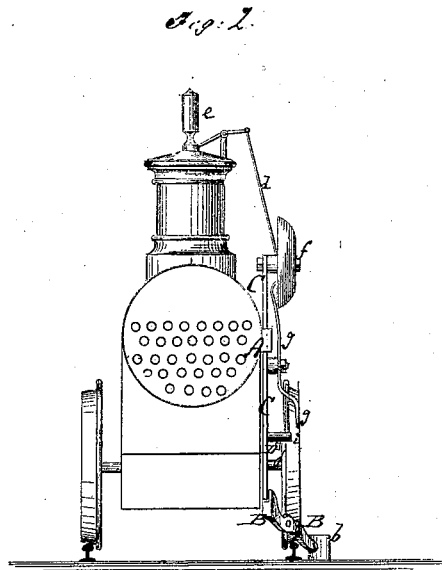
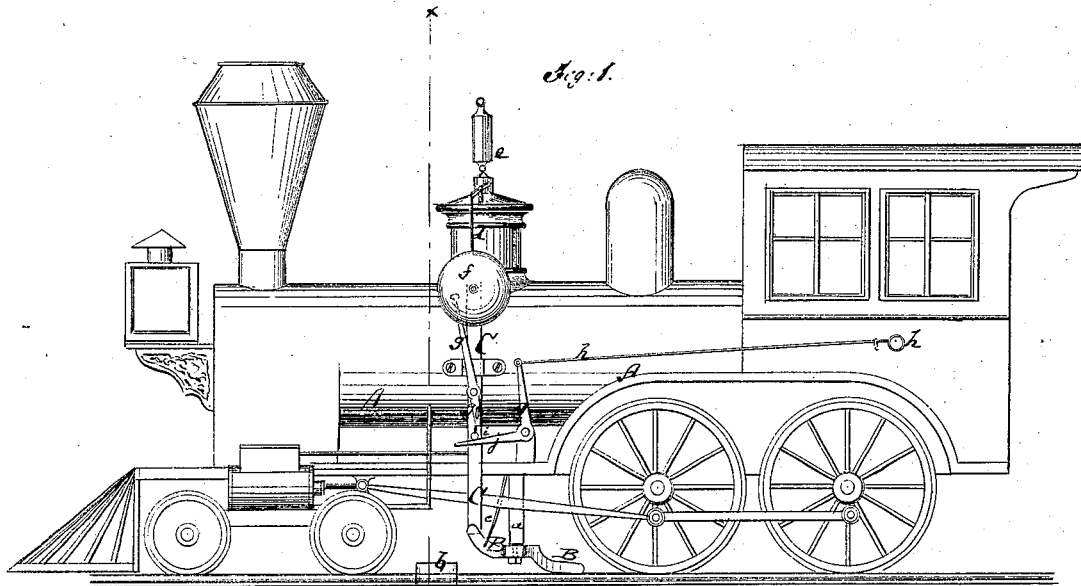


R. A. FILKINS.

Alarm.

No. 110,643.

Patented Jan. 3, 1871



Witnesses:

Chas. Nida.
L. S. Mabee

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REED A. FILKINS, OF NORTH ADAMS, MASSACHUSETTS.

Letters Patent No. 110,643, dated January 3, 1871.

IMPROVEMENT IN ALARMS FOR LOCOMOTIVE-ENGINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, REED A. FILKINS, of North Adams, in the county of Berkshire and State of Massachusetts, have invented a new and improved Automatic Alarm-Attachment to Locomotives; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 represents a side elevation of a locomotive, which is provided with my improved alarm-attachment.

Figure 2 is a transverse section of the same, *x x*, fig. 1, being the section line.

Figure 3 is a detail plan view of the fixed stop on the track for operating the alarm.

Similar letters of reference indicate corresponding parts.

This invention relates to a new attachment to locomotive-engines, whereby an alarm will be automatically set in motion at the approach of a curve, bridge, tunnel, or other place where a warning is to be given.

The object of the invention is to make the giving of the necessary alarms on railroads a matter of absolute certainty, and not of mere reliance upon the care and conscientiousness of engineers, and to thereby avoid all the accidents which would happen if the engineers were negligent in the stated direction.

The invention consists in the combination of the alarm apparatus, which may be in shape of a bell or whistle of suitable kind, with a lever for throwing it in gear whenever said lever strikes a fixed stop on the track, and with a bell-crank and handle, whereby it can be thrown out of gear when desired.

A in the drawing represents the body and frame of a locomotive-engine of suitable construction.

B is a lever pivoted to the side of a locomotive, to a pendant or arm, *a*, of its frame.

The lower end of the lever B is close above the track on which the engine moves, and in position to be swung inwardly by means of a stop, *b*, or lug on said track.

c is a spring acting on the lever B, to hold the same in position to be struck by said stop *b*.

O is a vertical slide arranged on the side of the frame A, preferably in form of a straight bar or plate.

Its upper end is, by a cord or link, *d*, connected with an alarm-whistle, *e*, or carries a bell, *f*, and the clapper *g* thereof, or either the bell only or the clapper, as may be found most advantageous.

D is a bell-crank pivoted to the side of the locomotive, and connected with a rod or handle, *h*, which extends back to within easy reach of the engineer, enabling the same to swing the bell-crank.

i is a pin projecting from the slide O above the arm *j* of the bell-crank, as shown.

The operation is as follows:

The lower end of the slide rests upon and is supported by the upper part of the lever B, in the manner shown in fig. 1. In this position the alarm apparatus is out of gear. Whenever the lower end of the lever B strikes the stop *b* said lever will be so moved as to drop the slide O, the same being sufficiently heavy to descend by its own weight. Whenever the slide is thus lowered, it will, by its motion, set the alarm into gear, either by raising the valve of the whistle or by bringing the clapper of the bell within reach of the reciprocating cross-head on the piston-rod of the cylinder, or with the link-motion of the slide-valve, or in other suitable manner. The alarm will then be sounded as long as the slide remains lowered and the engine in motion. When the slide O descends, as aforesaid, its pin *i* drops upon the arm *j*, or carries down with it said arm *j* of the bell-crank. Whenever, by means of the handle *h*, the bell-crank is swung to elevate the arm *j*, the slide O and all its appendages will also be elevated to throw the alarm out of gear. The spring *c* throws the lever B under the slide when the same has been elevated, as aforesaid, and holds the parts in the first-described position, ready to be again thrown in action by contact with a stop, *b*.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The combination of the slide O with the lever B and bell-crank D, all arranged on a locomotive-engine, substantially as and for the purposes herein shown and described.

REED A. FILKINS.

Witnesses:

GEO. W. MABEE,
ALEX. F. ROBERTS,