



# UNITED STATES PATENT OFFICE.

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## RAILROAD-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 378,451, dated February 28, 1888.

Application filed September 13, 1887. Serial No. 249,604. (No model.)

*To all whom it may concern:*

Be it known that I, TRUMAN C. LEWIS, a citizen of the United States, residing at Delaware, in the county of Delaware and State of Ohio, have invented certain new and useful Improvements in Railroad-Signals; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-  
10 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specifica-  
15 tion.

This invention relates to railroad-signals, and has for its object to provide a simple device which can be conveniently operated by the telegraph-operator from his office, day or night, to signal the approaching train the con-  
20 dition of the road ahead in regard to other trains.

The improvement consists in the novel features of construction and arrangement of parts, hereinafter more fully set forth, claimed, and  
25 shown in the annexed drawings, in which—

Figure 1 is a side view of my invention; Fig. 2, a section on the line X X of Fig. 3, looking to the right; Fig. 3, a top plan view with the cover removed, and Fig. 4 a sectional  
30 plan view on the line Y Y of Fig. 2.

On the rear part of the platform A is placed the case, composed of the front wall, *a*, the converging side walls, *a'*, and the top *a''*, within which is arranged the operating mechanism.  
35 The shafts B and B', located at opposite ends of the case and having bearings in the top and platform, extend above the top and below the platform. The shaft B has the flag-signal *b* at its lower end, and the light-signal C at its  
40 upper end. The shaft B' has the flag-signal *b'* and the corresponding light-signal C' at its upper end. These signals normally extend at right angles to the track, and the light-signals have colored glasses *c* and *c'* in their outer  
45 ends, which are in line with the lamp D on the front part of the platform.

The light-signals are for night use, and when they extend in front of the lamp the light shining through the glass gives the color of the  
50 glass, and when the signals are turned from in

front of the lamp the light, being unobstructed, is seen of a different or natural color, accord-  
ing to the nature of the lamp-shade.

The flag-signals have their sides of different colors. The sides facing inward or toward one  
55 another are of a like color, white, whereas the sides facing outward or in opposite directions are of a different color, red. In a normal condition the flag-signals will display the two colors from either approach; but the proper  
60 color may be exhibited by turning one or the other of the signals parallel with the track in the manner and by the mechanism presently to be described.

Each of the shafts B and B' has pinions E  
65 and E', respectively, which mesh with the gear-wheels F and F', mounted on the shafts G and G', which are journaled in the top and bottom of the case. The shafts G and G' are  
70 parallel and near each other, and pass through slots *m* and *m'* in the gear-wheels F and F', respectively, and limit the movement of each. The cords H and H' are attached at their in-  
ner ends eccentrically to the gear-wheels F  
75 and F', and their outer ends extend within convenient reach of the attendant or operator for moving the desired signal. The signals are held in and returned to their normal po-  
80 sition by the spiral springs *i* and *i'*, mounted on the shafts B and B', and having one end secured to the case, and the other end secured to the pinion placed thereon.

The device is secured to the end of a tube or gas-pipe, M, extended from the station or  
85 office, and the operating-cords H and H' pass through this tube to within convenient reach. Each cord controls its signal independent of the other. When a train is approaching, if it  
be desired to exhibit the white signal, the cord  
90 controlling the other—or red—signal is pulled upon, which, through the gear-wheel and pin-  
ion, turns said signal parallel with the track against the tension of the spiral spring. The  
cord being released, the signal is returned to  
95 its first position by the reaction of said spiral spring.

The device can readily be used for a single or double track, as each signal can be oper-  
ated independently of the other, and "danger"  
100 or "safety" signals can be displayed simulta-

neously to each train, or "safety-signal" to one train and "danger-signal" to the other train.

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

1. A railroad-signal comprising the following elements in combination: a case, the two parallel shafts placed at opposite ends of the case, the pinions keyed to the shafts, the two independent gear-wheels, one gear-wheel meshing with one of the said pinions and the other gear-wheel with the other, and the two operating connections fastened at one end to the said gear-wheels, and having their other end extending within convenient reach, substantially as described, for the purpose specified.

2. In a railroad-signal, the combination, with the platform, the case erected on a part of the platform, and the two shafts provided with day and night signals, the night-signals extending over the platform to project across the lamp placed thereon, of the pinions keyed to the shafts, the gear-wheels meshing with the pinions, the operating-cords, and the spiral springs, substantially as and for the purpose described.

3. In a railroad-signal, the combination, with the case and the platform extended therefrom to receive a lamp, of the two shafts placed one at each end of the case, the one shaft having a day-signal below the platform and a night-signal above the case, and the other shaft having a corresponding night-signal and a day-signal above the case, the night-signals

extending across or in front of the platform, and mechanism, substantially as described, for operating the shafts independently of each other, substantially as described.

4. In a railroad-signal, the combination, with the case, the shaft carrying a signal, and the spiral spring, of the pinion keyed to the shaft, the gear-wheel meshing with the pinion and having a slot, the shaft passing through the slot for limiting the movement of the gear-wheel in each direction, and the operating-cord, substantially as specified.

5. In a railroad-signal, the herein shown and described signal, composed of the platform, the case erected on the rear part of the platform, the two shafts placed at opposite ends of the case and extended above and below the same, the flag-signal secured to one of the shafts below the platform, and the night-signal secured thereto above the case, the corresponding night-signal and the flag-signal secured to the other shaft above the case, the night-signals extending in front of and on each side of the platform, the spiral springs, the pinions, the gear-wheels meshing with the pinions and having slots, the shaft of one gear-wheel passing through the slot of the other gear-wheel, and the operating-cords secured to the gear-wheels and extending within convenient reach, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

TRUMAN C. LEWIS.

Witnesses:

FRANK A. KAUFFMAN,  
LYMAN P. LEWIS.