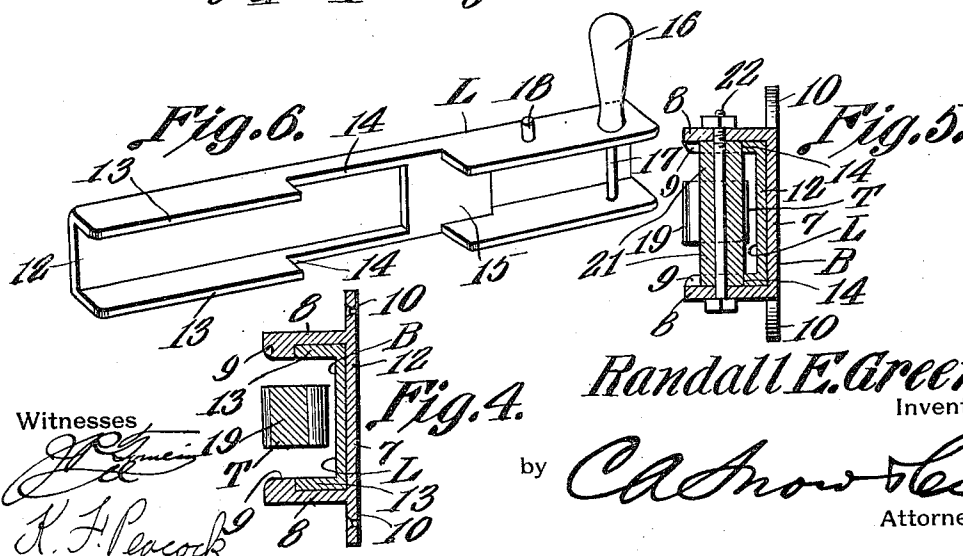
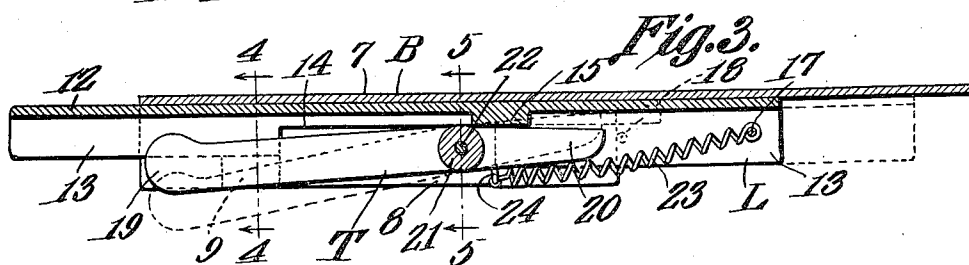
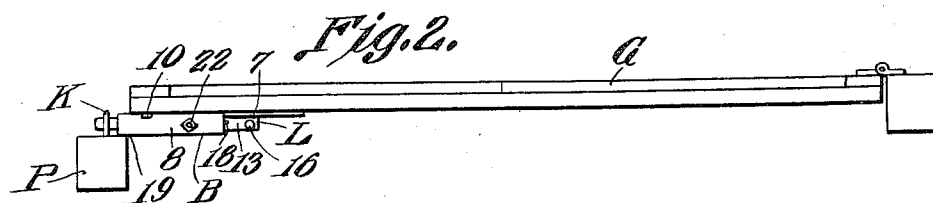
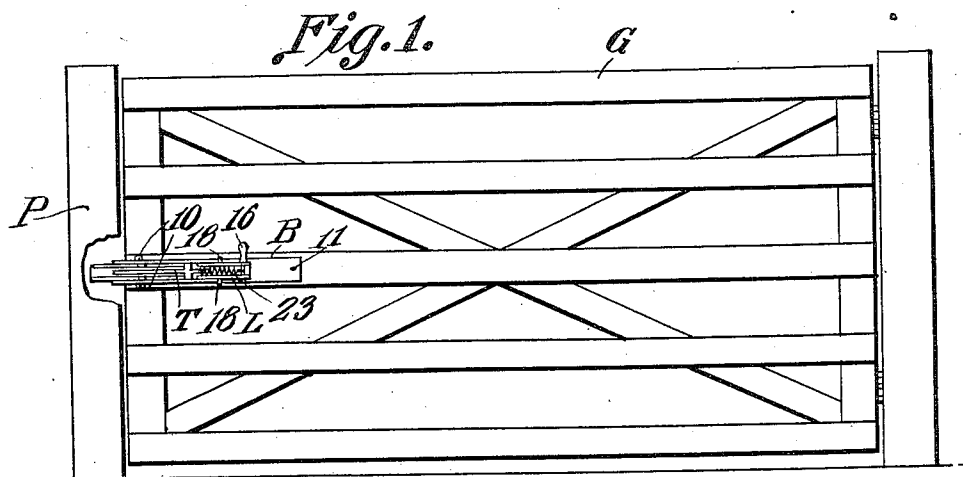


R. E. GREEN.
LATCH.
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1,050,941.

Patented Jan. 21, 1913.



