

A. T. CABEEN.
RAILWAY CROSSING SIGNAL.
APPLICATION FILED SEPT. 21, 1909.

1,014,117.

Patented Jan. 9, 1912.

2 SHEETS—SHEET 1.

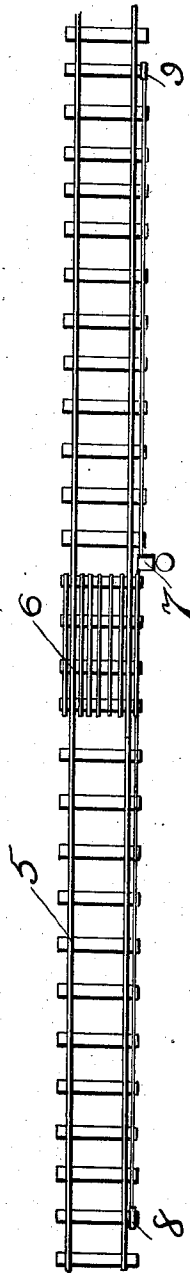


Fig. 1

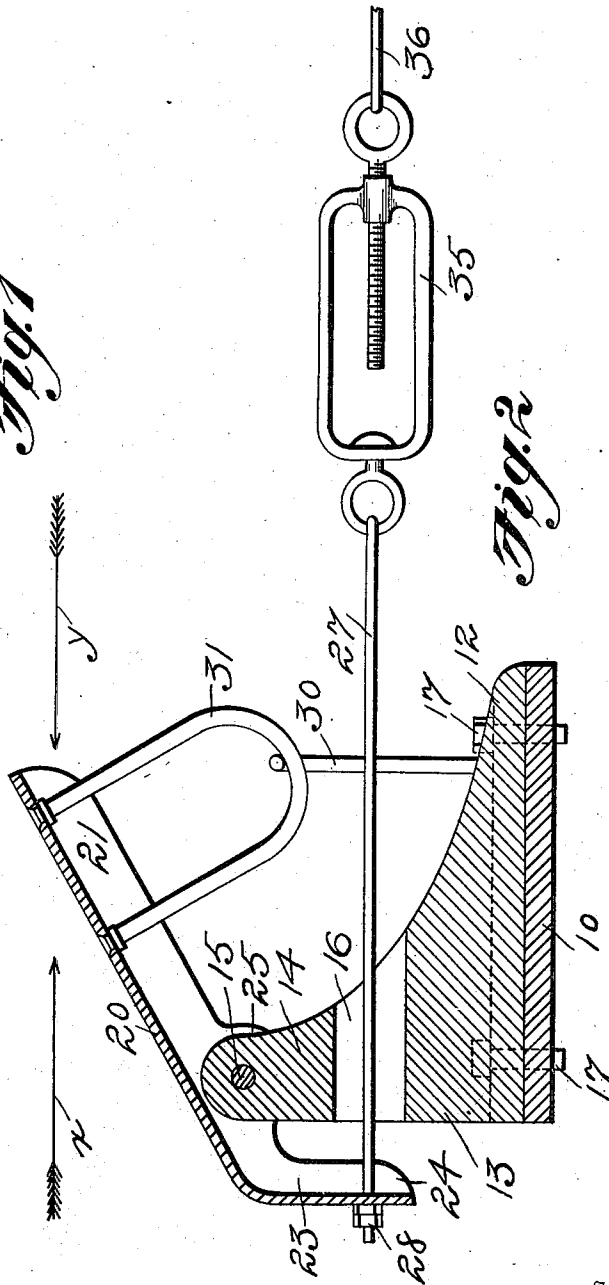


Fig. 2

Witnesses

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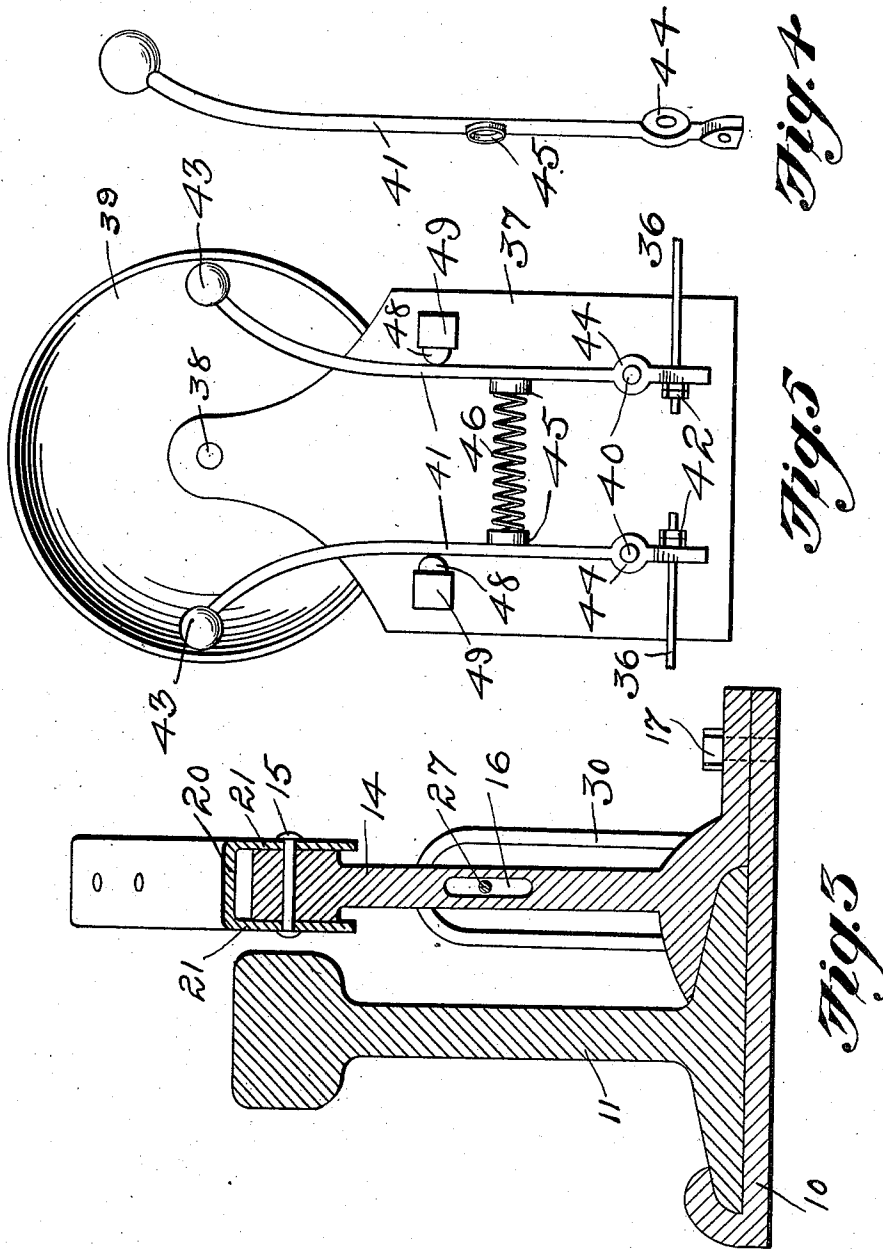
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UNITED STATES PATENT OFFICE.

AARON T. CABEEN, OF ALEDO, ILLINOIS.

RAILWAY-CROSSING SIGNAL.

1,014,117.

Specification of Letters Patent.

Patented Jan. 9, 1912.

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To all whom it may concern:

Be it known that I, AARON T. CABEEN, a citizen of the United States, residing at Aledo, in the county of Mercer and State of Illinois, have invented certain new and useful Improvements in Railway-Crossing Signals, of which the following is a specification.

This invention has relation to certain new and useful improvements in railway crossing signals.

The object of my invention is to provide an audible alarm for railway crossings arranged to be operated by the wheels of the rolling stock passing over the rails.

Another object is to provide a signal of the class described so constructed that the same will be silent when actuated by a car wheel approaching from one direction and be operated when approached from the opposite direction.

With these and other objects in view, the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described and particularly pointed out in the appended claims, it being understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a part of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 shows a top view of a railway disclosing the position and location of my signal, Fig. 2 is an enlarged sectional detail of the trip as used in my invention, Fig. 3 is a transverse sectional view through the mechanism and a rail, Fig. 4 is a perspective view of one of the bell clappers, Fig. 5 is an enlarged detached detail of the alarm bell as used in my invention.

My invention comprises an alarm signal arranged to be placed near a grade crossing, bridge or the like to give notice of the approach of an engine or train.

In the accompanying drawings, the numeral 5 designates a stretch of tracks, 6 a grade crossing, 7 the position of the alarm bell, and 8 and 9 the location of the trips.

