

(No Model.)

D. SLADE.
FOG SIGNALING APPARATUS.

No. 571,203.

Patented Nov. 10, 1896.

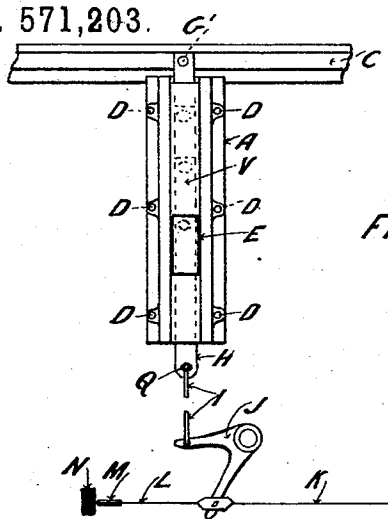


FIG. 1.

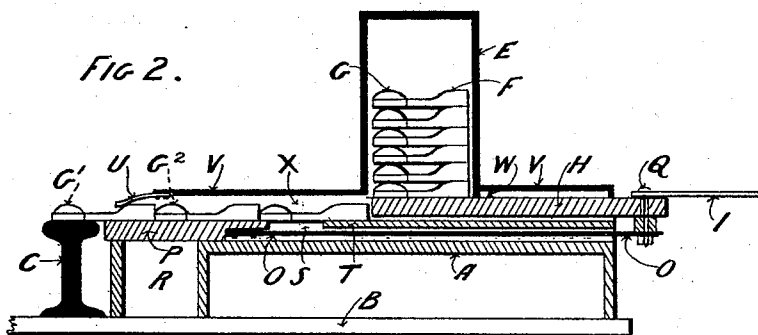


FIG. 2.

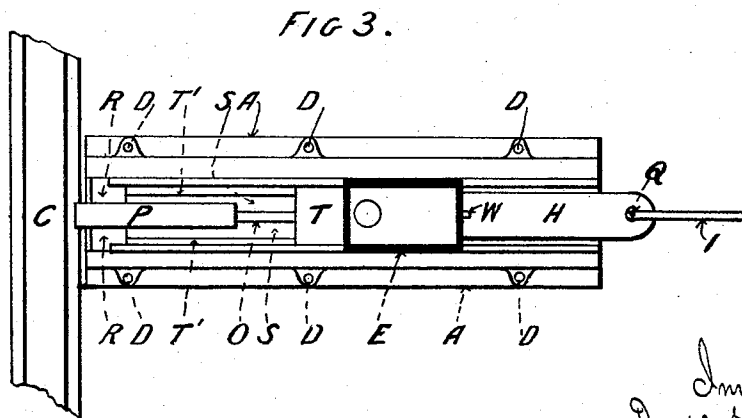


FIG. 3.

Witnesses

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DANIEL SLADE, OF ASHFIELD, NEW SOUTH WALES, ASSIGNOR TO CHRISTOPHER TAYLER, OF SYDNEY, NEW SOUTH WALES.

FOG SIGNALING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 571,203, dated November 10, 1896.

Application filed May 11, 1896. Serial No. 591,158. (No model.) Patented in England September 14, 1891, No. 15,548.

To all whom it may concern:

Be it known that I, DANIEL SLADE, a subject of the Queen of Great Britain, and a resident of Ashfield, near Sydney, in the Colony of New South Wales, have invented certain new and useful Improvements in Fog Signaling Apparatus, of which the following is a specification.

The invention has been patented in England, No. 15,548, dated September 14, 1891.

This invention relates to an improved apparatus for placing detonators upon railway-lines and removing and storing same as required.

It is customary now to have men stationed at the different signal-posts in foggy weather to attach and detach, as required, detonators or fog-signals on the rails. This apparatus has been especially designed so as to enable the signalman from his box to place the detonators on the rails, and also to remove them as required, thereby dispensing with the "special" man at the signal-post.

This improved apparatus consists, essentially, in the combination of a storage-box for detonators and a double-acting slide mechanism controlled by a wire or rod connected with the signal-box and operating bell-cranks attached to the slides, enabling the detonators to be withdrawn from the box, and placed upon the line, and secured there until either exploded by a passing train or withdrawn by the signalman. The detonators are placed upon a metal carrier of such size and construction as will enable them to pass along a channel provided in the apparatus, and so that the detonator itself will reach the center of the rail.

