

(No Model.)

J. A. WESTON:
LATCH FOR EXTENSION LADDERS.

No. 478,384.

Patented July 5, 1892.

Fig. 1

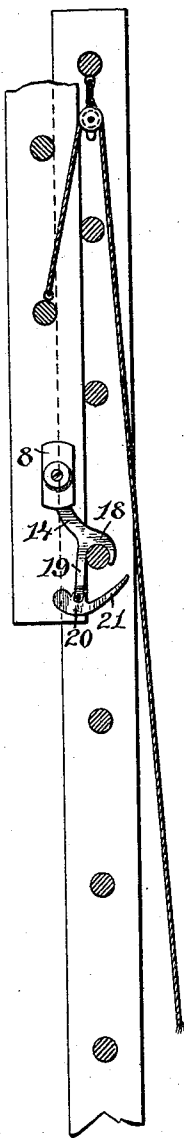


Fig. 2

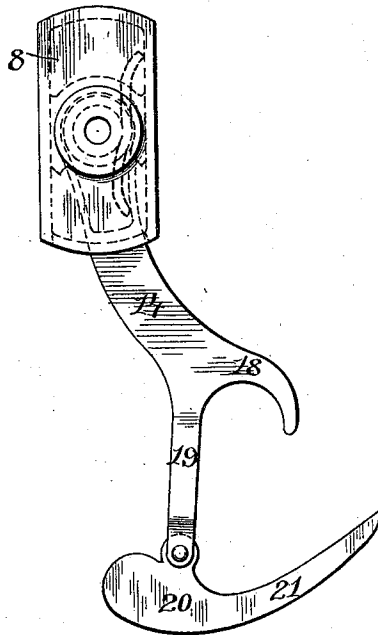


Fig. 3

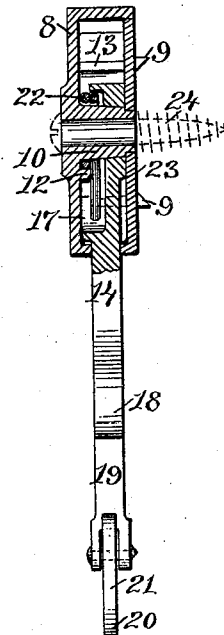


Fig. 4

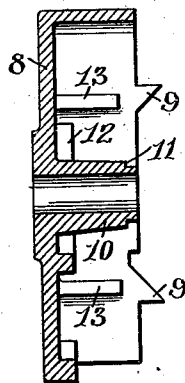
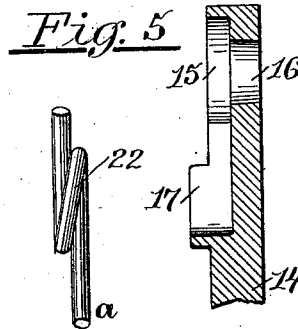


Fig. 6



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN A. WESTON, OF PROVIDENCE, RHODE ISLAND.

LATCH FOR EXTENSION-LADDERS.

SPECIFICATION forming part of Letters Patent No. 478,384, dated July 5, 1892.

Application filed March 23, 1892. Serial No. 426,063. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. WESTON, of the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Latches for Extension-Ladders; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in devices for automatically securing and supporting one of a pair of ladders to the other and for automatically releasing the same when desired.

The object of the invention is to produce a device of the nature described which shall be durable in construction, economical in cost, and efficient in operation.

The further object of the invention is to produce a latching device for extension-ladders which may be secured directly to the rounds of a ladder, by means of which but a single latching device is required instead of two when secured to the side frames of a ladder.

The invention consists in certain peculiar features of construction and combination of novel parts, which will hereinafter be more fully described, and pointed out in the claims.

Figure 1 represents a vertical sectional view of a pair of ladders, the latching device secured to one ladder and engaging the other and indicating the operation of the extension-ladder. Fig. 2 represents an enlarged view of the latching device and the case in which the base of the same is pivoted. Fig. 3 represents an edge view of the same, the case and the base of the latching-bar being shown in vertical section. Fig. 4 represents an enlarged vertical sectional view of the case in which the base of the latch-bar is pivoted. Fig. 5 represents the spring for operating the latch-bar, and Fig. 6 represents an enlarged vertical sectional view of the portion of said bar which is contained therein.

Similar numbers of reference designate corresponding parts throughout.

In the drawings, 8 indicates a case or box open on the bottom and on one end and furnished with the spurs 9 9 from the sides. The

interior of the box has a central, tubular, and slightly-conical bearing-post 10, the upper portion of which has a step 11, and the metal above this step being quite thin. Partially surrounding this post at a short distance therefrom is the bearing-rib 12, and the sides of the box are furnished with the strengthening-ribs 13 13. The thrust latch-bar 14 has at its upper end a recess 15 and a transverse conical perforation 16, the wall of the recess being extended at its lower portion to form the lip 17. This bar 14 curves sidewise and downward and has a curved jaw 18, below and on one side of which is a depending arm 19, in the end of which is pivoted the counterweighted pawl 20, having a gradually-curved outer edge and a finger 21, adapted to close the opening of the jaw 18 when pushed upward. The spring 22 surrounds the post 10 between the same and the bearing-rib 12. After this spring has been located the base of the latch-bar is placed in position, the bearing-post extending through the perforation 16, and the end *a* of the spring is brought to bear against the lip 17 of the latch-arm, the other end of the spring bearing against the side of the case. A covering-plate 23, made to fit between the sides of the case and having a central perforation, is now placed in position. The thin edge of the bearing-post extending through the perforation of the plate is expanded, and the plate is thus securely fixed against removal.

The device thus described forms a marketable article, which can be kept in stock by dealers and can be readily secured to a ladder-frame by the use of bolts or screws 24 or by means of the clamps to the rounds thereof without the use of more than ordinary skill. The spurs 9 9 are adapted to enter the wood of the ladder-frame to prevent the turning of the case.

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

1. In a latch for extension-ladders, the combination, with the spring-operated latch-bar 14, having the jaw 18 and downwardly-extending arm 19, and the counterweighted pawl 20, having the finger 21, pivoted to the end of said arm, of means for securing the pivoted

end of the latch-bar 14 or the case containing the same to a ladder, as described.

2. In a latch for extension-ladders, the combination, with the case 8, having the spurs 9
5 9, the tubular bearing-post 10, the bearing-rib 12, and the plate 23 for closing said case, of the latch-bar 14, having the recess 15, lip 17, and perforation 16, adapted to receive said bearing-post, a jaw 18, formed in part with
10 said latch, an arm 19, depending therefrom,

and a counterweighted pawl pivoted to the end of said arm, as and for the purpose described.

In witness whereof I have hereunto set my hand.

JOHN A. WESTON.

Witnesses:

HENRY J. MILLER,

JOSEPH A. MILLER, Jr.