To a suitable plate 10 arranged to be secured below the base flange of the rail 11, I secure the stand 13 as used in my invention provided with the outwardly extending base 12. This stand has a reduced head 14, carrying a pivot pin 15 and is further provided

with the horizontally disposed slot 16. The base 12 is held in position by means of the bolt 17. Pivotally held upon the pin 15, is the trip in the form of a lever. The trip 60 comprises the base 20, the two oppositely positioned side flanges 21, the obliquely continued outstanding head 23 which is connected to the flanges 21 by means of the flanges 24, while the ear-forming portion 25 65 is located proximal to the head 23. The ear-forming portions 25 of the flange are apertured to receive the bolts 15 so that this trip may be pivotally held to the stand as disclosed. Passing through a suitable opening 70 within the head 23 is one end of the connecting wire 27, secured by means of the nut 28. Extending upward from the base 12 of the stand, is the staple 30, this staple being arranged for coaction with the staple 31 secured to the under surface of the trip as clearly disclosed in the drawings. The wire 75 length 27 is secured to a second wire 36, by means of the swivel 35. The staples 30 and 31 limit the upward tilt of the trip as shown. 80 To a suitable base 37 carrying a bolt 38, is secured the gong 39 as shown in Fig. 4. This base carries the two supporting pins 40, each pin carrying a similar lever 41 each having an aperture at its lower end arranged 85 to receive the end of the wire 36 which is secured by means of a nut 42. Each lever 41 which is in the form of a clapper is provided with the hammer head 43 arranged to contact with the bell 39, while 90 near the lower end I provide the enlargement or head 44 arranged to receive the supporting pins 40 as shown. Near the upper end each bell lever carries a cup 45, the cups 95 of the two levers being held in spaced relation and are arranged to receive the expanding helical spring 46 this spring being arranged to force the bell levers against the rubber buffers 48 held within the ears 49 as shown in Fig. 4. 100

As shown in Fig. 3, the stand and trip are so positioned that the tread of the wheels will contact with the same. The turn-buckle 35 is given such adjustment that the trip 20 will be tilted in an upward condition 105 against the tension of the spring 46, which is sufficiently strong to insure the two bell levers 41 being held against their elastic buffers 48, in such a manner as to insure the levers being held in their extreme upper tilted condition. 110

The instrumentalities having been prop-

erly arranged, should a car wheel approach and pass over the trip in the direction of the arrow *x*, the trip after being released, would suddenly fly upward causing the tilting of the bell lever 41 against the tension of the spring 46, and in its return movement the hammer 43 would be brought into contact with the gong 39. Every wheel passing over the trip would insure the gong being struck once. The buffers 48 are so positioned that the hammer heads 43 do not contact with the bell or gong 39 excepting when tripped. This will insure its revibration of the gong. Should the car wheels approach the trip from the direction of the arrow *y*, the trip would be suddenly depressed, but would be gradually released allowing the bell hammer to slowly approach the buffer 48 so that there would be no ringing of the gong when the trip is tilted from the direction of the arrow *y*.

From the foregoing it will be seen that the device is arranged to be used in connection with a single track railroad as well as with a double track road. It will be seen that the signal will only be actuated when the train is approaching the crossing. The device is simple and inexpensive in construction, and both durable and efficient in operation. By means of the turnbuckle 35, the connecting wires or rods can always be held at a proper tension. The wire section 27 is guided within the opening 16, as well as passing through the staple 30.

What is claimed is:

1. In a crossing signal the combination with a stand disposed at a suitable distance from the crossing, of a trip pivotally secured to said stand having a head, said head being inclined upwardly in the direction of the crossing, means limiting the upward movement of said trip, a base, a gong secured to said base, an elastic stop, a pivotally held

bell lever, a spring to normally force said lever against said stop, and an adjustable connection extending from said trip to said bell lever.

2. In a crossing signal, the combination with a stand having a horizontal passage, and disposed at a suitable distance from the crossing, of a trip pivotally secured to said stand having a head, said head being inclined upwardly in the direction of the crossing, a staple extending from said stand, a staple extending from said trip in engagement with said first mentioned staple, a base, a gong secured to said base, an elastic stop, a pivotally held bell lever, a spring to normally force said lever against said stop and an adjustable connection extending from said trip through said horizontal passage and secured to said bell lever.

3. In a crossing signal, the combination with a suitable base, of two pins supported by said base, a bell lever secured to each of said pins, each bell lever having a socket, said sockets being held in spaced relation, a spring having its ends engaged within said sockets, elastic stops, said spring forcing said levers against said stops, a gong, two oppositely positioned stands, a trip secured to each stand and upwardly inclining in the direction of said gong and having a downwardly projecting end, at its lower extremity, a rod connected to said downwardly projecting end of the trip and to one of said levers, a loop on said stand, and a loop on said trip interlinking with said first named loop to limit the upward movement of said trip.

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

AARON T. CABEEN.

Witnesses:

T. C. HAINLINE,
W. P. CRISWELL.