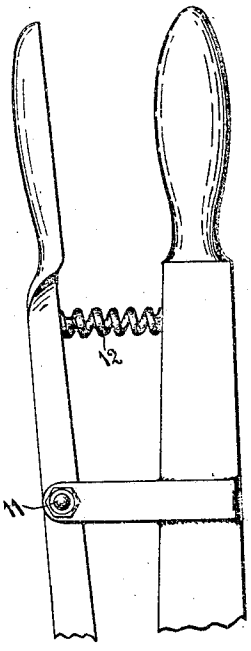
No. 787,843. PATENTED APR. 18, 1905.

W. HONSCHEID.

LOCK FOR LEVERS.

APPLICATION FILED AUG. 22, 1904.



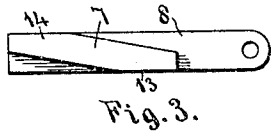


Fig. 3.

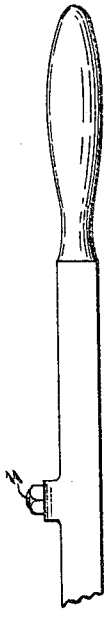


Fig. 1.

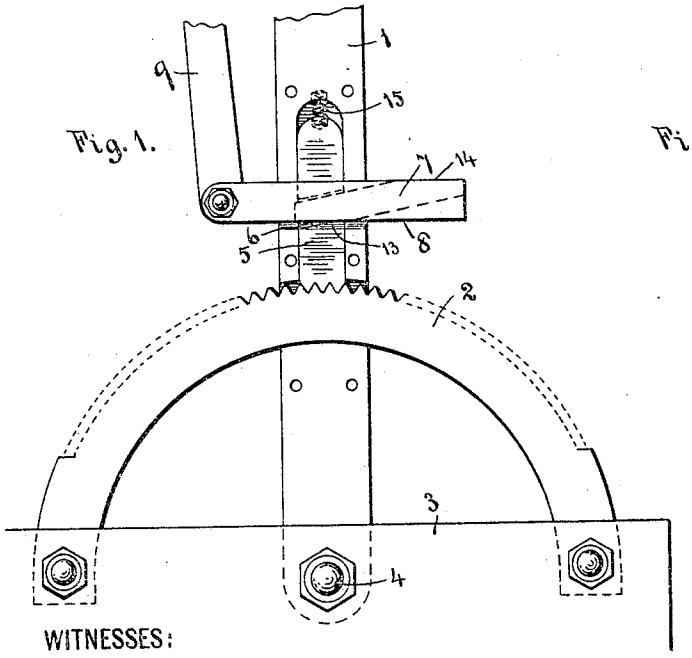
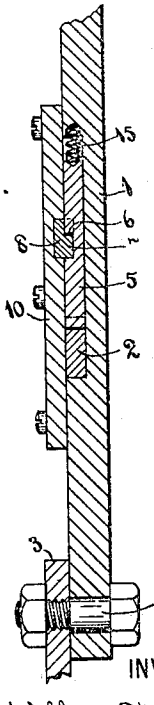


Fig. 2.



WITNESSES:

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No. 787,843. Patented April 18, 1905.

UNITED STATES PATENT OFFICE.

WILLIAM HONSCHEID, OF ELMIRA, NEW YORK.

LOCK FOR LEVERS.

SPECIFICATION forming part of Letters Patent No. 787,843, dated April 18, 1905.

Application filed August 22, 1904. Serial No. 221,643.

To all whom it may concern:

Be it known that I, WILLIAM HONSCHEID, a citizen of the United States, residing at Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Locks for Levers, &c., of which the following is a specification.

My invention relates more particularly to improvements in the levers by which the throttle-valves and reversing-gear of locomotives are adjusted; but my improved lock may also be used in connection with other machinery and appliances.

The object of my improvements is to provide a more positive locking device for such throttle and reversing levers, &c., whereby it will be rendered impossible for the lever to be jarred out of or moved from its adjusted position without first operating the locking device.

I attain my object by means of the arrangement of the several parts of my device as illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a reversing or throttle lever embodying my improvements with the inclosing face-plate removed; Fig. 2, a transverse section and elevation of the same, and Fig. 3 a detail showing the reverse side of the locking-bar.

Like numerals refer to like parts in the several views.

