(No Model.)

M. S. CEDARVALL.

BOLT.

No. 375,604. Patented Dec. 27, 1887.

Fig. 1.

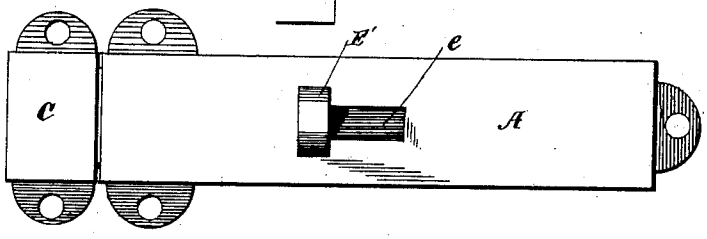


Fig. 2.

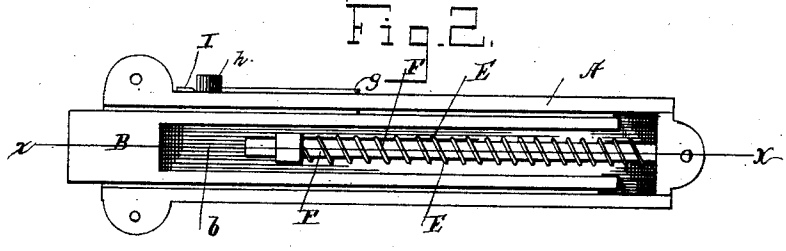


Fig 3

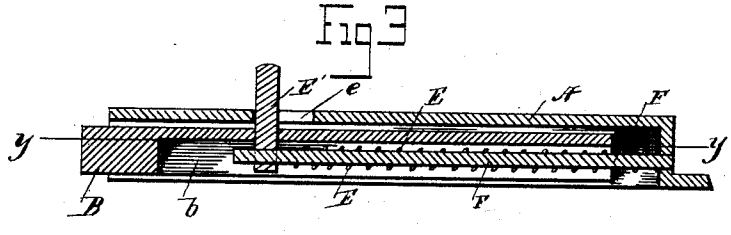
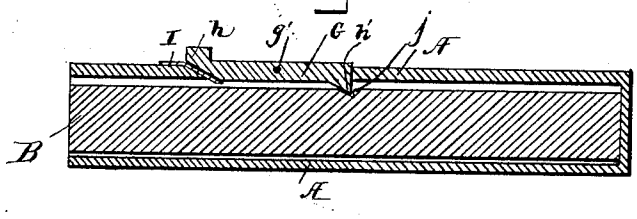


Fig 4



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UNITED STATES PATENT OFFICE.

MARTIN S. CEDARVALL, OF PETERSBURG, ILLINOIS.

BOLT.

SPECIFICATION forming part of Letters Patent No. 375,604, dated December 27, 1887.

Application filed September 28, 1887. Serial No. 250,922. (No model.)

To all whom it may concern:

Be it known that I, MARTIN S. CEDARVALL, a citizen of the United States, residing at Petersburg, in the county of Menard and State of Illinois, have invented certain new and useful Improvements in Spring-Bolts; and I 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 letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in spring-bolts; and it consists of the peculiar combination, construction, and arrangement of parts, as will be hereinafter fully described and claimed.

The object of my invention is to provide a simple and inexpensive spring-bolt in which the devices for impelling and guiding the sliding bolt are compactly arranged to take up a limited space and are entirely concealed and protected, so that the bolt is not liable to get out of order or subject to atmospheric changes, and is consequently more durable.

The bolt is provided with a spring-controlled dog, which automatically drops behind a shoulder on the sliding bolt when the latter is retracted within the case or shell of the device, so that the bolt is held in its retracted position until released, and this dog lies flush, or nearly so, with the shell or case at all times, and is not liable to be accidentally struck and release the bolt.

In the accompanying drawings, Figure 1 is an elevation of my improved bolt. Fig. 2 is a rear elevation thereof. Fig. 3 is a horizontal sectional view on the line *x x* of Fig. 2, and Fig. 4 is a vertical sectional view on the line *y y* of Fig. 3.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates the inclosing shell or case, which is left open at one end and the rear side, as shown, and the case is provided with integral perforated ears, through which screws are passed to secure the same to the gate in a horizontal position. This shell receives a sliding bolt, B, which fits snugly therein and is adapted to enter a keeper, C.

