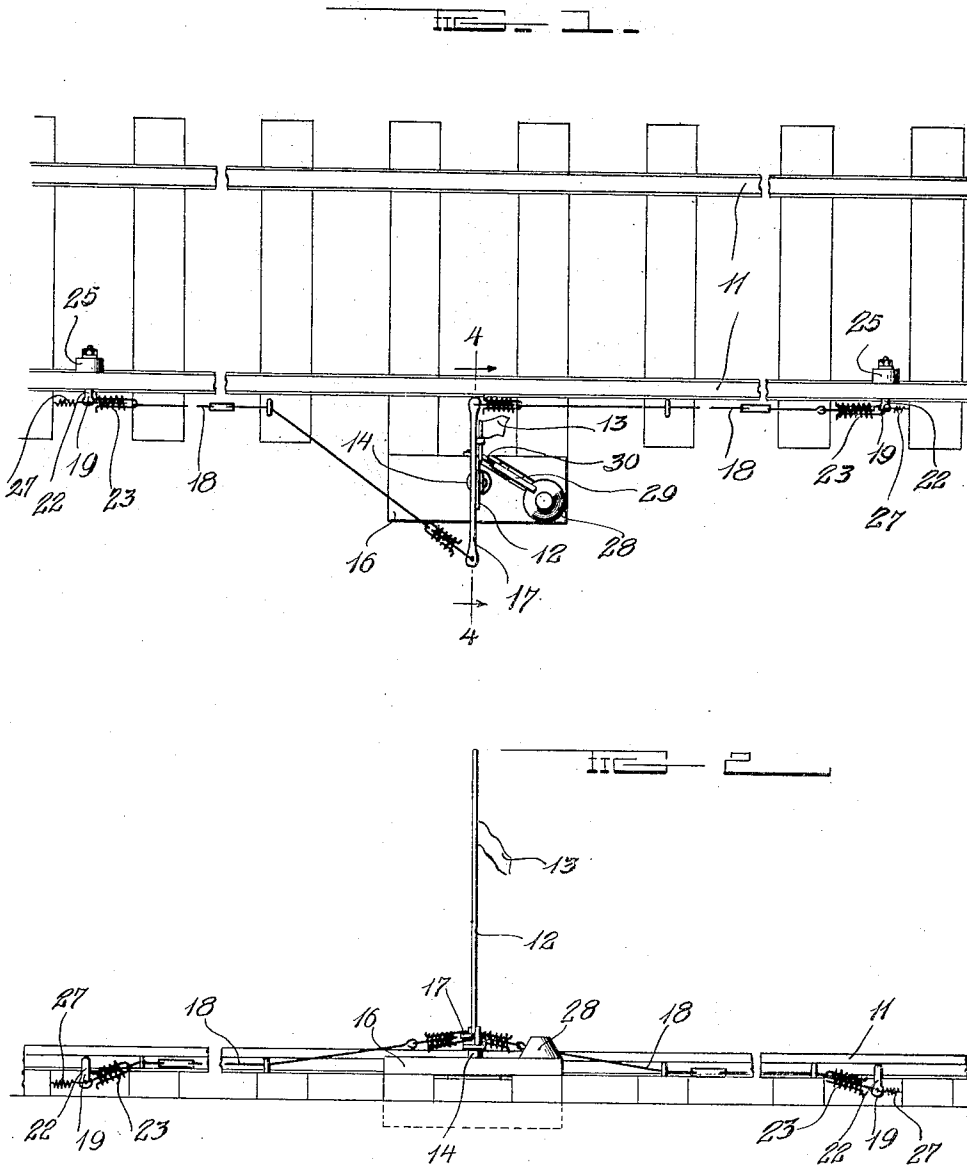


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HIGHWAY CROSSING SIGNAL.  
APPLICATION FILED OCT. 6, 1919.

1,348,696.

Patented Aug. 3, 1920.

