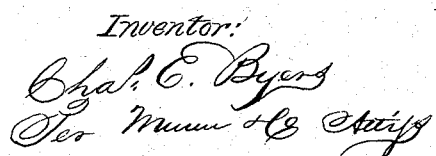


Patented May 22, 1866.



UNITED STATES PATENT OFFICE.

CHARLES E. BYERS, OF MAHANOEY PLANE, PENNSYLVANIA.

IMPROVED SWITCH-STAND FOR RAILROADS.

Specification forming part of Letters Patent No. 54,855, dated May 22, 1866.

To all whom it may concern:

Be it known that I, CHARLES E. BYERS, of Mahanoy Plane, in the county of Schuylkill and State of Pennsylvania, have invented a new and useful Improvement in Switch-Stands; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my improved stand, the cap of the lock being removed to show the interior arrangement. Fig. 2 is a top view of the stand, partially in section, through the line *xx*, Fig. 1.

Similar letters of reference indicate like parts.

The object of my invention is to furnish a switch-stand so constructed and arranged that the lever by which the rails are shifted, if broken, can be removed and replaced by a new one without removing the stand, and that the lever can be unlocked and the bolt which holds the lever in position withdrawn by one turn of the key, and at the same time the bolt be well secured from being reached and operated without the key; and consists in passing the lever through and working it in slots, in such a way that the lever shall pass through the center of the stand, the rod which connects the foot of the lever with the rails passing through one of the feet of the stand, and in the combinations by which I am enabled to unlock and operate the bolt which holds the lever in place in any of the required positions, said bolt being unaffected by the jar caused by the passing trains.

A B are the feet of the stand, by which it is secured to the foundation upon which it stands.

C is the cross-bar to which the lever D is pivoted, said lever passing through a slot, (represented in dotted lines in Fig. 1,) so that it can be pivoted in the center of the stand, as represented in Fig. 2.

To the lower end of the lever D is pivoted the rod or bar E, connecting the said lever to the rails or object to be moved, the rod or bar E passing through a slot in the center of the foot B of the stand, as represented in red lines in Fig. 1, by which arrangement I obtain a greater freedom of movement and a more powerful action upon the object to be moved.

The upper end of the lever D passes through a slot in the upper part, F, of the frame of the stand.

The lever D is secured in the desired position by means of the bolt G of the lock H, which lock is attached to the lever D above and so close to the top F of the frame of the switch-stand that it will be impossible to operate upon the bolt G between the lower end of the lock and the top of the stand.

The bolt G is pivoted to the end piece, I, so that it may move up and down with the movement of said piece.

The piece I is held down, keeping the bolt G forced down and the lever D locked by the action of the spring J upon the said piece I, until they are released by the action of the key.

The under side of the piece I is channeled to allow the passage of the upper end of the lever K.

The lever K is pivoted to the lock-plate, as represented, and its lower end is bent over at right angles, so as to form a projection or square hook, which fits into a cavity in the side of the bolt G, into which it is forced and held by the action of the spring L, until forced back by the key operating upon its upper arm.

M are the wards, which may be of any desired form or pattern.

The bolt G shuts into cavities N in the upper part, F, of the stand.

When the key is put into the lock H and turned, the first effect is to force back the upper end of the lever K, which withdraws the projection on the lower end of said lever from the cavity in the bolt G. By the time the said projection has been withdrawn from said cavity the key has reached the piece I, which it raises, withdrawing the bolt G from the cavities N, which allows the lever D to be moved as required. By this arrangement the bolt which locks the lever D is itself bolted, and to free the said lever D requires a key which will pass the wards M and at the same time be capable of operating the lever K and the bolt G.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the bolt G, lever K, piece I, and spring J L, applied to the lever D, arranged relatively to each other and with the top F of the switch in the manner and for the purpose herein specified.

CHAS. E. BYERS.

Witnesses:

CHAUNCEY IVES,
CHAS. C. BROCK.