(No Model.)

D. P. DRISCOLL & J. H. DUGAN.

SWITCH LOCK.

No. 271,435. Patented Jan. 30, 1883.

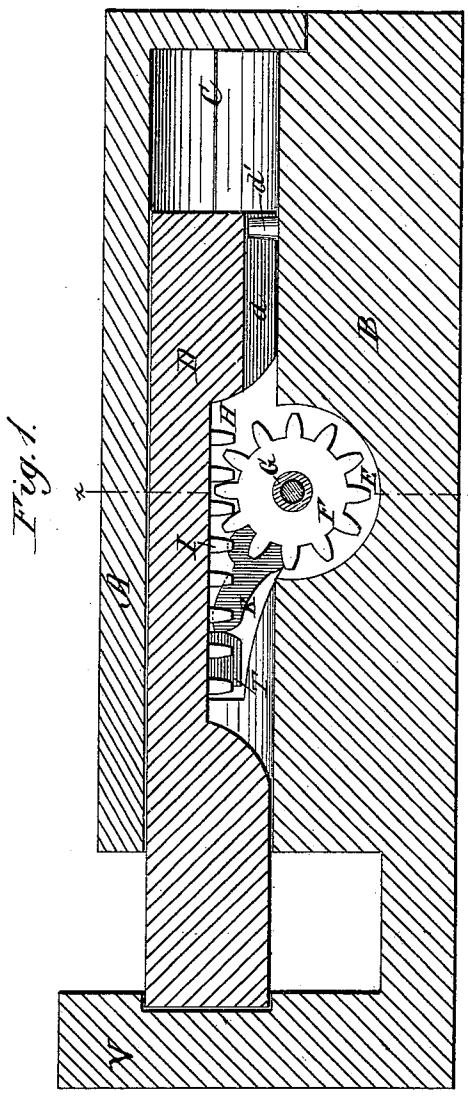


Fig. 1.

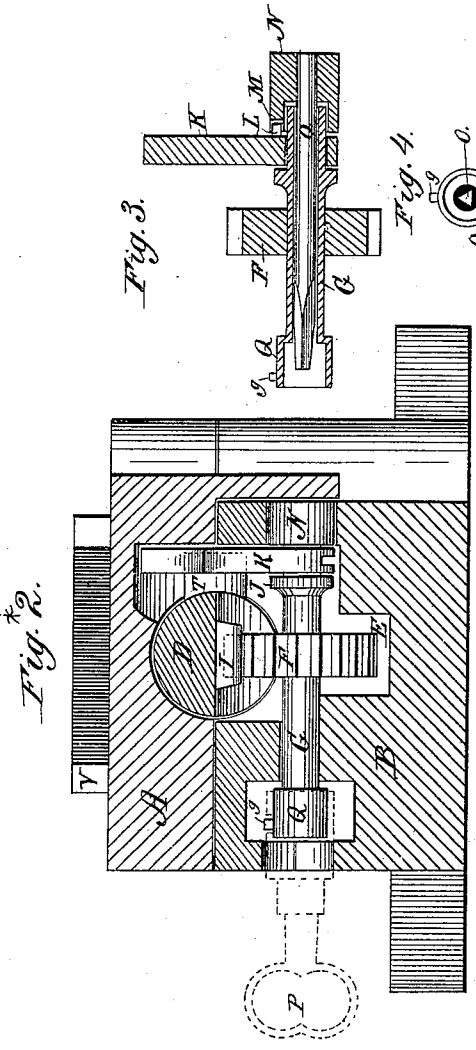


Fig. 2.

Fig. 3.

Fig. 4.

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DANIEL P. DRISCOLL, OF PITTSBURG, PENNSYLVANIA, AND JOSEPH H. DUGAN, OF DENNISON, OHIO.

SWITCH-LOCK.

SPECIFICATION forming part of Letters Patent No. 271,435, dated January 30, 1883.

Application filed August 17, 1882. (No model.)

To all whom it may concern:

Be it known that we, DANIEL P. DRISCOLL, of Pittsburg, in the county of Allegheny and State of Pennsylvania, and JOSEPH H. DUGAN, of Dennison, in the county of Tuscarawas and State of Ohio, have invented a new and useful Improvement in Railroad-Switch Locks, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming a part of this specification.

This invention relates to locks for securing the lever by which a railroad-switch is operated; and the invention consists of the novel construction hereinafter described and claimed.

In the drawings, Figure 1 is a vertical section through the longitudinal axis of the bolt, and Fig. 2 is a transverse section on the line *x x*, Fig. 1. Figs. 3 and 4 are detail views.

The casing of the lock is formed of two shells, A B, having a cylindrical recess, C, between them for the bolt D.

In a recess, E, in the lower shell, B, is located a cogged wheel, F, which is mounted upon a hollow spindle, G, supported transversely in the shell in such manner that one-half the wheel shall extend up into the said cylindrical recess, and, to accommodate the wheel, the bolt is recessed to about the center at H, and provided with a rack, I, which engages with the cogs of the wheel.

The spindle G is provided with a collar, J, near one end, and an arm, K, loosely mounted upon the spindle, in contact with the collar, is provided with a lug, L, which engages with a notch, M, in the end of a sleeve, N, which incloses the said end of the hollow spindle. This sleeve is rigidly secured to one end of a spindle, O, which is located within the hollow spindle, and the opposite end of the spindle O is made triangular or of other shape, whereby the key P shall engage therewith to turn the same. The hollow spindle is made larger at Q, to receive the triangular end of the spindle O and afford sufficient space between them for the insertion of the inner barrel of the key, and this part Q of the spindle G is provided with a lug, *g*, on its outer surface, which engages with a bayonet-slot to be formed in the outer barrel of the key when the said barrel is passed over Q. The bayonet-slot in the key is made of such form in order that the first movement of the key shall operate the inner spindle, O, independently of the spindle G, so that the arm K, which is connected to the former spindle by means of the sleeve N, as above described, and which serves to lock the bolt by means of the lug T, with which it engages, shall first be lifted out of engagement with said lug before the cogged wheel is rotated to withdraw the bolt.

The bolt is prevented from rotating when moved by means of a longitudinal groove, *d*, in its bottom, with which engages a projection, *d'*, in the bottom of the recess C.

The switch-lever, which may be of any ordinary construction, is held in engagement with the bolt by means of the projection V, forming a seat therefor in conjunction with the casing.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination, with a bolt, of a rotary device for moving the same, which is rigidly mounted upon a hollow spindle, an arm for locking the bolt, which is loosely mounted upon the said spindle, and a spindle arranged inside the hollow spindle and having means for engaging with the arm, substantially as shown and described, and for the purpose set forth.

2. The combination of the bolt having a rack formed in a recess in the under surface, and the projection or lug at one side, the hollow spindle carrying the cogged wheel, the arm loosely mounted on said spindle and having a lug at one side, the inner spindle having a sleeve inclosing one end of the hollow spindle and engaging with the arm, and the key having an inner and an outer part for engaging the spindles, respectively, and means for imparting motion to the inner spindle an instant before the outer one is rotated, to disengage the arm before the bolt is withdrawn, substantially as shown and described.

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