

C. W. SPAYD.

Railroad Switch-Signals.

No. 145,456.

Patented Dec. 9, 1873.

Fig. 4.

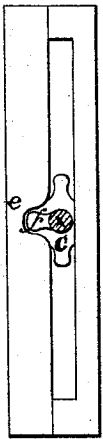


Fig. 3.

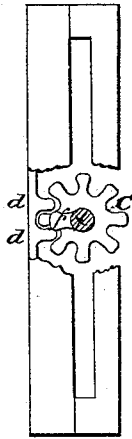


Fig. 2.

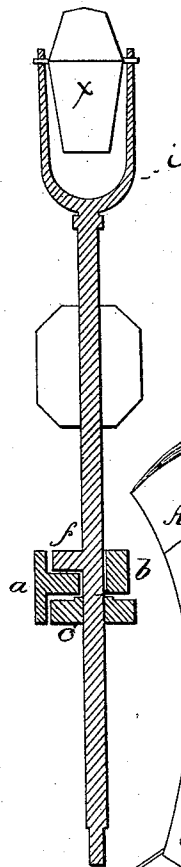
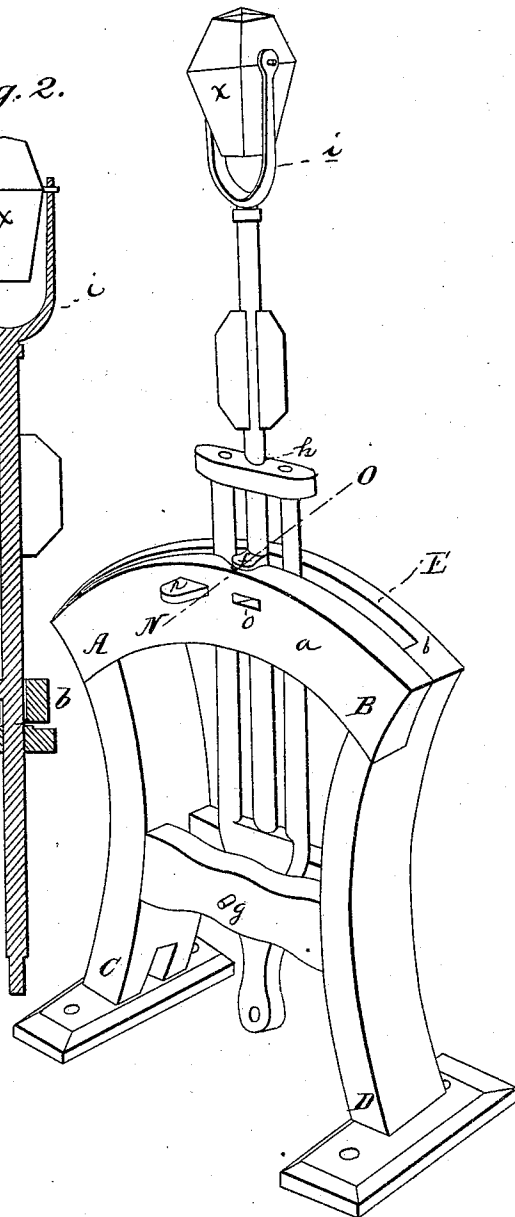


Fig. 1.



Witnesses.

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CHARLES W. SPAYD, OF WILKESBARRE, PENNSYLVANIA.

IMPROVEMENT IN RAILROAD SWITCH-SIGNALS.

Specification forming part of Letters Patent No. **145,456**, dated December 9, 1873; application filed January 10, 1873.

To all whom it may concern:

Be it known that I, CHARLES W. SPAYD, of the city of Wilkesbarre, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Machine for Security in Operating Railroad - Switches; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is a vertical section of the signal stem or rod and the cap through the line N O, Fig. 1; Fig. 3, a horizontal representation of the cap with part broken out.

My invention is an improvement in railway signal-switches of the class in which a lantern with differently-colored sides is caused to make a part revolution at each movement of the switch-lever, so as to indicate the position of the switch by the color of the rays emitted in a direction parallel to the track. The improvement consists in features hereinafter described, and specifically indicated in the claims.

The switch-stand A B C D is of the ordinary construction, except as to the arch bar or cap E, which is formed in two parts, one of which, *a*, is rabbeted on the under side, to accommodate the cog gear or pinion *c*, and recessed at *e* on the upper side, to receive the projection or arm *f* of the signal-rod. Teeth *d d* are formed on the rabbeted portion of the bar *a*, beneath the recess *e*, to engage with the pinion *c*, and produce a half-revolution thereof, when the signal-lever is thrown over from one side to the other. The signal rod or stem (shown in Fig. 2) is supported by the double-armed lever and cap, (shown in perspective in Fig. 1,) the lower extremity of the rod forming a journal, working in a cup or recess of the lever, as at *g*, Fig. 1, and passing freely through a hole in the cap of said lever, as at *h*, Fig. 1. The upper end of this rod is fitted into a fork, for the purpose of carrying a lantern, *x*, for night signal, as at *i*, Fig. 2, and also such other day signals, or colored

disks, as may be selected, to be, as usual, firmly attached to the stem. The signal-lantern is to be placed in the fork upon pivots, so that it shall be free to retain by gravity an upright position whenever the lever may be inclined to one or the other limit of the switch-stand. The signal-rod carries, firmly attached to it, the above-mentioned pinion and the start or arm *f*. The drawing shows that the machine is applicable to a switch of single throw or movement, or a switch of double throw or movement. When the signal-rod is erect, the position of the lantern and signal-disks is to be so disposed as to show white. While in this position the start *f* will be in the recess, as shown in Fig. 4 at *e*, and therefore parallel with the main track. A movement of the lever to the right or left, by means of the pinion and the two cogs *d d*, (shown at Fig. 3,) will cause a quarter-revolution of the signal stem or rod and its arm *f*, which arm *f* confines the signal-rod in its direction to the end of its sweep or motion, in consequence of its fitting the slot formed by the cap-pieces or lever-guides of the stand.

The signal, having the same motion as the stem, will, in the inclined position of the lever, bring the colored faces of the signals into proper direction to be seen from the main track, to indicate the opening to a siding or switch in the one side of the main track or the other.

I claim—

1. The key *r*, in combination with the two-part switch-lever and the signal-carrying rod pivoted between them, and provided with the arm *f*, moving between the sides of the cap of the switch-stand, as shown and described, whereby said rod may be locked, as specified.

2. In combination with cap E of the stand, provided with teeth *d d* and recess *e*, the rod or lever *h*, its rigid arm *f*, and pinion *c* keyed thereto, as shown and described.

C. W. SPAYD.

Witnesses:

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