The lever 1 is pivoted at 4 to operate in conjunction with the toothed segment 2, said lever and segment being mounted upon any suitable support 3. Within a groove formed in the side of the lever is a latch-bar 5, provided at the downward end with teeth to correspond with and engage those of the segment 2, said latch-bar having a longitudinally-reciprocating movement within the groove in the lever. The outward face of the latch-bar is provided with an inclined transverse groove which is engaged by an inclined tongue 7, formed upon one side of the lock-bar 8. This lock-bar is coupled to the lever 9 at one end and is thrown thereby from right to left to raise the latch. The lock-bar is held in place by the face-plate 10, which is provided on the inside with a transverse groove to form a guideway for said bar. The lock-operating lever 9 is pivoted to the reversing-lever 1 at point 11 and is held in its normal or closed position by means of the spring 12. The tongue 7 on the lock-bar is provided at its upper and lower ends with horizontal faces 13 and 14, which are adapted to slide across the ends of the groove 6 in the latch, thereby firmly locking the latch in either its closed or open positions. By an inspection of Fig. 1 it will be seen that by reason of horizontal face 13 on the tongue 7, which in the closed position of the lock-bar stands completely across the latch, said latch cannot by any possibility be forced out from engagement with the teeth of the segment without operating the lever 9 to actuate the locking-bar. In order to assist the downward movement of the latch, I may provide a spring at 15; but I do not consider this as essential. It will be seen that by this arrangement of the latch and lock-bar I have provided a simple and effective locking device by which the lever 1 will be securely held in any of its adjusted positions. By this construction the latch-bar is centrally located on the lever and is made to engage more than one tooth on the segment. The parts of the device, however, may receive some modification without departing from the spirit of my invention. I may use other means than the reciprocating lock-bar to move and lock the latch-bar, and any other form of teeth may be used on the segment 2.

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

1. The combination, with a lever and a serrated segment, of a latch-bar adapted to be reciprocated in a longitudinal guideway on the lever and provided with one or more teeth to engage corresponding teeth on the segment, a combined shifting and locking member in operative engagement with the latch-bar whereby the latch-bar is thrown into and out of engagement with the segment-teeth and positively locked against motion when in

engagement therewith, an operating-lever on the main lever coupled to said shifting member, and a spring to hold said operating-lever and shifting member normally in position to lock the latch-bar against the segment.

2. The combination, with a lever and a serrated segment, of a latch-bar adapted to be reciprocated in a longitudinal guideway on the lever and provided with one or more teeth to engage corresponding teeth on the segment, a shifting and locking member reciprocating in a transverse guideway on the lever and acting upon the latch-bar to throw it into and out of engagement with the segment-teeth, an operating-lever on the main lever coupled to said shifting member, and a spring to hold said operating-lever and shifting member normally in position to lock the latch-bar against the segment.

3. The combination, with a lever and a serrated segment, of a latch-bar adapted to be reciprocated in a longitudinal guideway on the lever and provided with one or more teeth to engage corresponding teeth on the segment, a bar reciprocating in a transverse guideway on the lever and provided with inclined surfaces in engagement with corresponding surfaces formed on the latch-bar, whereby the latch-bar may be thrown out of and into engagement with the segment-teeth, an operating-lever on the main lever coupled to said reciprocating bar, and a spring to hold said operating-lever and bar normally in position to lock the latch-bar against the segment.

4. The combination, with a lever and a serrated segment, of a latch-bar adapted to be reciprocated in a longitudinal guideway on the lever and provided with one or more teeth to engage corresponding teeth on the segment, an operating-lever for said latch-bar, a bar coupled to said lever and reciprocating in a transverse guideway on the main lever, said bar being provided at one side with an inclined tongue in engagement with an inclined groove on the latch-bar, and said tongue having its end which lies nearest the segment cut at right angles to the line of motion of the latch-bar and extending across the latch-bar when the latter is in engagement with the segment, and a spring to hold said parts in their normal locking positions.

5. The combination, with a reciprocating latch-bar, of a lock-bar mounted in a guideway transverse to the latch-bar, said lock-bar having an inclined tongue in engagement with an inclined groove on the latch-bar and the tongue having an end cut off on a line which will oppose motion in the latch-bar when the end of the tongue lies across said bar.

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

WM. HONSCHEID.

Witnesses:
E. C. CRANDALL,
H. A. KAUFELT.