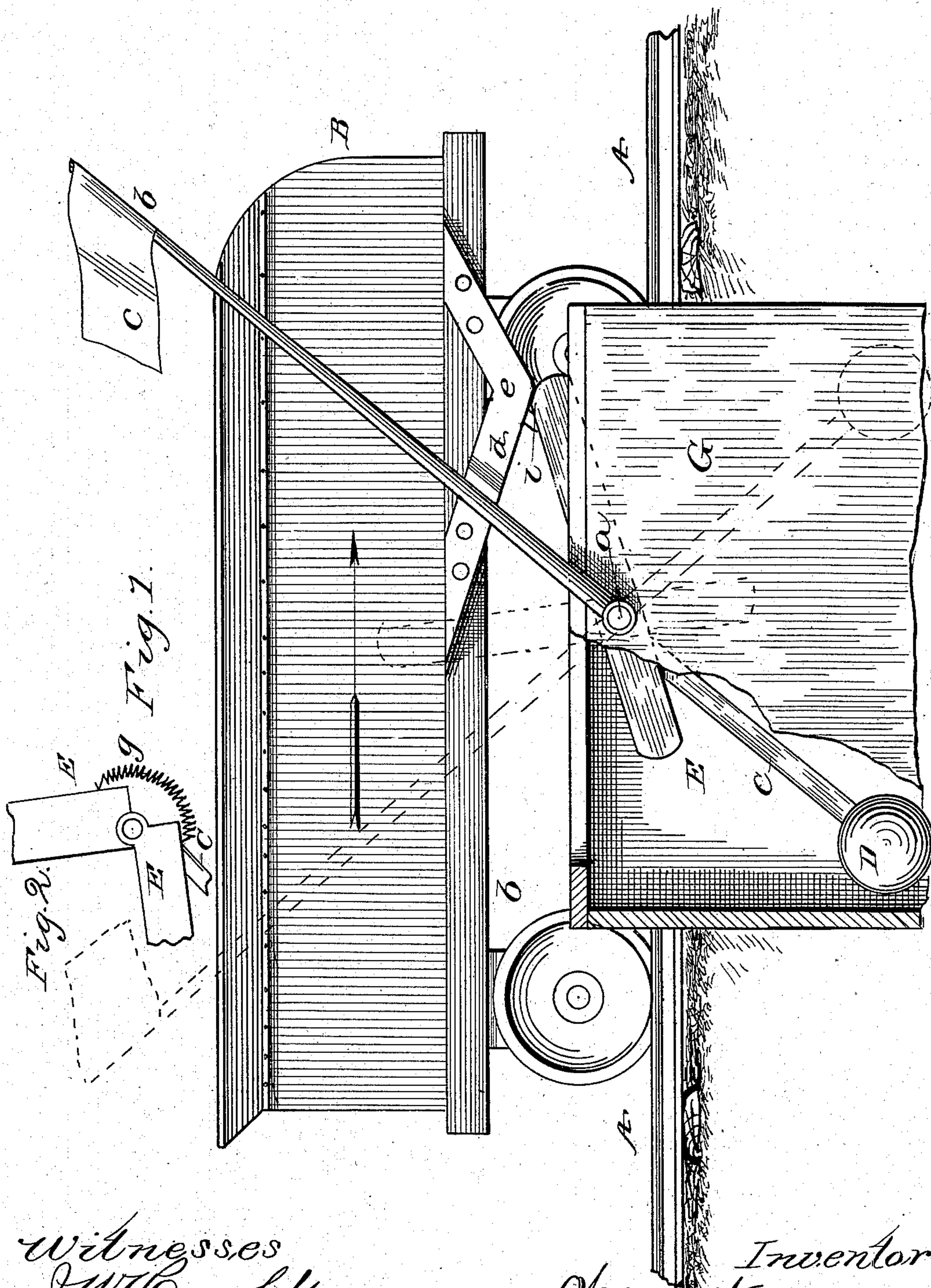


(No Model.)

W. H. WADDELL.
RAILWAY TIME SIGNAL.

No. 288,519.

Patented Nov. 13, 1883.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM H. WADDELL, OF CHARLOTTESVILLE, VIRGINIA.

RAILWAY TIME-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 288,519, dated November 13, 1883.