UNITED STATES PATENT OFFICE.

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LATCH.

1,050,941.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed August 6, 1912. Serial No. 713,667.

To all whom it may concern:

Be it known that I, RANDALL E. GREEN, a citizen of the United States, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented a new and useful Latch, of which the following is a specification.

This invention relates to latches, and aims to provide a latch for gates, doors and the like, which is designed to automatically engage the proper keeper when the gate, door or the like is closed.

The present invention also contemplates the provision of a device of the character indicated which shall be simple, durable, compact and inexpensive in construction, as well as convenient, serviceable and efficient in use.

With the foregoing and other objects in view the present invention resides essentially in a latch, embodying a body, a latch bolt slidably engaged thereby, a trigger pivoted to the body for engagement with the latch bolt to normally detain same in retracted position, and a spring connecting the trigger and latch bolt tending to bring the trigger into engagement with the latch bolt and tending to project the latch bolt, the latch bolt being provided with a handle for convenience in manipulating same or retracting same, when the gate, door or the like is to be opened.

The present invention also resides in the details of construction, arrangement and combination hereinafter more fully set forth, it being understood, however, that this device is susceptible of alterations or deviations in its details within the scope of the appended claims without departing from the spirit of the present invention.

The invention has been illustrated in its preferred embodiment in the accompanying drawings, wherein like reference characters have been employed to denote corresponding parts, and wherein—

Figure 1 is a side elevation of the latch applied to a farm gate. Fig. 2 is a plan view thereof. Fig. 3 is an enlarged longitudinal sectional view of the latch. Figs. 4 and 5 are sectional views taken on the line 4—4 and 5—5 of Fig. 3, respectively. Fig. 6 is a perspective view of the latch bolt.

Referring specifically to the drawings, the latch embodies in its essentials, the body B, the latch bolt L, and the trigger T, the details of which will be presently set forth.

The body B comprises an elongated or rectangular back 7 having the flanges 8 projecting from its edges and extending from the outer end thereof, to an intermediate point. These flanges 8 are provided with inner lugs 9 adjacent their edges and adjacent the outer end of the body B. This body B is secured to the gate, door or the like, by means of a pair of ears 10 projecting from the edges of the back 7 adjacent the outer end of the body and by means of the aperture 11 provided in the back adjacent its inner end.

The latch bolt L is channel-shaped or in the form of a channel iron, the back of which is designated by the numeral 12 and the flanges of which are noted by the numeral 13. The back 12 if the latch bolt is arranged against the back of the body B and has its flanges 13 fitting with the flanges 8 of the body, the edges of the flanges 13 engaging the lugs 9, in order to permit the latch bolt to slide longitudinally and in order to retain the latch bolt in position. The intermediate portions of the flanges 13 of the latch bolt are cut away as designated by the numeral 14 and a boss 15 projects from the back 12 at the inner ends of the cut away portions 14.

The inner end of the latch bolt protrudes beyond the inner ends of the flanges 8 of the body, and a handle 16 is secured to the inner end of the latch bolt so as to upstand therefrom, the handle 16 having a shank 17 passing through the flanges 13 adjacent their inner ends. The flanges 13 are also provided with stops 18 projecting from their outer faces, which stops are adapted to strike the inner ends of the flanges 8 when the outer end of the latch bolt is projected beyond the body B.

The trigger T embodies a long outwardly projecting arm 19 disposed between the respective flanges of the body and latch bolt and also embodies an inwardly projecting arm 20 arranged between said flanges, the said trigger being pivoted between the flanges 8 of the body and having the opposite bosses 21 at its fulcrum passing through the cut away portions 14 of the flanges 13, a bolt 22 passing through the flanges 8 and through the fulcrum of the trigger. When the latch bolt is in retracted position, the arm 20 of the trigger is adapted to engage the shoulder formed by the outer end of the

boss 15, the arm 19 of the trigger thereby swinging outwardly from between the respective flanges. The bosses 21 engage the edges of the cut away portions 14 to assist the flanges 9 in retaining the latch bolt in proper position.

