(No Model.)

G. E. LENHART.

SWITCH STAND.

No. 383,738. Patented May 29, 1888.

Fig. 1.

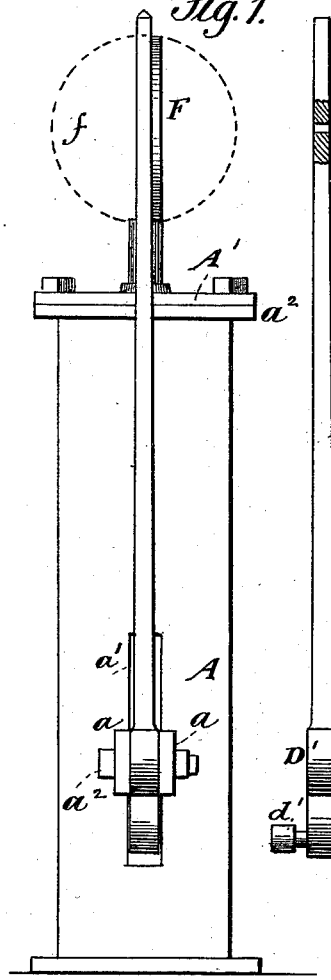


Fig. 6.

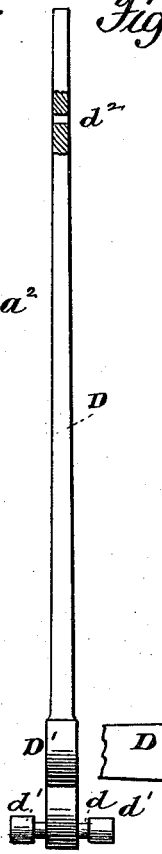


Fig. 2

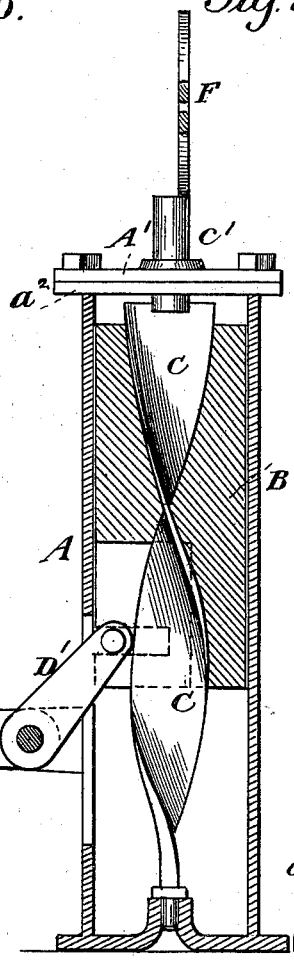


Fig. 3.

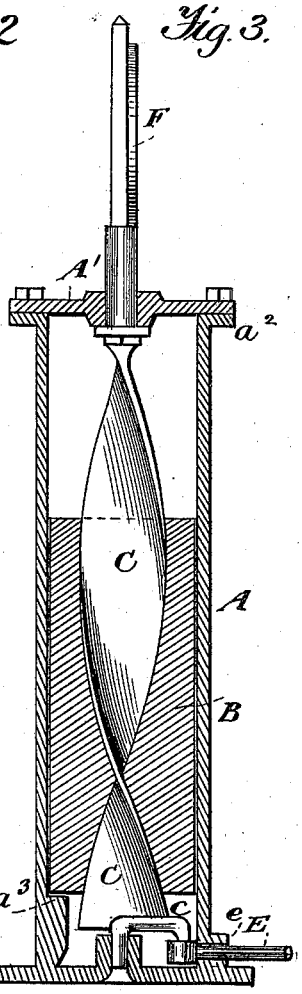


Fig. 4.

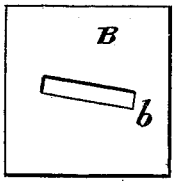
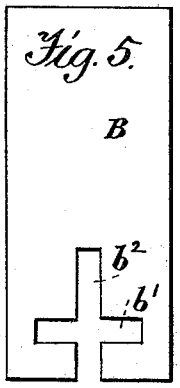


Fig. 5.



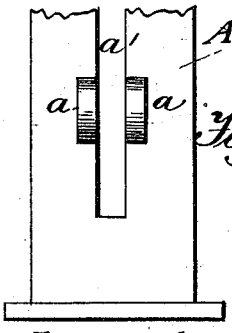


Fig. 7.

Witnesses:
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C. B. Thompson.

Inventor:
George E. Lenhart,
by Geo. W. T. Hoffman
Atty.

UNITED STATES PATENT OFFICE.

GEORGE E. LENHART, OF ST. PAUL, MINNESOTA, ASSIGNOR OF ONE-HALF TO C. W. McINTYRE, OF SAME PLACE.

SWITCH-STAND.

SPECIFICATION forming part of Letters Patent No. 383,738, dated May 29, 1888.

