

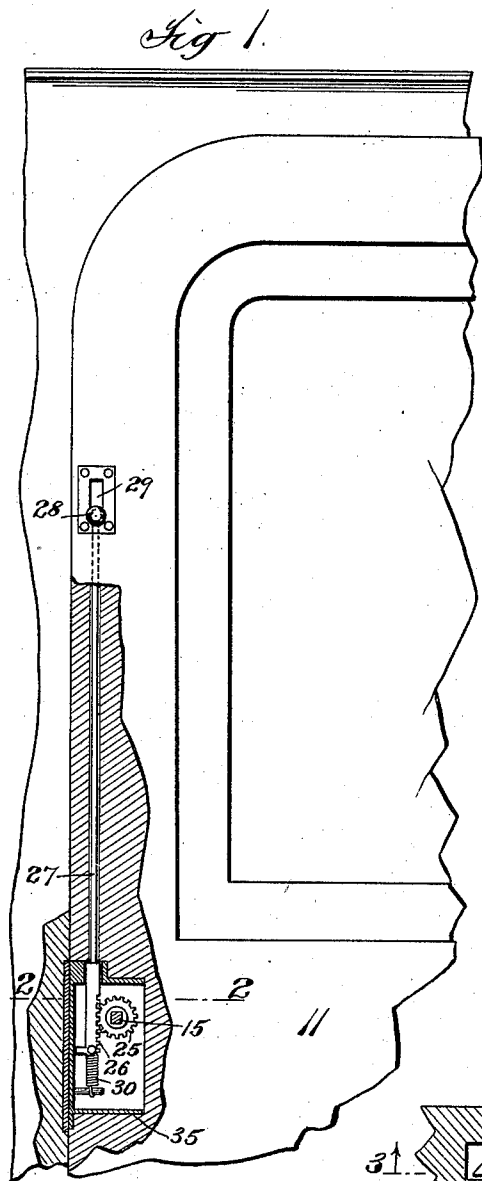
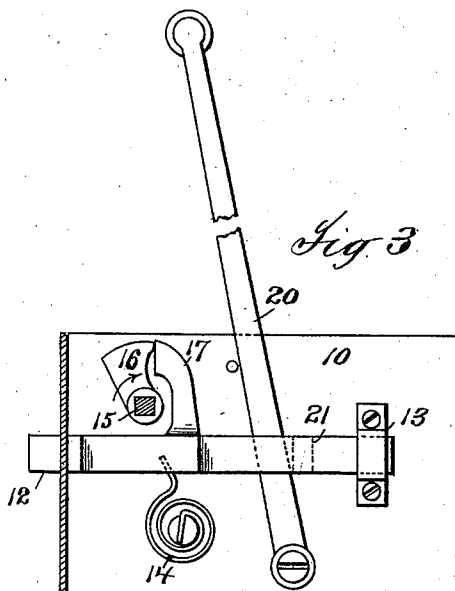
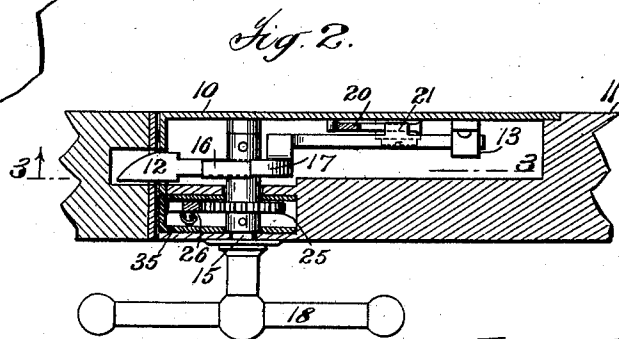
No. 669,825.

Patented Mar. 12, 1901.

J. P. EDWARDS.
CARRIAGE DOOR LATCH.

(Application filed Apr. 26, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOHN P. EDWARDS, OF BAR HARBOR, MAINE.

CARRIAGE-DOOR LATCH.

SPECIFICATION forming part of Letters Patent No. 669,825, dated March 12, 1901.

Application filed April 26, 1900. Serial No. 14,431. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. EDWARDS, a citizen of the United States, residing at Bar Harbor, county of Hancock, and State of Maine, have invented certain new and useful Improvements in Carriage-Door Latches, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The invention relates to latches for carriage or coach doors; and the object of the invention is to provide means whereby the driver may conveniently operate the latch without leaving the box-seat of the carriage.

To this end I provide an operating-handle located within convenient reach of the driver and connecting mechanism through which the latch may be operated by means of such handle.

A feature of the invention lies in providing a construction which may be used in connection with any of the usual or suitable forms of carriage-latches as heretofore constructed, being secured to the door in addition to the regular form of latch and without necessitating any change therein.

