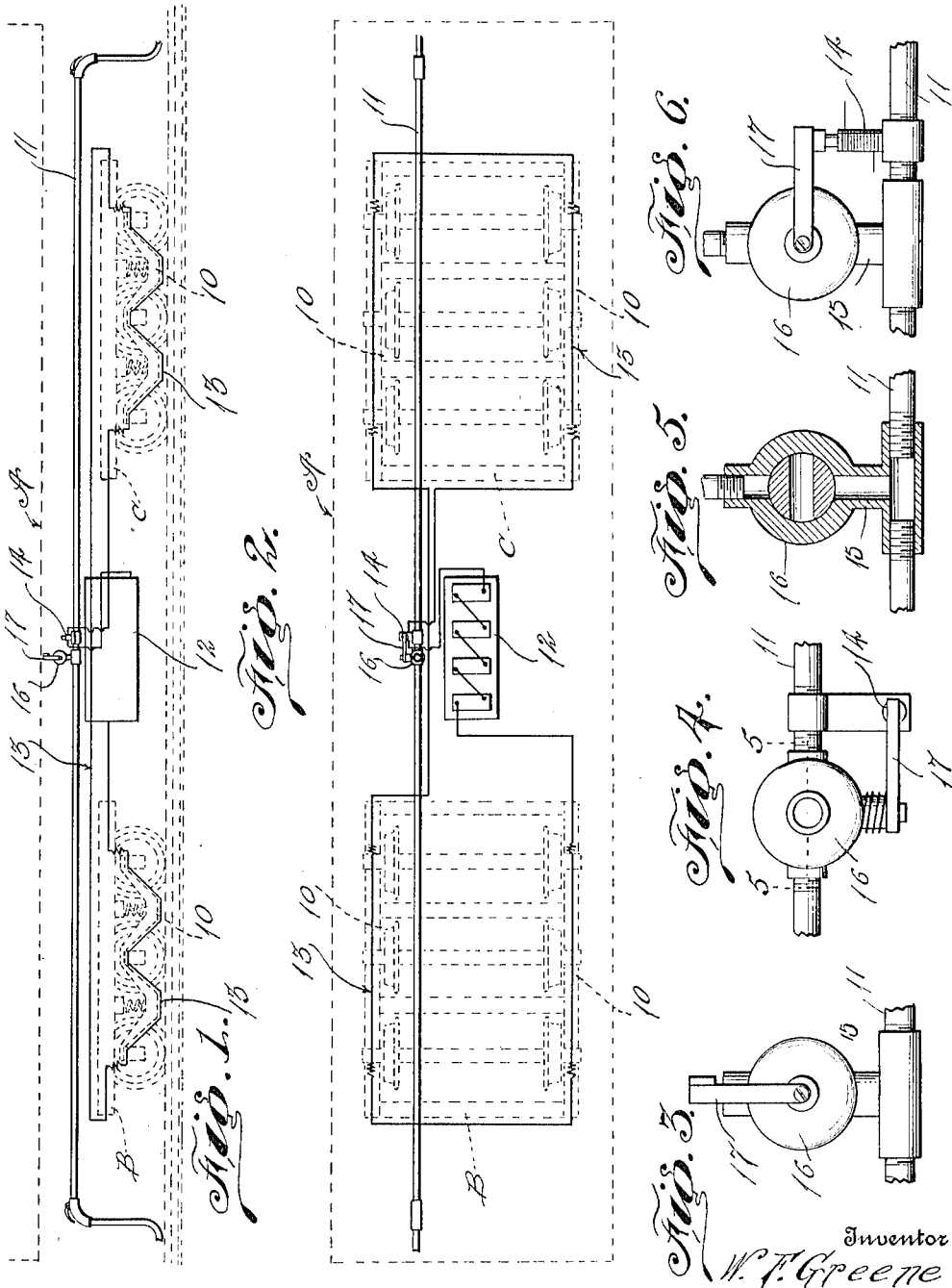


W. F. GREENE.
SAFETY DEVICE FOR RAILROAD TRAINS.
APPLICATION FILED AUG. 16, 1912.

1,064,142.

Patented June 10, 1913.