The endwise-movable bolt is provided with a longitudinal channel or passage, *b*, which is formed in the rear side thereof and opens through the rear inner end of the same. A coiled spring, E, is fitted and housed in the longitudinal channel in the sliding bolt, and one end of this spring bears against the rear closed wall of the case, while the opposite end of the spring impinges against the inner end of a fixed knob-piece, E′. This knob-piece is arranged in a horizontal position, and passes through a suitable longitudinal slot, *e*, that is formed horizontally in the front wall of the shell or case A. The knob-piece thus extends beyond the shell, so that it can be grasped by the fingers and moved back and forth in the slot *e*, and as the knob-piece is fixed or secured in a rigid or firm manner to the endwise-movable bolt, the latter is moved correspondingly.

A horizontal guide-rod, F, is arranged longitudinally in the coiled spring E, and one end of this rod is fixed in the end wall of the shell, while the other end of the rod passes through a suitable aperture that is formed in the extended inner end of the knob-piece E′, so that as the bolt slides back and forth the knob-piece rides over the guide-rod.

A longitudinal slot, *g*, is formed in the upper wall of the shell or case above the sliding bolt B, and in this slot is arranged a horizontal dog or pawl, G, that lies flush with the upper surface of the upper wall, or nearly so, as shown. This dog is pivoted at an intermediate point of its length on a suitable fixed pin or shaft, *g′*, and it is provided at opposite ends with oppositely-extending lips or shoulders *h h′*, one of which, *h*, extends upwardly from the dog and beyond the shell or case, so that the thumb or finger can be applied thereto to depress one end of the dog, and the other lip or shoulder, *h′*, extends downwardly toward the sliding bolt. The end of the dog having the downwardly-projecting lip or shoulder *h′* is normally depressed toward the sliding bolt by means of a spring, I, so that the lip is forced behind a shoulder, *j*, that is formed at a suitable point on the sliding bolt. The spring is made of a flat piece of metal and arranged close against the shell or case, and it has one end secured to the shell, and the other end is fitted beneath the free end of the dog to depress the other end.

The operation of my invention is obvious. The bolt, when released from the dog, is normally expelled beyond and through the open end of the case or shell, so that when the gate is closed the bolt enters the keeper to prevent the gate from swinging open. To withdraw the bolt from the keeper it is only necessary to grasp the knob-piece by hand and move the same rearwardly, thereby forcing the bolt into the shell against the tension or pressure of the coiled spring. As the bolt is retracted wholly within the case, the shoulder or lip *j* thereon comes opposite the lip *h'* on the dog, which is impelled downwardly by its spring, so that the two engage, and thus prevent the bolt from being projected beyond the shell until the dog is released, which can be readily accomplished by pressing on the shoulder *h* to elevate the depressed end of the dog and withdraw its lip *h'* from engagement with the bolt, the latter being automatically expelled by the coiled spring.

It will be observed that the coiled spring and the guide-rod are housed wholly within the longitudinal recess or channel in the sliding bolt, and that the bolt itself is inclosed in a solid case, whereby the parts are wholly concealed and protected from the weather. The parts are compactly arranged and take up very little space, and the device as a whole is simple and durable in construction, effective in operation, and cheap.

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

1. The herein-described spring-bolt, consisting of a slotted shell or case, a longitudinally-recessed bolt therein, a guide-rod arranged in the recess of the bolt and fixed to the shell or case, a spring-controlled dog for holding the bolt retracted within the case, a coiled spring around said guide-rod, and a knob passing through the slot in the case and through the bolt, and having its inner end fitted on the guide-rod to slide freely thereon, whereby the knob is connected to the bolt to control the latter independent of separate fastening devices, as and for the purpose described.

2. A spring-bolt comprising a slotted shell or case, a sliding bolt therein having a shoulder, *j*, and a longitudinal channel or recess, a spring housed in the channel of the bolt, a knob passing through the case and connected to the bolt, a pivoted dog fitted in one of the slots of the case and having a lip adapted to engage the corresponding lip on the bolt when the latter is retracted in the case, and a spring bearing against the dog, substantially as described.

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

MARTIN S. CEDARVALL.

Witnesses:

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