2 SHEETS—SHEET 1.



Inventor

Oscar Brown

Witnesses

*[Signature]*

By

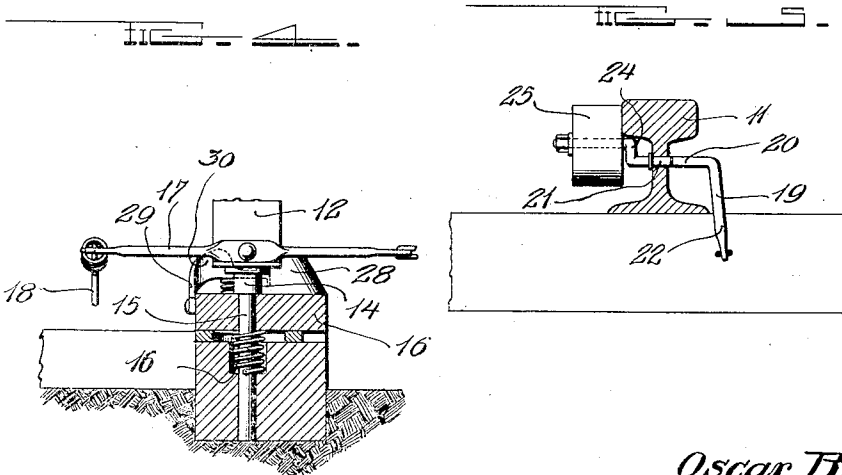
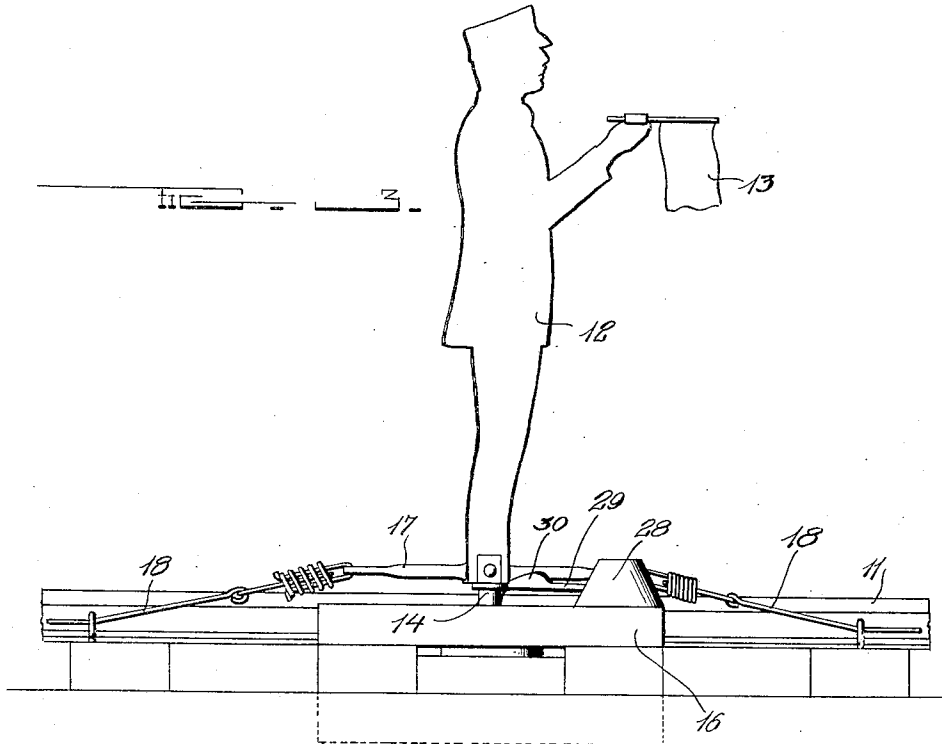
*Victor J. Evans*

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# UNITED STATES PATENT OFFICE.

OSCAR BROWN, OF LULA, GEORGIA.

HIGHWAY-CROSSING SIGNAL.

1,348,696.

Specification of Letters Patent.

Patented Aug. 3, 1920.

Application filed October 6, 1919. Serial No. 328,939.

*To all whom it may concern:*

Be it known that I, OSCAR BROWN, a citizen of the United States, residing at Lula, in the county of Hall and State of Georgia, have invented new and useful Improvements in Highway-Crossing Signals, of which the following is a specification.

The object of the invention is to provide a relatively simple and comparatively inexpensive grade crossing signaling device adapted for operation by approaching trains of which the wheels are adapted by contact with a trip, suitably located, to cause such operation of the signal as to serve as a warning to pedestrians and drivers following the cross road, sufficiently in advance of the train to avoid the accidents which are common to railway grade crossings, and with this object in view the invention consists in a construction and combination of parts of which a preferred embodiment is illustrated in the accompanying drawings, it being understood that changes in the form, and proportion may be resorted to, within the scope of the appended claim, without departing from the principles involved.

