

(No Model.)

F. P. NEWELL & H. MOHLE.
RAILROAD SWITCH STAND.

No. 473,335.

Patented Apr. 19, 1892.

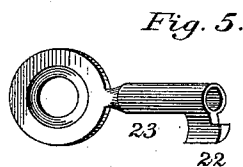
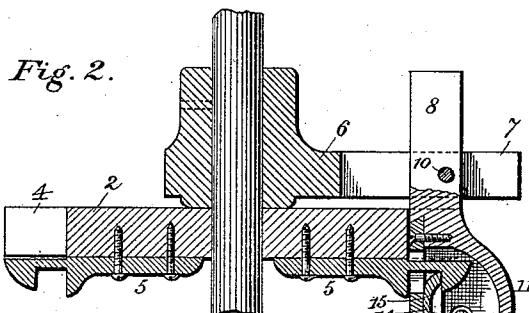
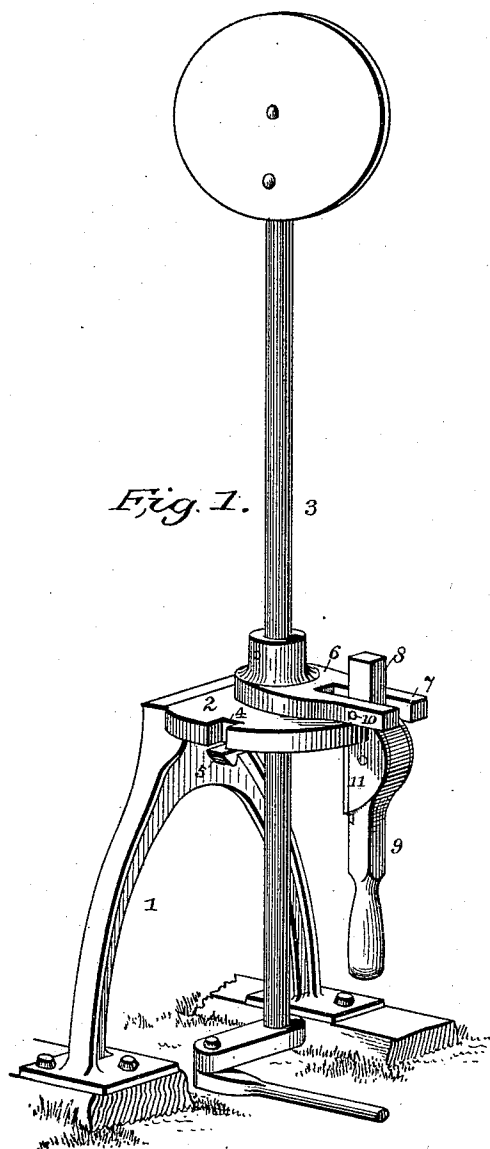


Fig. 6.

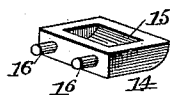


Fig. 3.

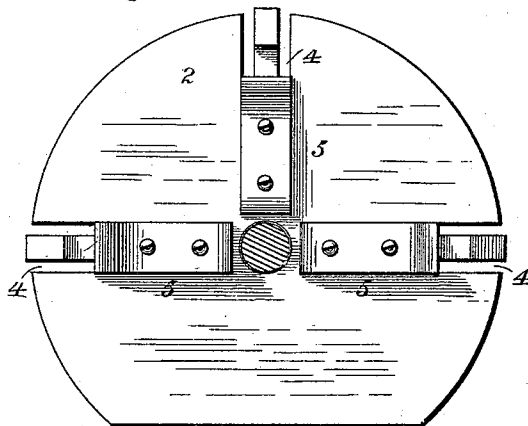
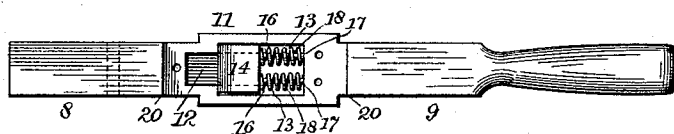


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANK. P. NEWELL AND HENRY MOHLE, OF STEVENS POINT, WISCONSIN.

RAILROAD-SWITCH STAND.

SPECIFICATION forming part of Letters Patent No. 473,335, dated April 19, 1892.

Application filed September 14, 1891. Serial No. 405,673. (No model.)

To all whom it may concern:

Be it known that we, FRANK. P. NEWELL and HENRY MOHLE, citizens of the United States, residing at Stevens Point, in the county of Portage and State of Wisconsin, have invented a new and useful Railroad-Switch Stand, of which the following is a specification.