Application filed December 30, 1887. Serial No. 259,416. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. LENHART, of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Switch-Stands, of which the following is a specification, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object and nature of my invention will be fully set forth in the following specification and claims.

In the drawings, Figure 1 is an elevation of my improved switch-stand. Fig. 2 is a vertical section showing the interior mechanism in one position. Fig. 3 is a vertical section showing the interior mechanism in another position. Fig. 4 is an end view of the weight. Fig. 5 is a view of one side of the weight. Fig. 6 is a view of the operating-lever, and Fig. 7 a view of part of the casing.

Similar letters of reference indicate similar parts in the respective figures.

A is the outer casing or shell provided with the flanges a^2, to which the cap A′ is secured. Near the lower end of one side of the casing A are the lugs a, and between the lugs a slot, a', is cut in the casing A, for a purpose hereinafter specified.

B is a weight of from three hundred to four hundred pounds, which fits loosely within the casing A. This weight has a spiral hole extending from top to bottom, in which the spiral bar C is adapted to fit loosely; or, instead of having a spiral hole the weight may be made hollow from the bottom to a point near the top, and a slot, b, cut in the top of the weight to allow the end of the spiral bar C to pass through. The effect will be the same in either case—that is to say, the raising or lowering of the weight will have the effect of turning the spiral bar C. The lower end of the bar C is stepped in the bottom of the casing A, and to its upper end a short rod, C′, is attached, which extends upward through the cap A, and to it is secured the target F. The lower end of the weight B is provided with a transverse slot, b', and with a vertical slot, b^2.

D is a bent lever pivoted at its bend to the lugs a, the short arm D′ extending through the slot a'. A pin, d, is driven through the end of the short arm D′, and provided at each end with friction-rollers d'. This pin d fits in the slot b' of the weight B, and when the lever D is operated will serve to raise the weight. The vertical slot b^2 is for the purpose of giving the short arm D′ play when the weight is raised or lowered. A crank-arm, e, is secured to the lower end of the bar C, to which is pivoted the switch-rod E, a slot, e, being cut in the lower part of the casing A to give the switch-rod play when the bar C is revolved.

The target F is provided with a hole, f, with which the hole d^2 in the lever D is adapted to register when the weight B is in its lowest position, for the purpose of locking the lever to the target, and so prevent unauthorized persons tampering with the switch.

The interior of one side of the casing A is provided with a shoulder, a^3, to support the weight B when in its lowest position and prevent it from falling too low.

The operation is as follows: When the switch is set for the main track, the weight will be in its lowest position, as shown in Fig. 3, and the lever D will be in a perpendicular position and can be locked to the target, as described. When it is required to set the switch for the siding, the lever is unlocked from the target, and by depressing the long arm the short arm will be elevated and carry with it the weight B. As the weight is lifted, it will cause the spiral bar C to revolve, and the crank-arm e will be operated to set the switch. At the same time the target F will be turned to indicate that the line is blocked. By simply releasing the lever D the weight will descend by its own gravity and again set the switch for the main track.

Having described my invention, I claim—

1. A vertical spiral bar mounted in suitable bearings, and a weight loosely mounted on said bar, combined with a switch-rod connected to said spiral bar, substantially as specified.

2. A vertical spiral bar mounted in suitable bearings, a weight loosely mounted on said bar, and a pivoted lever engaging with the said weight, combined with a switch-rod connected to the spiral bar, substantially as specified.

3. A vertical spiral bar mounted in suitable bearings, a weight loosely mounted on said bar and provided with a vertical and a transverse slot, and a pivoted lever provided with friction-rollers on its short arm, which work in the transverse slot in said weight, combined with a switch-rod connected to the spiral bar, substantially as specified.

4. The combination, with the outer casing, of the weight, the bent lever, the spiral bar, and the switch-rod, substantially as specified.

5. The outer casing, A, having the lugs *a* and the slot *a'*, and the bent lever D, pivoted to said lugs, its short arm D' extending through said slot, combined with the weight B, the spiral bar C, passing through said weight, and the switch-rod E, substantially as specified.

6. The outer casing, A, and the bent lever D, pivoted thereto, the short arm D' of said lever extending into the interior of said casing, and being provided with the pin *d* and friction-rollers, combined with the weight B, having the slots *b'* and *b²*, in which said arm and pin are adapted to enter, the spiral bar C, and the switch-rod E, substantially as specified.

7. The outer casing, A, and the lever D, pivoted thereto, said lever having the hole *d²*, combined with the weight B, the spiral bar C, and the rod C', and the target F, having the hole *f*, with which the hole *d* in the lever D registers when the weight is at its lowest point, substantially as and for the purpose specified.

In testimony whereof I have hereunto set my hand and affixed my seal.

GEORGE E. LENHART. [L. S.]

Witnesses:

CHARLES NICHOLS,

FRANK D. WILLIS.