A full understanding of the invention can best be given by a detail description of a preferred construction embodying the same, and such a description will now be given in connection with the accompanying drawings, showing such a preferred construction.

In said drawings, Figure 1 is a broken-out side view showing part of a carriage, including a portion of the door, and partly in section to show an attachment constructed in accordance with my invention. Fig. 2 is a section taken on line 2 of Fig. 1 and on a larger scale. Fig. 3 is a view on the scale of Fig. 2, taken on line 3 of Fig. 2 to show the latch and operating connections.

Referring to the drawings, 10 is the latch-casing, of suitable form and secured to the door 11 in the usual manner. The latch-bolt 12 is mounted to reciprocate in the casing, being guided by the face of the casing and the guide 13 and is spring-pressed to its outward holding position by a spring 14.

15 is the operating-spindle, which carries a wing 16, adapted to engage a lug 17, projecting from the latch-bolt, so that when the spindle is turned in the direction of the arrow

the bolt will be withdrawn against the tension of the spring for unlatching the door. The outer end of the spindle carries a handle 18 for unlatching the door from the outside. For unlatching the door from the inside an upwardly-projecting lever 20 is provided, this lever being pivotally connected to the casing below the latch-bolt and in position to engage a lug 21, extending from the bolt, so that when the lever is thrown back from the position shown in Fig. 3 the bolt will be retracted. The spindle 15 also carries a pinion 25, the teeth of which engage with a rack 26, mounted to reciprocate vertically, and from which a rod 27 extends upward within the door-frame and carries at its upper end a handle 28, which extends outside the door through a slot 29. This handle is located in position to be conveniently reached by the driver from his seat. By this construction when the handle is moved upward the spindle 15 will be rotated in the direction of the arrow in Fig. 3 for retracting the latch-bolt through the operation of the rack 26 and pinion 25. To avoid any uncertainty in the return of the parts to normal position, a spring 30 may be provided for retracting the rack 26 after it has been moved for operating the latch. The pinion 25 and rack 26 may be mounted within the casing 10, so as to form a single attachment embodying the various parts of the latch; but for the purpose of enabling my invention to be used in connection with existing forms of latches I preferably provide a separate casing 35 for the rack and pinion, adapted to be secured in the door-frame on the other side thereof from the main latch-casing 10. This casing 35 may be of any suitable form to provide a guide for the rack 26, space for the pinion 25, and a connection for the spring 30, if a spring is provided. It will be seen that such a casing and parts contained therein may be made very small and compact, so as to be readily fitted to the carriage-door, and may be used in connection with any suitable form of latch.

It will be understood that the invention is not to be limited to the exact construction shown and to which the foregoing description has been mainly confined.

What I claim is—

1. The combination with the latch-bolt and

the operating-spindle of a carriage-door latch, of an operating-handle on the door in position to be conveniently reached by the driver, and connections within the door-frame between the handle and the spindle whereby by the movement of the handle the spindle will be rotated to retract the latch-bolt, substantially as described.

2. The combination with the latch-bolt and the operating-spindle of a carriage-door latch, of a pinion on the operating-spindle, and an upwardly-extending operating-rod having a handle in position to be conveniently reached by the driver and having a rack at its lower end in engagement with said pinion, whereby by the vertical movement of the rod the spindle will be rotated to retract the latch-bolt, substantially as described.

3. The combination with the latch-bolt and the operating-spindle of a carriage-door latch, of a pinion on the operating-spindle, a rack mounted to reciprocate vertically in engagement with said pinion, an operating-handle on the door in position to be conveniently reached by the driver, and means connecting the operating-handle with the rack, substantially as described.

4. A latch-operating attachment for carriage-doors comprising a casing, a rack mounted in the casing to reciprocate vertically and having an operating-rod extending upward

therefrom and carrying a handle, and a pinion adapted to fit on the latch-operating spindle in engagement with the rack, substantially as described.

5. A latch-operating attachment for carriage-doors comprising a casing, a rack mounted in the casing to reciprocate vertically, a pinion adapted to fit on the latch-operating spindle in engagement with the rack, an operating-handle adapted to be located on the carriage-door in position to be conveniently reached by the driver, and means connecting the operating-handle with the rack, substantially as described.

6. A latch-operating attachment for carriage-doors comprising an operating-handle adapted to be located on the door in position to be conveniently reached by the driver, and operating means connected to said handle for causing the latch-operating spindle to rotate when the handle is moved, said operating means being adapted to be located within the door-frame, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN P. EDWARDS.

Witnesses:

JOHN MULHOLLAND,
A. L. KENT.