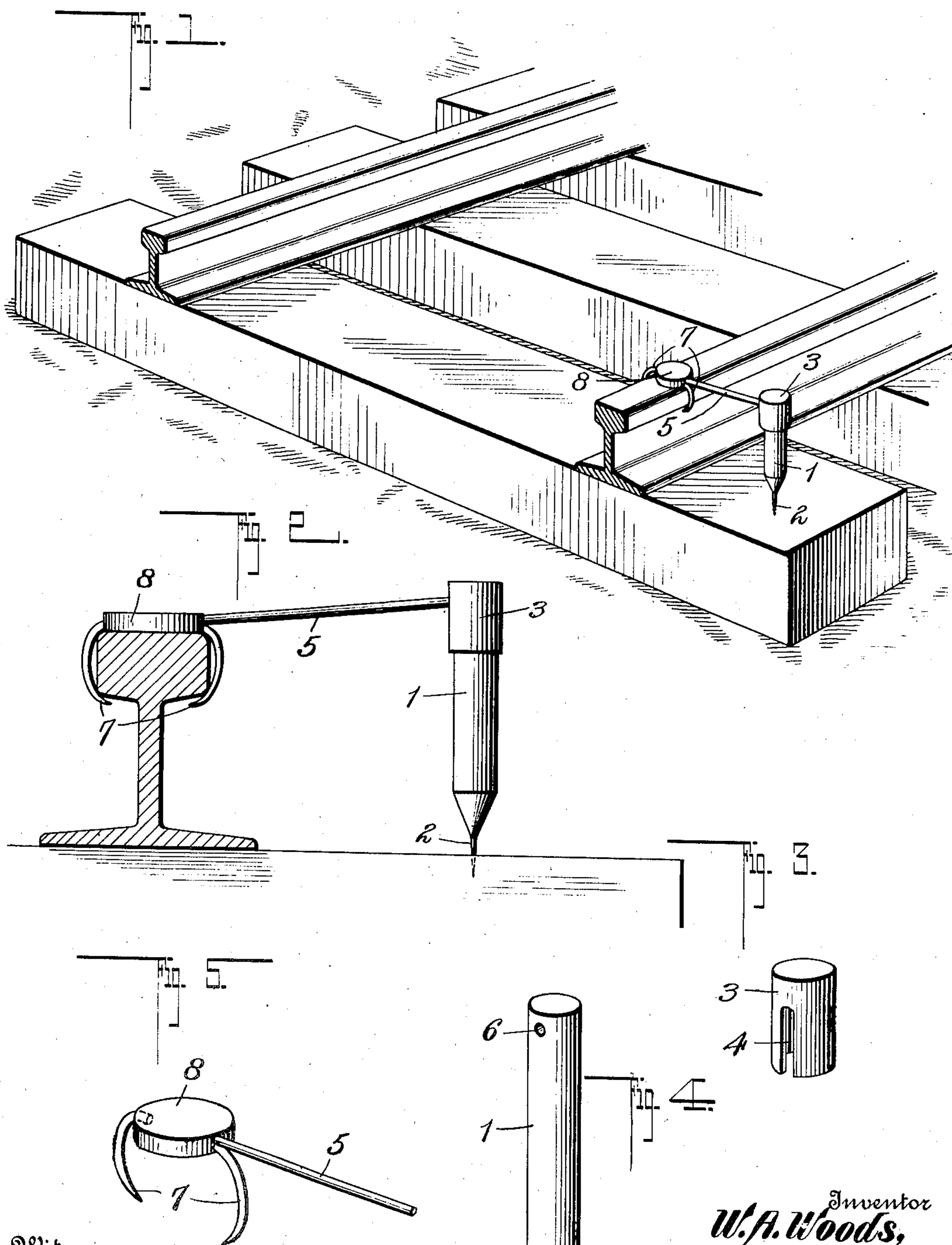


W. A. WOODS.  
SAFETY SIGNAL APPLIANCE.  
APPLICATION FILED FEB. 2, 1910.

983,415.

Patented Feb. 7, 1911.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM A. WOODS, OF MILWAUKEE, WISCONSIN.

## SAFETY SIGNAL APPLIANCE.

983,415.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed February 2, 1910. Serial No. 541,515.

*To all whom it may concern:*

Be it known that I, WILLIAM A. WOODS, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Safety Signal Appliances, of which the following is a specification.

This invention relates to a railroad signal device and consists of a fusee, a lighter, gripping devices carried by the lighter for the purpose of engaging a rail, and a torpedo carried by the lighter when both an audible and visible signal are desired.

The object of the invention is to produce a visible signal in the form of a red glare of light given forth at the same time that a torpedo is exploded and designed to call the attention of the engineer to the signal in case the report of the torpedo was not heard by him. It frequently happens that when the torpedo only is depended upon the report is not as loud as is necessary to attract the attention of the engineer and the signal therefore goes unheeded which would not be the case if in addition to the torpedo a red light was given forth at the same time.

In the accompanying drawings: Figure 1 is a perspective view showing the device in position. Fig. 2 is a side elevation, a rail being in section. Fig. 3 is a detail perspective view of a cap. Fig. 4 is a detail perspective view of a fusee. Fig. 5 is a detail perspective view of the lighter with torpedo attached.

In these drawings, 1 represents the fusee provided at one end with a prong 2 for engagement with the tie and at the other end with a cap 3 which cap is longitudinally slotted as shown at 4 in order that it may fit down over the lighter 5 which lighter projects through a suitable opening 6 into the fusee.

The free end of the lighter is provided with a torpedo 8 and curved gripping prongs 7 adapted to engage opposite sides of the tread portion of the rail, thus preventing vi-

brations of the rail, caused by the jar of an approaching train, dislodging the torpedo and lighter.

The torpedo 8 is applied to the lighter as shown in Fig. 5 and is held by the prongs 7 in position upon the rail tread to be engaged by the wheels.

As will be noted from Fig. 1 the device is dropped upon the outer side of one of the track rails. As the wheels strike the torpedo 8 the same will be set off thus igniting the lighter 5 which in turn will fire the compound carried by the fusee and a suitably colored light will flare up about the engine. At the same time the torpedo 8 will be exploded and the engineer will receive a double signal.

The cap 3 is of the same material as the outer covering of the fuse 5, preferably a readily inflammable paper compound. In constructing a device of this kind the fuse contains a material which also gives out a red light. An engineer upon hearing a torpedo will instinctively look out of the cab window, and very often in stormy weather or during the firing of the furnace he may not be absolutely sure that the sound which attracted his attention was that of a torpedo, but with a device constructed as described above the engineer can have no doubts as to the origin or nature of the sound, since the glare of the red light can readily be seen by him from the window of the cab. This light will also act as a protection for the rear of the train striking the torpedo and brought to a standstill by it.

What I claim is:

A device of the kind described consisting of a fusee, a cap carried thereby, a lighter passing through the side of the cap and into the fusee, rail engaging means carried by the free end of the lighter and a torpedo carried by said lighter.

WILLIAM A. WOODS.

Witnesses:

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