In the drawings:

Figure 1 is a plan view of a signaling apparatus applied in the operative position to a section of railway tracks, and indicating in intersecting relation therewith a grade crossing or highway.

Fig. 2 is a side view of the same.

Fig. 3 is a detail side view showing the visual signaling standard turned to the position to which it is moved by contact of the train wheels with the trip.

Fig. 4 is a detail sectional view to show the relation between the cross arms by which the visual signal is operated and by which the portable signal is sounded.

Fig. 5 is a detail view of the trip showing the railway rail in connection with which it is mounted, in sections.

Located adjacent to a cross road indicated at 10, which intersects the railway of which the rails are indicated at 11, is a signal standard 12, which as indicated in the drawing may be made in the form of a watchman, standing near the line of the track rails and holding a signaling flag 13 or other visual signaling device which is normally held extended transversely over

the line of the track but which is adapted to be turned to a position extending across the intersecting highway 10, so as to give a warning signal to a pedestrian or driver approaching on the latter, and to this end said standard is provided with a spindle 14 mounted in a suitable bearing 15 in a boxing or housing 16 supported by or secured in a permanent manner to the cross ties of the road.

Connected with the spindle of the standard is a return spring 16 adapted to hold the standard usingly in its normal or face position while connected to the standard at a convenient distance above the level of the tie is a cross arm 17 from which extends a tension rod or wire 18 adapted to be carried along the track parallel with and preferably close to one of the rails for attachment to and operation by a trip 19 which should be located for example about 300 ft., or more from the crossing. In the construction illustrated, this trip consists of the spindle 20 mounted in a suitable bearing which may be formed in the rail as shown at 21, from one end of which depends an arm 22 for connection as by suitable cushioning springs 23 with the tension rod or wire, and a trip arm 24 preferably provided with an anti-friction roll 25 which is arranged in such a relation to the tread of the rail as to be engaged by the flange of a passing entire wheel.

Connected with the trip is a return spring 27 or the equivalent thereof for normally holding the same in its position with the contact roll in the path of a wheel flange and adapted to return the trip promptly to said position upon the release by a wheel, the vibratory movement of the trip caused by the successive contacts of succeeding wheels with the trip roller serving through the successive trains upon the rod or wire to actuate the cross arm and thus vibrate the standard rotatably to cause such a movement of the signaling device as to attract attention from the cross road. In the construction illustrated, the mechanism above described, so far as the trip and connection with the cross arm are concerned is duplicated, so as to be applicable to a single track railroad, but obviously on a double track road it is necessary to arrange the trip only in such relation to the signal standard as to

be actuated by a train approaching the cross road.

Conveniently located, either in or on the casing or housing as shown in the drawing is a signal bell or gong 28 adjacent to which is located a pivotal lever 29 forming a hammer for contact with the bell or gong, and said lever is preferably provided with a cam 30 arranged in the path of the cross arm of the standard, so that as the latter is vibrated said arm comes in contact with the cam and thus actuates the hammer or lever to sound the bell. This method of signaling serves to supplement the visual signal in attracting the attention of an approaching pedestrian or driver and under normal circumstances insures the checking of progress in time to avoid the accidents which are common at grade crossings.

It will be obvious that such an apparatus as described can be applied to a railway at a minimum cost both as to installation and maintenance, inasmuch as there is no complicated mechanism to get out of order or

which may possibly be interfered with by accumulations of snow and ice and the like.

Having thus described my invention what I claim as new is:—

A railway crossing signaling device having a base, a standard revolubly mounted upon the base and provided with a lateral signaling arm and a depending spindle, a spring connected with said spindle for yieldingly holding the standard in its normal position, a cross arm carried by the standard, a trip arm having a roller arranged in the path of wheels traversing the track rails, yielding means for holding said trip in its normal position, connections between said trip and the cross arm of the standard and having cushioning spring attachment to the latter, and an audible signaling means carried by the base and having an operating arm movable in a plane perpendicular to and provided with a cam arranged in the path of movement of said cross arm.

In testimony whereof I affix my signature.

OSCAR BROWN.