch against the flange X, formed inside of the outer end of the shell or frame A, and which shoulders assist in preventing the bolt from being pulled out of its casing in any manner.

Extending outward from the key-slot E in one side of the bolt is the groove G in which the operating-pin H on one end of the locking-plate I catches for the purpose of moving the bolt endwise when the locking-plate I is turned by the key. This locking-plate has a circular flange, I', formed on its opposite side from the pin H, and this flange serves as the fulcrum in which the plate turns. The locking-plate is kept from having any other than a turning motion by this flange, and is prevented from becoming displaced by the pressure of the bolt against it. The frame or casing A is thickened at that point where it forms a rest or support for the locking-plate, and hence the plate can have no other than a turning movement, because it is held in position upon one side by the frame and upon the other side by the bolt. Upon the opposite side of the key-slot E from the groove H the bolt is cut away, as shown at L, and at each end of the slot E is formed flanges N O, behind which the flange J upon the locking-plate I is made to catch. The flange J is at the opposite end of the locking-plate I from the pin H, and this flange serves to lock the bolt in place after it has been moved its full distance either in or out, and thus prevents the bolt from being forced endwise in either direction.

When a turning movement is first applied to the locking-plate I by the key, when the bolt is moved inward to its full extent the pin H on the plate I moves into the groove G, and as the plate continues to be forced around the bolt is forced outward until the pin passes out of the groove into the slot E. At the same time that the pin is being moved forward to-



ward the outer end of the shell or frame A the flange J upon the other end of the locking-plate I is being forced backward from the front of the flange O, where it was keeping the  
 5 bolt from being drawn outward, to back of the flange N, where it prevents the bolt from being forced inward until the locking-plate is turned by the key. As this flange passes backward from in front of the flange O to the  
 10 rear of the flange N when the bolt is forced backward, it passes through the groove Q, made in the side of the bolt, as shown.

By having the flange upon one end of the locking-plate and the pin upon the other it  
 15 will be seen that it is only necessary to turn the plate so as to cause the pin to move the bolt endwise, and then the flange upon the other end of the locking-plate serves to lock the bolt in position so that it cannot be affected  
 20 by any force applied to the lock outside of the key.

Having thus described my invention, I claim—

1. The combination of the inclosing shell or frame, the locking-bolt cut away at or near its  
 25 rear end and provided with flanges at opposite ends of the key-slot, and a groove extending from one side of the key-slot, with the locking-plate provided with a pin or projection at one end and a locking-flange at the  
 30 other, substantially as described.

2. The combination of the inclosing shell or frame, the endwise-moving bolt provided with a flange at each end of the key-slot, and the  
 35 locking-plate provided with a flange for catching behind one of the flanges and locking the bolt in position, substantially as specified.

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

ERNST FRIDRICH W. ZARBOCK.

Witnesses:

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 FRANK R. WILLIAMS.