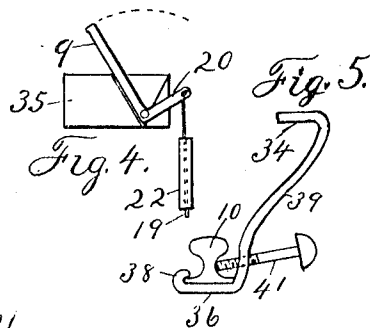
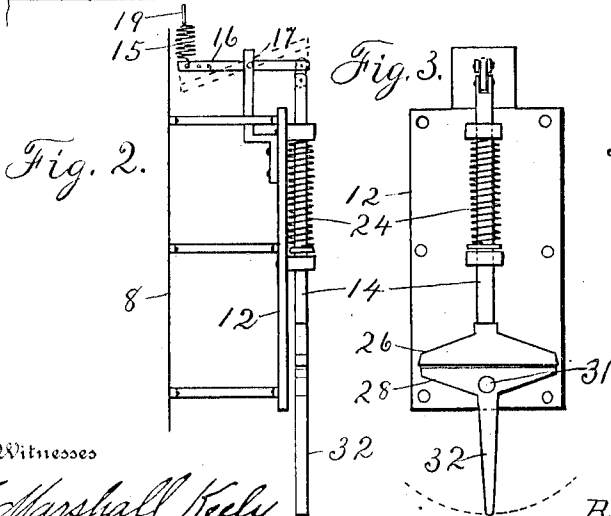
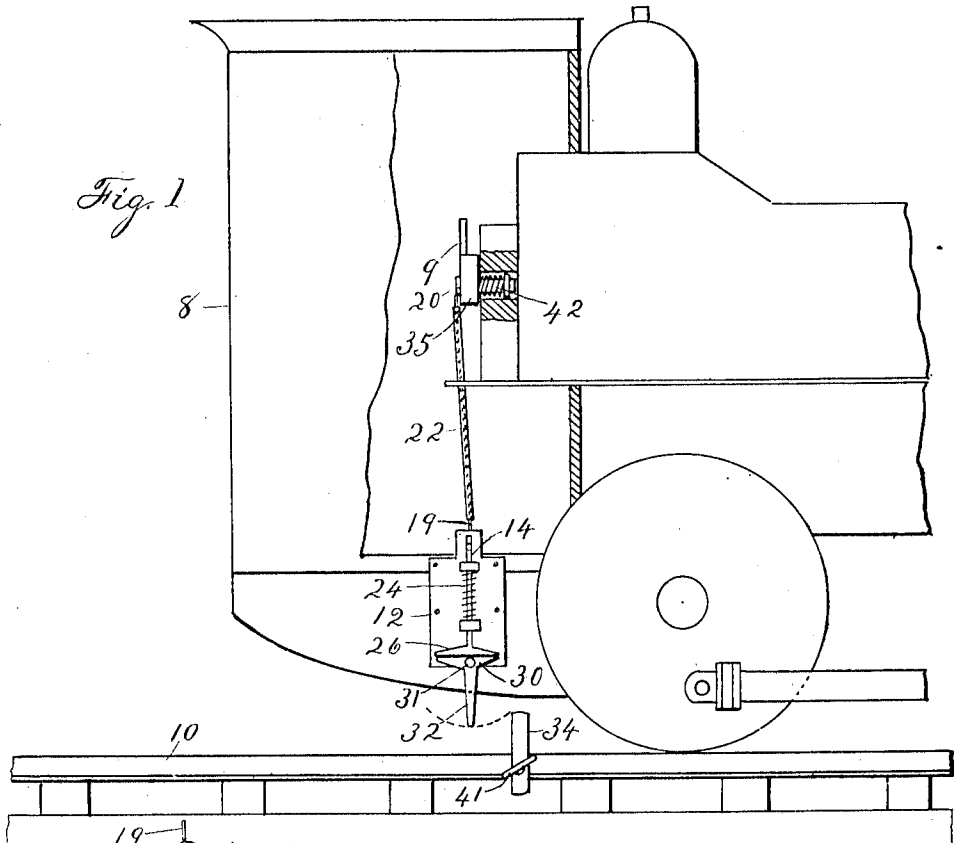


K. W. CARLGREN.
AUTOMATIC TRAIN STOP.
APPLICATION FILED APR. 21, 1909.

949,145.

