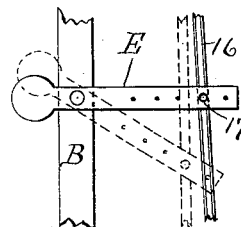
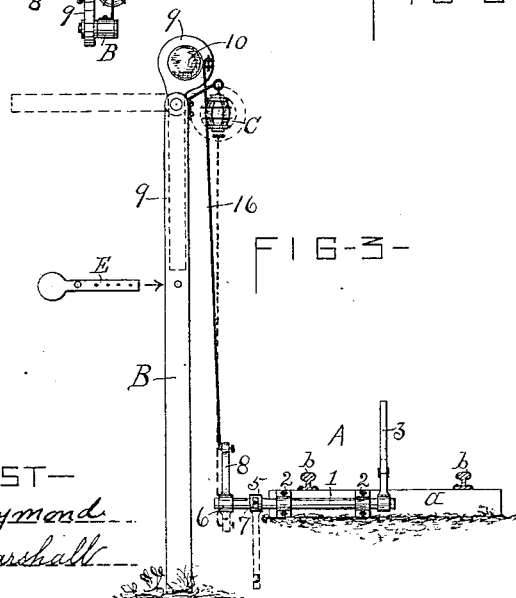
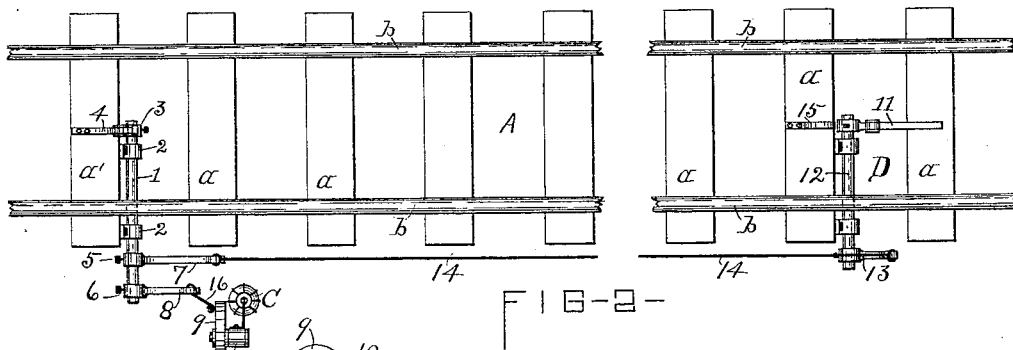
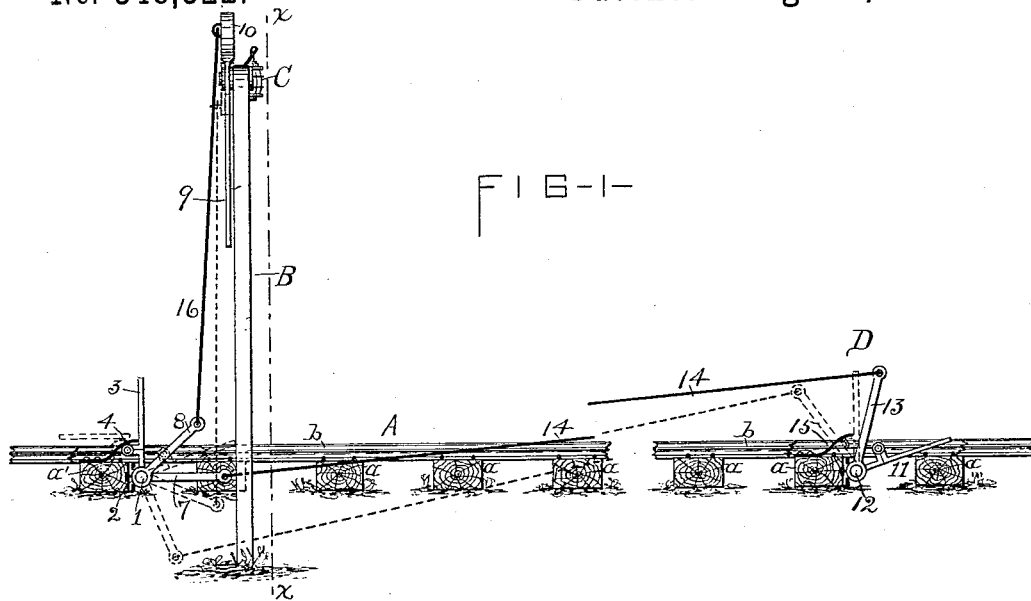


(No Model.)

S. B. FYLER.  
RAILWAY SIGNAL.

No. 348,322.

Patented Aug. 31, 1886.



ATTEST—  
*E. A. Raymond*  
*Wm Marshall*

INVENTOR—  
*S. B. Fyler*  
per *E. A. Raymond*  
*his atty.*

# UNITED STATES PATENT OFFICE.

SILAS B. FYLER, OF EAST SYRACUSE, NEW YORK.

## RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 348,322, dated August 31, 1886.

Application filed January 16, 1886. Serial No. 188,709. (No model.)

*To all whom it may concern:*

Be it known that I, SILAS B. FYLER, of East Syracuse, county of Onondaga, in the State of New York, a citizen of the United States, have invented certain new and useful Improvements in Railway-Signals, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved railway-signal; Fig. 2, a plan view of the same; Fig. 3, a transverse section taken on line *x x*, Fig. 1; and Fig. 4, an enlarged detail view of my tension-regulating device, illustrating its operation.

Similar letters of reference indicate corresponding parts.

My invention relates to that class of railway-signals commonly known as "block-signals;" and my object is to improve such signal apparatus both in construction, utility, and ease of operation. It is constructed as follows:

A represents a railway-track consisting of ties *a* and rails *b*. Upon one of the ties, as *a'*, I mount horizontally a shaft, 1, in bearings 2, secured to the side of the tie. Upon the inner end of this shaft I place a collar provided with an arm, 3, which arm is constructed in two parts hinged together, as shown, and the whole arm standing at right angles to the shaft and vertical in its original position. Upon the top of the tie I secure one end of a spring, 4, the other end of which bears against the upper section of the arm 3. The shaft 1 extends out beyond the ends of the ties, and upon it I mount the collars 5 6, each provided with arms 7 8, respectively, and each of these arms is provided with a transverse eye adjacent to its end, and both stand at right angles to the shaft, and these arms are arranged, the arm 7 to stand out horizontally and the arm 8 to stand at an angle of about forty-five degrees upward, when they are in their original position, ready for operation.

B is the signal-post, upon or in the upper end of which I pivotally mount the vane 9. This vane consists of a flat piece of wood or metal enlarged at one end, so as to receive a piece of colored glass, 10, red or green. The lever 8 is connected to the short end of the vane by the rod 16.

C is a lantern, suspended from the top of the post B in such position that when the vane is operated the glass 10 will come over in front of it.

D represents my device for use at the other end of the "block," consisting of a hinged arm, 11, mounted upon a shaft, 12, which is journaled in bearings upon a tie, and which also carries an upright arm, 13. The arms 7 and 13 are also connected to each other by the rod or wire 14. I also mount a spring, 15, behind the arm 11, secured to the tie.

E represents my device for regulating the tension upon the rod 16, when so desired, consisting of a bar pivoted upon or in the post B, adjacent to one end of the bar, and provided with holes through it to receive a pin, 17, which engages with the rod 16, and thus by shifting the pin inward from one hole to another any slack in the rod 16 can be readily taken up.

My device operates as follows: The device D is located at any desired distance from the port B—say a half mile, more or less. In Fig. 1, I show my apparatus in position ready for operation by a train approaching from the left side of the drawings, the arm 3 being erect, while the arm 11 inclines downward, so that its end is about level with the rail. As the locomotive reaches the arm 3 it throws it over forward, rotating the shaft 1, which carries the arms 7 and 8 downward. The arm 7 pulling down upon the rod 16 throws the vane into a horizontal position, or nearly so, as shown by the dotted lines in Fig. 3, and at the same time the arm 8 pulls upon the wire 14, which draws the arm 13 over toward the post B, and at the same time raises the arm 11 to an upright position, all as shown by the dotted lines; and when the lantern C is lighted this movement of the vane draws the glass 10 down in front of the light, and this creates a danger-signal at night, while the extended bar of the vane is a like signal by day. Then as the train approaches D it strikes the then upright arm 11, throws it over forward, and this reversing action of the arm 3 causes all of the parts to assume their normal positions. When the arms 3 and 11 are located some distance apart, the wire 14 is supported upon pulleys or rollers mounted upon posts along the side of the track. The hinge-joints in the arms 3

and 11 are placed there by me, so that when either one is erect, as 3 in Fig. 1, a train moving against it from the right of the drawing will simply bend over the upper part of the arm against the spring, and as soon as the last car has passed over it the spring will throw it up into position again.

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

1. A railway-signal consisting of the shaft 1, provided with the upright hinged arm 3, the diagonal arm 7, connected to the vane 9, mounted upon the post B, and the horizontal arm 8, connected to the arm 13 of the shaft 12, having also a hinged arm, 11, in combination with the track, constructed and operating together substantially as described.

2. In a railway-signal apparatus, the tension-regulator E, operating in combination with the post B and rod 16, substantially as described.

3. In a railway-signal, the combination of the trip-lever 3, shaft 1, arm 8, and rod 16, provided with regulator E, in combination with the post B, lantern C, and vane 9, provided with glass 10, constructed and operating together substantially as shown and described.

In witness whereof I have hereunto set my hand this 8th day of January, 1886.

SILAS B. FYLER.

In presence of—

F. W. BARKER,  
WM. MARSHALL.