This invention relates to a combined switch lock and lever; and the objects in view are to provide a cheap and simple device adapted to be used in connection with the ordinary switch-stand and to so construct the lever as to automatically become locked when adjusted to any one of its numerous positions, thus avoiding the necessity of employing the usual character of switch-locks.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a switch-stand having a combined lock and lever constructed in accordance with our invention. Fig. 2 is a transverse vertical section of the upper portion of the stand, the line of section being taken longitudinally through the lever. Fig. 3 is a bottom plan of the locking-plate removed from the stand. Fig. 4 is an inner elevation of the locking-lever, the case-covering plate being removed. Fig. 5 is a detail in perspective of the key. Fig. 6 is a detail in perspective of the locking-bolt.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates an ordinary switch-stand, upon which is mounted the usual locking-plate 2, and 3 designates the target or switch mast, rotatably and vertically mounted in the stand and plate 2. At intervals the periphery of the plate is provided with lever-receiving locking-notches 4, and upon the under side of the plate is secured or cast a series of hook-shaped catches 5, one being located opposite each of the notches 4 and projecting into the same, the said catches being slightly narrower than the notches, so as to leave spaces at each side of the catches.

6 designates the mast-operating arm, which projects from and is rigidly connected to the mast immediately above the locking-plate, over which latter the arm is designed to move.

The free end of the arm is bifurcated, as shown at 7, and receives the reduced upper end 8 of the locking-lever 9, which lever is pivoted between the bifurcations by a transverse bolt 10.

The locking-lever a slight distance in front of the arm is cast or formed with a hollow chamber or lock-case 11, which is reduced, as at 12, at its upper end and has formed at opposite sides a pair of ways 13. Upon the ways there is mounted for sliding a chamfered bolt 14, one side of which is provided with a recess or ward 15, and upon the bottom of the bolt is formed a pair of depending pins or studs 16, which are located opposite a corresponding pair of pins 17, extending upwardly from the bottom of the recess or chamber 11. A pair of coiled springs 18 are interposed between the bottom of the bolt and the bottom of the chamber or lock-case, the ends of the springs receiving the pins or studs 16 and 17, said springs serving to yieldingly force the bolt toward the upper end of the recess or lock-case. The face of the lever is provided with a dovetailed recess 20, into which is slid laterally a plate 19, the ends of which are beveled to fit the dovetailed walls of the recess 20, said plate being secured in position by screws or other fastening devices.

One side wall of the lock-case is provided with a curved key-hole slot 21, adapted to receive the curved blade 22 of the key 23, said blade, when the key is in position, serving to act in a cam-like manner upon the recess 15 of the bolt, thus pressing the latter downwardly against its springs and unlatching or withdrawing the bolt from the catch 5, engaging the same.

In operation the handle or lever is grasped by the switchman and swung to the desired notch and then lowered, which act brings the catch 5 of that notch or recess into which the handle is lowered into the reduced opening 12 at the upper end of the lock-case 11 and brings the inclined face of the catch against the beveled face of the bolt, the two faces riding by each other and the bolt taking in rear of the shoulder of the catch. It will now be obvious that a secure lock is effected between the switch-lever and the lock-plate, and in order to disengage the same it is necessary to insert the key heretofore described and operate it in the manner specified to depress the bolt

out of engagement with the shoulder of the catch, whereupon said lever is released and may be swung out of engagement with the notch to the desired position in any of the
5 other notches.

It will be observed that the mechanism constituting the lock is exceedingly simple and durable, including no small parts difficult to assemble or liable to become impaired, and
10 that when the lever has been swung to the desired position it will automatically lock by reason of its own weight, so that it cannot be tampered with by unauthorized persons or miscreants or left unlocked accidentally by
15 the switchman.

Having described our invention, what we claim is--

1. The combination, with the switch-stand, its mast, the locking-plate having notches, and
20 catches located upon the under side of the same opposite the notches, of a mast-arm located above the plate, a lever pivoted to the end of the arm and provided with a lock-case and an opening above the same, the latter
25 adapted to receive the catches, and a spring-pressed bolt mounted in the lock-case and normally projected into the path of the catches, substantially as specified.

2. The combination, with a switch-stand, a notched locking-plate provided upon its under
30 side and opposite its notches with hooks smaller than the notches, the switch-mast, and the bifurcated arm extending from the mast, of the lever located between the bifurcations and pivoted thereto, said lever being provided
35 with the lock-case or chamber 11, reduced at its upper end to form an opening and having opposite ways, the bolt mounted for sliding in the ways and having the recess 15, and the coiled springs interposed between the bottom
40 of the recess and bolt and serving to yieldingly support the latter in the opening, the side wall of the case being provided with a key-hole adapted to receive a key and located at
45 one side of the bolt, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

FRANK. P. NEWELL.
HENRY MOHLE.

Witnesses for Frank. P. Newell:

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Witnesses for Henry Mohle:

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