Witnesses
J. O. S. S. S.
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By *[Signature]* *[Signature]*

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM F. GREENE, OF HUNTINGDON, PENNSYLVANIA.

SAFETY DEVICE FOR RAILROAD-TRAINS.

1,064,142.

Specification of Letters Patent.

Patented June 10, 1913.

Application filed August 16, 1912. Serial No. 715,481.

To all whom it may concern:

Be it known that I, WILLIAM F. GREENE, a citizen of the United States, residing at Huntingdon, in the county of Huntingdon, State of Pennsylvania, have invented certain new and useful Improvements in Safety Devices for Railroad-Trains; and I do hereby 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 appertains to make and use the same.

This invention relates to safety devices for railroad trains.

The object of the invention resides in the provision of a safety device for railroad trains which includes electrically controlled means for effecting the sounding of a signal upon the breaking of any of the arch bars of the various trucks which support the cars of the train whereby ample warning will be transmitted to the engineer of the dangerous conditions existing and enable him to stop the train before a serious accident occurs.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and particularly pointed out in the appended claim.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which

Figure 1 is a side elevation of the bottom of a car showing the improved device applied, all of the parts of the car being shown in dotted lines with the exception of the electrical apparatus, train pipe air line and the valve controlled by the electrical apparatus for supplying air to a signal located in the cab of an engine. Fig. 2 a plan view of what is shown in Fig. 1. Fig. 3 an enlarged side elevation of the electrically controlled valve of the device, with the valve in open position. Fig. 4 a plan view of the electrically controlled valve in closed position. Fig. 5 a section on the line 5-5 of Fig. 4, and Fig. 6 a side view of the electrically controlled valve showing the parts thereof in the position they would occupy when the arch bars of the truck are intact.

Referring to the drawings, A indicates generally the body of a car and B and C the

front and rear trucks supporting said body. These trucks B and C are provided at each side with arch bars 10 of the usual and well known construction.

Extending longitudinally of the car body A between same and the trucks B and C is the usual train pipe 11 of an air brake system. Supported beneath the car between the trucks B and C is a box 12 in which is disposed a plurality of batteries not shown. The current generated by the batteries within the box 12 is conducted through a wire 13 which extends contiguous with and beneath the arch bars 10 of both of the trucks B and C. This wire 13 is held against the arch bars in any suitable manner so that upon the breaking of any of the arch bars the wire 13 will also be severed. Included in the circuit of the batteries within the box 12 and supported upon the train pipe 11 is a magnet 14 and leading from the train pipe adjacent said magnet 14 is a branch pipe 15 which is adapted to conduct air from the train pipe to the cab of the engine for the purpose of sounding a signal to the engineer at that point. Disposed in the branch pipe 15 is a valve 16 provided with an operating handle 17 which constitutes the armature of the magnet 14.

Under normal conditions the valve 16 is held in closed position by means of the magnet 14 attracting the free end of the operating handle 17 thereto. As soon however as one of the arch bars 10 becomes broken for any cause the wire 13 will also be broken which will result in cutting out the circuit of the magnet 14 and deenergizing the latter. As soon as the circuit of the magnet 14 is broken the handle 17 will move to the position shown in Fig. 6 under the influence of a spring 18 so as to open the valve 16 when the air in the train pipe will pass through the pipe 15 and sound a signal in the engine cab, effect initial application of the brakes and permit the engineer to at once shut off the throttle and avoid the possibility of serious accident.

What I claim is:—

In a safety device for railway trains the combination of a car, trucks supporting said car and including arch bars at each side, a train pipe extending beneath the car between the latter and said trucks, batteries supported beneath the car between the trucks, a wire for conducting the current of said batteries, said wire extending contigu-

ous with and beneath the arch bars of the truck whereby the breaking of any of said arch bars will sever said wire, a magnet included in the circuit of said batteries, a
5 branch pipe leading from said train pipe for conducting air to sound a signal, a valve in said branch pipe, a handle on said valve constituting the armature of said magnet and arranged to close the valve when said
10 handle is attracted by the magnet, and

spring means for automatically moving the valve to open position when said magnet is deenergized.

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

WILLIAM F. GREENE.

Witnesses:

ARNOLD GREENE,
R. G. MILLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