A contractile coiled wire spring 23 is connected to the shank 17 at the inner end of the latch bolt and is connected to the arm 20 of the trigger, an eye 24 being engaged to the outer edge of the said arm to which the corresponding end of the said spring is engaged. This contractile spring 23 tends to swing the arm 20 toward the latch bolt or into engagement with the boss 15 and also tends to slide the latch bolt outwardly so to project beyond the body B. The said spring therefore serves a dual function, namely, to project the latch bolt, and to engage the trigger with the latch bolt so as to prevent the same from being projected.

The body B, latch bolt L, and the trigger T, may be cast from suitable metal, or may be otherwise constructed, the other parts also being fashioned from suitable material. The various parts are also readily assembled and may be easily taken apart for purposes of repair, cleaning or replacement.

For purpose of illustration, a gate G has been illustrated in Figs. 1 and 2 to which the body B has been secured adjacent the free or swinging end of the gate, the post toward which or against which the free end of the gate swings being designated by the letter P and the said post being provided with a keeper or staple K for the engagement of the latch bolt. The body is so secured to the gate, that the outer ends of the flanges 8 thereof will swing against the post or against a stop or projection, it therefore appearing, that when the latch bolt is retracted and engaged by the trigger, the arm 19 of the trigger will project from between the flanges 8, so that when the gate is closed, the arm 19 will be pushed inwardly by its engagement with the post or stop, in which event, the latch bolt will be released and will spring into engagement with the keeper K. The gate is in this manner automatically latched when closed, and may be readily opened by moving the handle 16 inward, so as to retract the latch bolt, in which event, the latch bolt will be again engaged by the trigger.

The latch is adapted for use in divers purposes, which will be apparent from the foregoing, and it will be apparent that the objects aimed at are attained in a satisfactory manner, the present latch providing a desirable one for the purposes for which it is designed.

Having thus described the invention, what is claimed as new is:

1. A latch embodying a body including a back having a pair of flanges, a channel-

shaped latch having its back bearing against the back of the body and having its flanges fitting within the flanges of the body, the flanges of the latch having portions thereof cut away, a trigger pivoted between the flanges of the body and having opposite bosses at its fulcrum passing through the cut away portions of the latter flanges, the trigger having an arm engageable with the back of the latch bolt and having an oppositely projecting arm adapted to swing outwardly from between the flanges, and means for projecting the latch bolt.

2. A latch embodying a body, a latch bolt slidably engaged thereby, a trigger carried by the body to engage the latch bolt and normally detain the same in retracted position, and a spring connecting the trigger and latch bolt so as to tend to engage the trigger with the latch bolt and to tend to project the latch bolt.

3. A latch embodying a body, a latch bolt slidably engaged thereby, a trigger pivoted to the body having an arm engageable with the latch bolt to normally detain the latch bolt in retracted position and having another arm to engage an object so as to release the latch bolt, and a contractile spring connecting the former arm of the trigger and the latch bolt.

4. A latch embodying a body including a back having a pair of flanges, a latch bolt slidably between the flanges, a trigger pivoted between the flanges and engageable with the latch bolt to normally detain them in retracted position, and a spring connecting the trigger and latch bolt so as to tend to engage the trigger with the latch bolt and to tend to project the latch bolt.

5. A latch embodying a body including a back having a pair of flanges, a channel-shaped bolt slidably between the flanges of the body, a trigger pivoted between the flanges of the body, the trigger having an arm engageable with the latch bolt and having an oppositely projecting arm adapted to swing outwardly from between the flanges, and a contractile spring connecting the former arm of the latch and the inner end of the latch bolt.

6. A latch embodying a body including a back having a pair of flanges provided with inner lugs adjacent their edges, a channel-shaped latch bolt having its back bearing against the back of the body and having its flanges fitting within the flanges of the body with the edges of the flanges engaging said lugs, a portion of the flanges of the latch bolt being cut away and a boss projecting from the back of the latch bolt, a trigger pivoted between the flanges of the body and having opposite bosses at its fulcrum passing through the cut away portions of the latter flanges, the trigger having

an arm engageable with the said boss and
having an oppositely projecting arm adapt-
ed to swing outwardly from between the
flanges, a handle having a shank passing
5 through the flanges of the latch bolt at
their inner ends, and a contractile spring
connecting the former arm of the trigger
and the said shank.

In testimony that I claim the foregoing
as my own, I have hereto affixed my signa- 10
ture in the presence of two witnesses.

RANDALL E. GREEN.

Witnesses:

C. E. CUMMINGS,
S. T. GREEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