Application filed April 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WADDELL, of Charlottesville, in the county of Albemarle and State of Virginia, have invented certain new and useful Improvements in Railway Caution-Signals; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My improvements relate to that class of inventions known as "caution-signals" for railroads; and it has for its object to provide means whereby the passage of a train sets in operation a signal, which is designed to vibrate a sufficient length of time to give notice to the engineer of a second train, which may happen shortly to pass thereafter on the same track, of the slight advance of the preceding train, thus giving him a basis upon which to calculate the speed of his train to avoid accident; and to this end my invention consists in locating along the side of the track at various intervals a weighted rod or pendulum suspended on a horizontal shaft, and adapted to be struck by a shoulder depending from the sill or side of the car, said shaft turning with the oscillation of the pendulum, by which a signal-pole is made to swing back and forth, for a purpose hereinafter specified; and my invention consists in other details of construction, all of which will be more particularly hereinafter explained.

Referring to the annexed drawings, Figure 1 is a side view of features embodying my improvements, and by which they are illustrated; and Fig. 2 is a view in detail of one part thereof.

The same letters of reference denote like parts in the figures, wherein—

A represents a portion of a railroad-track, and B a car supposed to be moving thereon. Along the outer side of said track, and as often and at as numerous intervals as may be desired, I propose to locate, in any suitable manner, a weighted rod or pendulum, C denoting the stem, and D the bob or weight. The top end of the stem is formed with or has affixed thereto a cross-piece, E, which cross-piece is not exactly horizontal or at right an-

gles to the stem, but is slanting or oblique thereto, approximating to a T shape. The pendulum above described is suspended on a horizontal shaft, *a*, which is free to turn in suitable bearings, and to the outer end of said shaft is fitted, by a nut-fastening or any equivalent means, a pole, *b*, so that when motion is imparted to the pendulum this pole swings back and forth, it being intended that a flag, *c*, or any sort of signal, shall be affixed to the end, by which the notice of the engineer may be attracted.

The sill *f* of the car B, it is proposed, should be provided with an arm, *d*, which arm is elbowed, as at *e*. Only one car of a train may be thus provided, or as many more as may be desired, it being for the purpose of striking the upwardly-extending end of cross-piece E, and thus impart oscillatory motion to the pendulum. The car is supposed to be moving in the direction indicated by the arrow, the dotted lines showing the movement of the pendulum and pole.

As shown in Fig. 2, the piece E, at the point where it crosses the stem C, is knuckle-jointed, its portions being connected by a spring, *g*. The purpose of this form is that when a train be backed, should the cross-piece not be struck in such manner as to depress it, it will yield at the joint and be restored to its normal inclination by the spring, although in general the depression is the same either in a forward or backward movement of the train, the cross-piece being rounded off on the end, as at *i*, for that purpose.

A suitable hole or trench should be dug of sufficient dimensions and depth to allow free movement of the pendulum, such movement being controlled by the length, and, if desired, may be surrounded with a boxing, G, as a protection from rust and the weather.

The operation will be apparent, as well as its objects. Motion being imparted to the device by a passing train will cause it to oscillate a sufficient length of time to give such notice to another train behind it in case there should not be a reasonable lapse of time between them, and thus give a warning, whereby the danger of accident can be avoided.

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

1. In a caution-signal for railroads, the combination, with the weighted pendulum suspended on a shaft having suitable bearings and adapted to turn therewith, of the flag-pole supported on said shaft, the whole located in a trench at the side of the track, and to operate substantially in the manner described.

2. In a caution-signal for railroads, the combination of the rocking shaft and its bearings, with the flag-pole located on said shaft at its outer end, and the weighted pendulum having the oblique cross-piece at the end of its stem at which it is suspended, said cross-piece extending upward at a sufficient inclination to be depressed by the depending arm of a car, for the purpose set forth.

3. In a caution-signal for railroads, the herein-described combination of the turning shaft with the flag-pole, pendulum, and cross-

piece, said cross-piece being knuckle-jointed at about its middle, and connected by a spring, substantially for the purpose described.

4. In a caution-signal for railroads, the combination of the swinging pendulum having cross-piece, as described, with the rocking shaft and flag-pole located at intervals along the line, the same to be situated over suitable trenches dug therefor and surrounded by the boxing, as set forth and described.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

WILLIAM H. WADDELL.

Witnesses:

B. F. MORSELL,
EDWARD E. ELLIS.