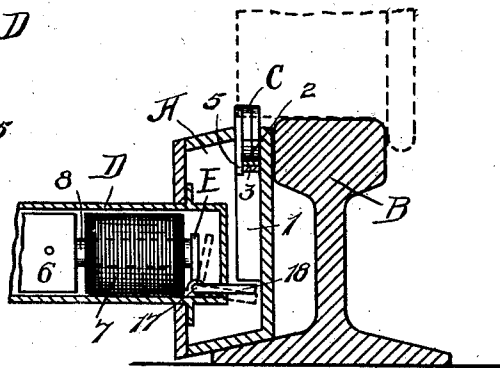
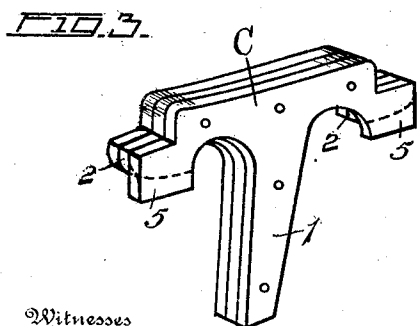
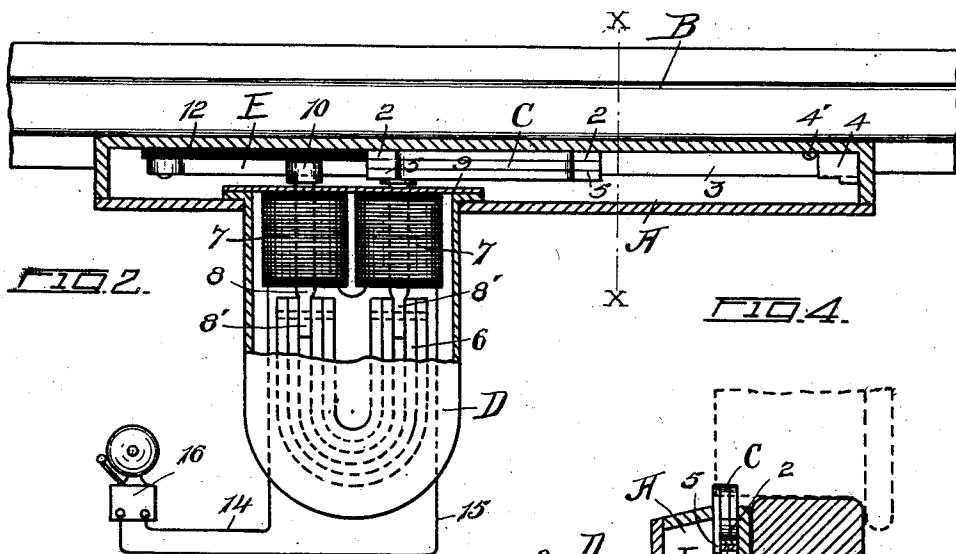
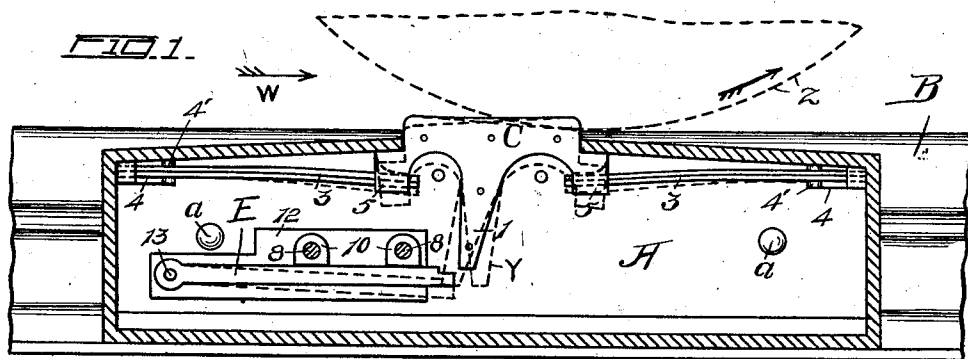


No. 821,801.

PATENTED MAY 29, 1906.

H. A. HOESCHEN.
ELECTRIC RAILROAD SIGNALING DEVICE.

APPLICATION FILED MAY 2, 1905.



Witnesses

Frederick H. Walker.
F. W. Kelle.

By

Inventor,

Henry A. Hoeschen.
Griffin & Larson,
Attorneys

UNITED STATES PATENT OFFICE.

HENRY A. HOESCHEN, OF OMAHA, NEBRASKA.

ELECTRIC RAILROAD SIGNALING DEVICE.

No. 821,801.

Specification of Letters Patent.

Patented May 29, 1906.

Application filed May 2, 1905. Serial No. 258,465.

To all whom it may concern:

Be it known that I, HENRY A. HOESCHEN, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented a certain new and useful Improvement in Electric Railroad Signaling Devices, of which the following is a specification.

The object of my invention is to provide an electric signaling device adapted to be used for railroads and the like and adapted to be operated or actuated by the passage of a train over the track.

Referring to the accompanying drawings, forming a part of this specification, and wherein like characters of reference denote similar parts throughout the several views, Figure 1 shows a central sectional view on line X X of my invention secured to the rail. Fig. 2 shows a plan view thereof with portions broken away. Fig. 3 is a perspective view of the T-shaped head as used in my invention, while Fig. 4 is a cross-sectional end view of a modification of my invention.