Patented Feb. 15, 1910.



Inventor

Knut W. Carlgren.

By

Chas. D. Brett

Attorney

Witnesses

Marshall Keely
Harry H. Tweth

UNITED STATES PATENT OFFICE.

KNUT W. CARLGREN, OF SALT LAKE CITY, UTAH.

AUTOMATIC TRAIN-STOP.

949,145.

Specification of Letters Patent. Patented Feb. 15, 1910.

Application filed April 21, 1909. Serial No. 491,209.

To all whom it may concern:

Be it known that I, KNUT W. CARLGREN, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Automatic Train-Stops, of which the following is a specification.

My invention pertains to means for automatically stopping a train of cars, in an emergency, by operating the air brake on the train independently of the engineer or other train man.

The part of the device not on the engine is portable and quickly adjustable in operative position, when conditions require its use. It is especially valuable during a heavy fog or snow storm, when lights or other signals cannot be seen by the engineer, and timely warning cannot be given the engineer of a broken rail, washout, land-slide or other peril to the train.

The accompanying drawings illustrate the invention, Figure 1 being in outline, a vertical side view of part of an engine cab equipped with a portion of the invention and showing another portion on the track beneath; dotted lines indicate different positions of some of the parts. Fig. 2 is a side view of a part of the device. Fig. 3 is a face view of the parts shown in Fig. 2. Fig. 4 is a face view of the brake lever, and Fig. 5 is an edge view of the trip.

In the drawings the reference character 8 designates an ordinary locomotive cab, having an air-brake lever 9.

10 is the track rail on which the engine stands.

12 is a base plate secured to the cab in as nearly a vertical line with the brake lever as is convenient. On this base plate a vertically reciprocating rod 14 is mounted, whose upper end has a link connection with a lever 16, fulcrumed at 17, and with its inner end attached to a spring 15, which connects with a chain or cord 19, which cord is connected to a rigid arm 20 on the brake valve handle 9. A tube 22 is provided in which the cord 19 is movable. A spring 24 on the rod 14, holds the rod movably in its lowest position.

A cross bar 26 on the lower end of rod 14

rests upon the top 28 of a T-shaped lever 30, said lever 30 working on a pivot 31 and having its arm 32 extended downwardly sufficiently to strike, in passing, the trip 34 which is removably attached to the track rail 10. The lever 30 lifts the rod 14, whether moved forward or backward. Until purposely released, the brake lever 9 is held in operative position by its frictional contact with the guide 35, against which it is pressed by the spring 42.

The trip is composed of a body portion 36 extending under the rail 10, and having a flange 38 to engage the inner edge of the bottom of the rail. The outer portion 39 of the trip is bent upward and provided with a threaded hole in which a thumb screw 41 binds the device to the rail. Above the screw 41 the outer portion of the trip is extended upwardly and formed suitably for contact with the lever arm 32 as mentioned above.

The operation of the mechanism, thus described is evident without further explanation.

What I claim and desire to secure, is—

1. An automatic train stop comprising an arm attached to the brake controlling lever, a cord connecting said arm with the inner end of a lever 16 fulcrumed on a base plate, a reciprocating spring rod having a link attachment to the outer end of lever 16, a cross bar on the lower end of said spring rod, a T shaped lever fulcrumed on a pivot on said base plate and whose top is in contact with said crossbar, the lower arm of said T shaped lever being extended downward, and a trip adapted to actuate said mechanism as herein set forth.

2. In an automatic train stop, a lever guide, a brake controlling lever in said guide, means to movably hold said lever in said guide, a short arm on said brake lever, a cord attached to said arm, a lever having one end attached to said cord and its other end attached to a vertically reciprocating rod, and means to actuate said rod, as herein set forth.

3. In an automatic train stop, a lever guide, a brake controlling lever in said guide, a spring 42 to movably hold said lever in said guide, a short arm on said brake lever,

a cord attached to said arm, a tube to protect said cord, a spring 15 attached to the lower end of said cord, a lever having one end attached to said spring 15 and its other
5 end attached to a vertically reciprocating rod and means to actuate said rod, as herein set forth.

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

KNUT W. CARLGREN.

Witnesses:

B. CLEGG,

EVERARD BIEREN, Jr.