In order that this invention may be more fully understood, references will be made to the accompanying sheet of drawings, in which—

Figure 1 is a diagrammatic view of this improved apparatus placed in position for operation. Fig. 2 is a sectional elevation showing the double-acting slide, feed or storage box, and spring for holding or securing the detonator on the rail, and also receptacle or storage-box for detonators after being removed from the rail. Fig. 3 is a plan of the

apparatus with top or cover removed, showing the channel along which the detonators pass to the rail, also method of removing detonators when required.

In all figures similar letters are used to denote similar parts.

A is a raised platform resting on an extended sleeper B, which carries the rails C. On platform A is placed the apparatus, to which it is secured by the bolts D.

E is the storage or feed box, which may be so constructed that a door is provided either at the top or sides to permit of the detonator-carriers F, with the detonators G, being placed therein.

H is a sliding bar to force the detonators into position, being operated by the connecting-rod I, attached to one arm of the bell-crank J.

The rod or wire K leads to the signal-box and is connected to the other arm of the bell-crank J. A wire L is also attached to bell-crank J, and passes over a wheel M, and has attached to the end the counterbalance-weight N.

The rod O is attached to the second slide P at one end and to the slide H by the bolt Q at the other end.

A storage-box or receptacle R is provided at the rail end of the apparatus to receive the detonators after being released from the rail. The opening S is to enable the slide P, when withdrawn, to come against the fixed plate T, which partly forms the bed of detonator-channel X. The bed of detonator-channel X is level with the top of the rail and is so constructed that an opening is left, as shown in Fig. 3, to permit of slide P and connecting-rod O freely working therein.

The detonator-carriers after leaving the storage-box E will pass onto plate T, and after losing the support of that plate will be supported on either side by the extended pieces T'.

The slide P does not in any way support the detonator-carriers, except in the case of G', as in this case the spring U forces the hinder part of the detonator-carrier G' and each succeeding detonator-carrier onto slide P. The spring U, attached to the covering-

plate V, holds the detonator after being forced into position by slide H.

A chock W is so attached to slide H that it will prevent it entering the detonator-channel too far.

The apparatus is in its normal position, that is, ready for placing a detonator on the rail, the slide H is withdrawn to its full extent, thus allowing a detonator to fall into the channel X from the storage-box E. The slide O would also be withdrawn by the rod O, bringing the end against the fixed plate T. The detonator G' (see Fig. 2) would not be in the position shown, but would occupy the position of G².

When it is required to place a detonator on the rail, the signalman from his box releases the rod K. The counterbalance N will then fall and cause the slide H to enter the channel X, pushing a detonator into position on the rail. This action will cause the slide P to extend so far as to form a seating for the hinder part of the detonator-carrier, the spring U holding it in position.

When it is required to remove the detonator, the signalman will, by rod K and wire L, raise the counterbalance N. This will cause the arm of bell-crank J to assume such a position that slide H will be withdrawn, allowing another detonator to fall into position. The slide P will also be withdrawn, leaving the hinder part of the detonator-carrier without support. The spring U will then force the unexploded detonator into the storage-box R.

It will be obvious that a great saving in expense will be effected and a greater security and safety to passengers and rolling-stock will be secured by the adoption of this invention, for it places under the control of one man both the semaphore-signals and the fog-signals.

I propose to construct my apparatus of any

suitable metal and of such sizes as may be required for the effective working of same. 45

It will be noticed from Fig. 2 that the detonator-carriers F have enlargements or projections at their rear ends of a thickness equal, approximately, to that of the detonators. The projections are engaged by the holding-spring U, and the carriers are thus properly positioned to keep the detonator on the rail. 50

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is— 55

1. In apparatus for fixing detonators the combination of the casing having a storage-box, the box for receiving the detonators the slide for moving the detonators into position, and a second slide controlling the receiving-box, substantially as described. 60

2. In combination, the casing, a storage-box, a slide for moving the detonators into position, a controlling-slide adapted to support the end of the detonator when in position and a spring for pressing upon the detonator, substantially as described. 65

3. In combination, the casing having the storage-chamber for the detonators, the slide for moving the detonators therefrom, a second slide connected with the first slide to move therewith and the spring for pressing upon the detonators, substantially as described. 70

4. A detonator mount or carrier consisting essentially of a carrier F, a detonator secured to one end, a projection at the opposite end and a holding device engaging said projection, substantially as described. 75

In witness whereof I have hereunto set my hand in the presence of two witnesses. 80

DANIEL SLADE.

Witnesses:

OCTAVIUS PLATER CLAYTON,
THOMAS WILLIAM MILLER.