In carrying out the aim of my invention I use a suitable housing A, which is secured to the rail B by means of the bolts a. Projecting through the top of the housing A is a movable head C, provided with the downwardly-extending leg 1 and at the extreme ends of the head C with the projections 2 2, against which work suitable springs 3 3, which are suitably secured to the lugs 4 4, and ribs 4' 4', which are secured to the housing A, and which springs 3 are adapted to normally support the movable head C. It will be observed that I provide the projections 2 2 of the head C on one side with the downwardly-projecting lips 5 5 to keep the springs 3 3 from working sidewise in case they should have a tendency to do so.

Suitably secured to the outer side of the housing A, it will be observed, is a housing D, into which is placed my generator, which consists of a plurality of permanent magnets 6 and the electromagnets 7, the permanent magnets 6 being secured to one end of the cores 8, which pass through the electromagnets 7 and through the end 9 of the housing D. In placing my generator within this housing D it will be observed that it is protected from the weather and impossible to get wet from rain or snow.

Secured to the ends 8' 8' of the cores 8 8 are the soft-iron pole-shoes 10 10, against which the armature E is held, which arma-

ture is suitably secured to the insulation 12 by means of the bolt or pin 13, as clearly shown in Fig. 1. Extending from the electromagnets 7 are the wires 14 and 15, which lead to a suitable signaling device 16, adapted to be actuated by the current from the generator, which is generated when the train is passing in one direction only.

In Fig. 4 a modification of my invention is shown in which the armature E is secured to a rock-shaft 17, said rock-shaft and armature both being placed within the housing D to prevent the armature from getting wet and rusting. This rock-shaft 17 is provided with the arm 18, against which the leg 1 of the head C strikes and pushes downward whenever the wheels of the cars pass over the head C in one direction, which thus reciprocates the armature and generates the current in the same manner as shown in Fig. 1, which will now be described.

The operation of my device is as follows: When the wheel Z of a passing train strikes the head C from the side, as shown in Fig. 1, the wheel presses one end of the head C downward, thus pushing the leg 1 of the head C forward and downward, as shown in dotted lines, and thus causing the same to come in contact with one end of the armature E, thus releasing the armature from the pole-shoe 10 10, and as the wheel Z moves over the head C and when it leaves the same it throws the leg 1 in a position as shown by dotted lines Y, after which it is returned to its proper position by means of the springs 3 3, which normally press upward on the lips 2 2 and hold the head C in its proper place. In having the wheels pass over the head C in this manner it will be observed that it reciprocates the armature E, thus generating a current, which is communicated to the signaling device 16, as heretofore described, thus giving notice at a suitable point or crossing of an approaching train.

My signaling device, it will be observed, will only generate a current when the train is going in the direction as shown in Fig. 1, thus causing the signaling device to ring. When a train is going in the direction of the arrow W, it strikes the head C and causes the leg 1 to move forward and downward, as shown by the dotted lines Y in Fig. 1, thus missing the armature E.

In the drawings I have shown the head C as being made of a plurality of plates, one of the outer plates having the square projec-

tions or lips 5 5 and the other plates having the lower part of the projections or lips 2 curved, as shown. My object in having the head C made of a plurality of plates is that in case one of the head-plates C should happen to be broken it would not affect the operation of the same. Further, it can be readily noticed that a head could be replaced. Although I have shown the same comprised a plurality of sections or plates, I desire to reserve the right to make the head C out of one piece, if so desired.

In case the aforesaid movable head C, provided with the downwardly-extending leg 1, is pressed downwardly in use with semaphores, switches, and gates the leg 1 is so arranged that when the movable head C is pressed downward suitable spring-terminals may be brought into contact by means of aforesaid leg, thus forming a circuit for operating said semaphores, switches, and gates.

It is of course understood that my invention can be made of any suitable material or any size desired, and the same can be used in connection with semaphores, switches, and gates.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent, is—

1. In a railroad signaling device, the combination with the electric generator, the armature, the movable head provided with the downwardly-projecting leg for reciprocating said armature when depressed by passing ve-

hicles, and springs for normally supporting aforesaid movable head, substantially as specified.

2. A railway signaling device comprising a suitable housing, of an electric generator, a pivotally-supported armature, a movable head partly projecting through and beyond the top of aforesaid housing, springs adapted to normally support said movable head at its extreme ends, said head being provided with a downwardly-projecting leg, said leg when pressed downward and forward by the passing car-wheels, adapted to reciprocate aforesaid armature, substantially as and for the purpose set forth.

3. In a railway signaling device, the combination of a suitable housing secured to the rail, a second housing secured to said first housing, an electric generator such as described and shown held within said second housing, a pivotally-supported armature adapted to be reciprocated by means of the aforesaid head operated by the passing car-wheels, causing a current to be generated which is communicated by means of wires to a suitable alarm, suitable springs adapted to normally support aforesaid movable head substantially as shown and described.

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

HENRY A. HOESCHEN.

Witnesses:

CHAS. H. VON MANSFELDE,
GRACE M. ROWLAND.