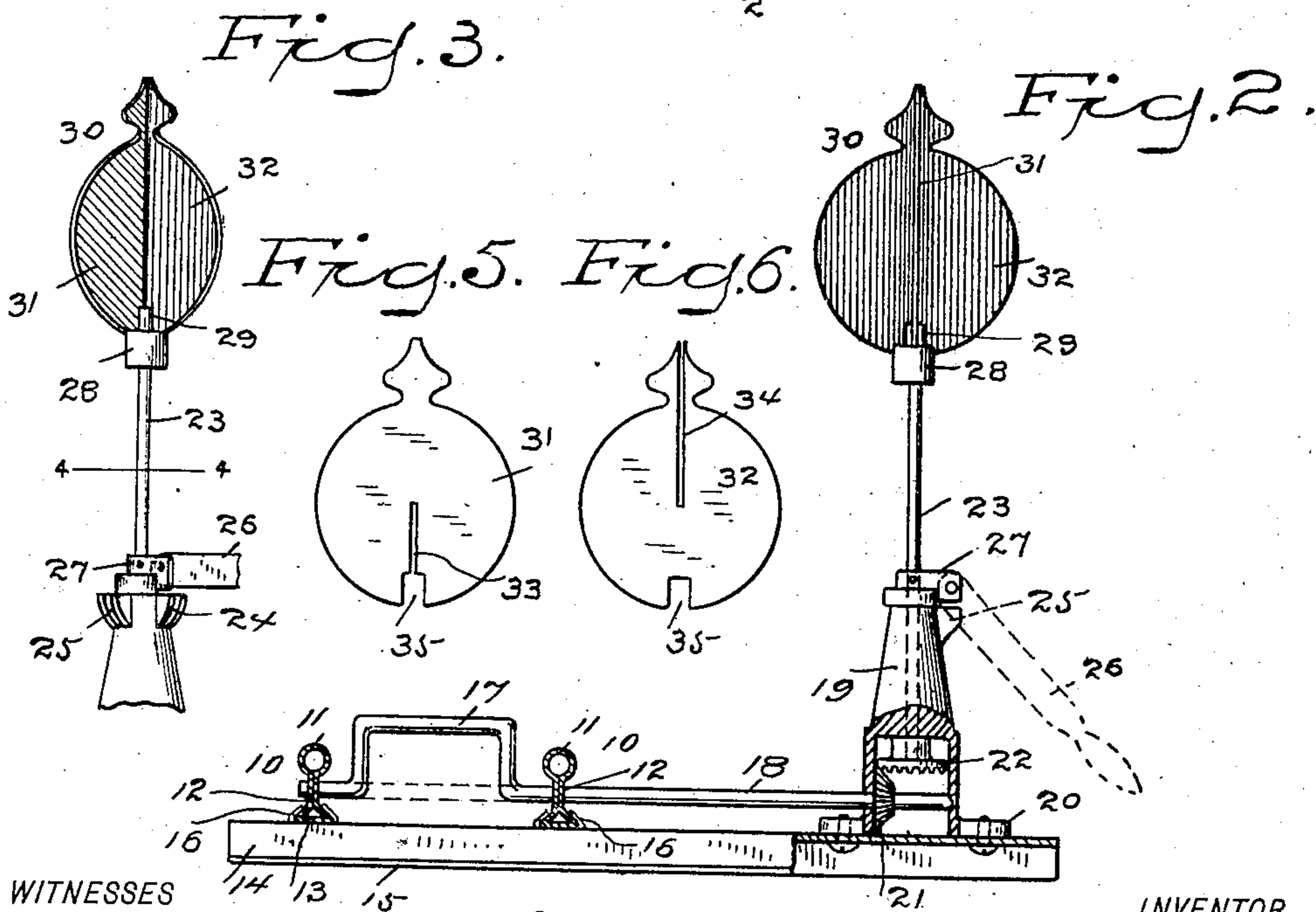
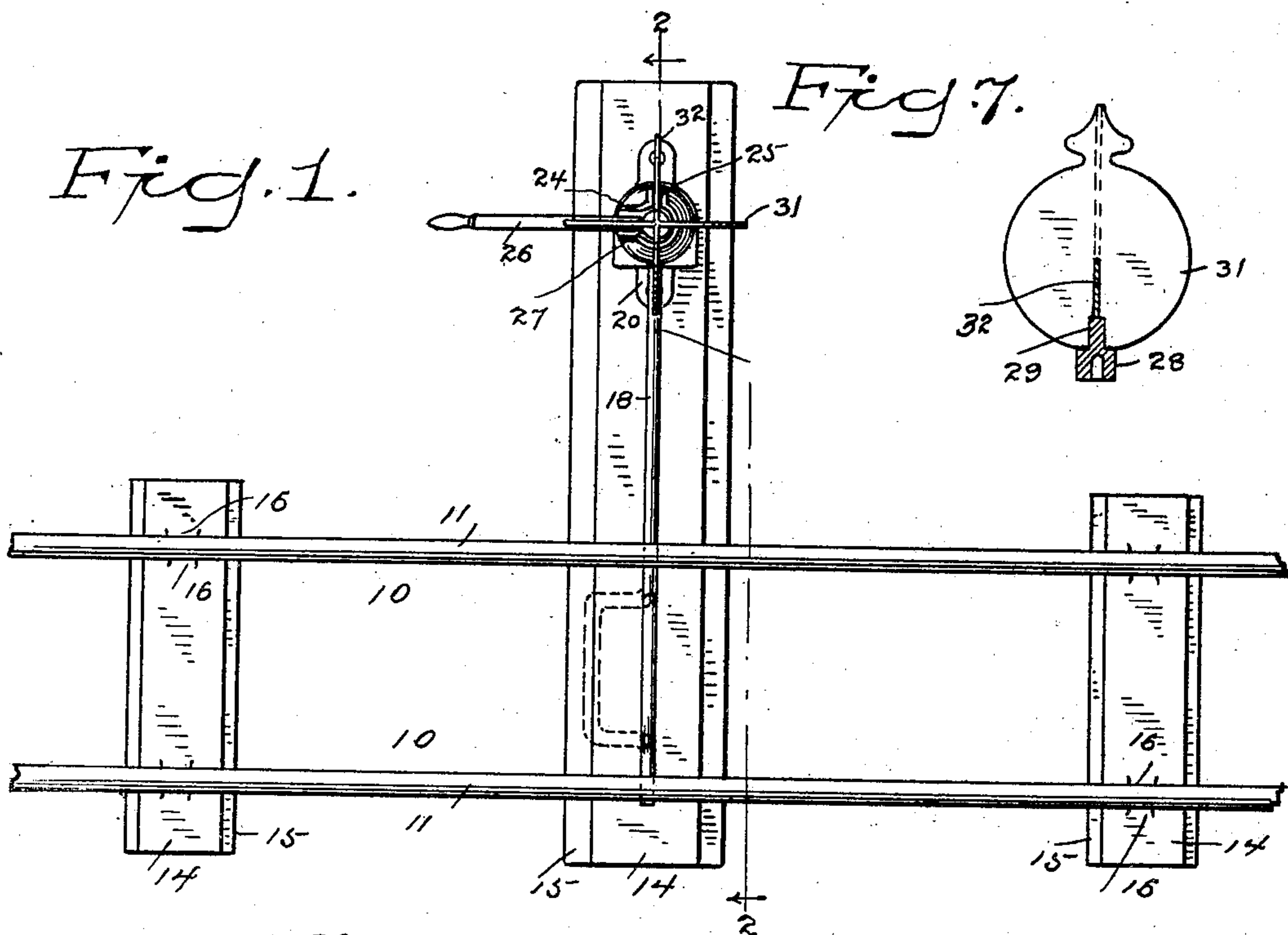


No. 875,427.

PATENTED DEC. 31, 1907.

W. R. HABERLIN.
TOY SIGNAL AND TRAIN STOPPING DEVICE.

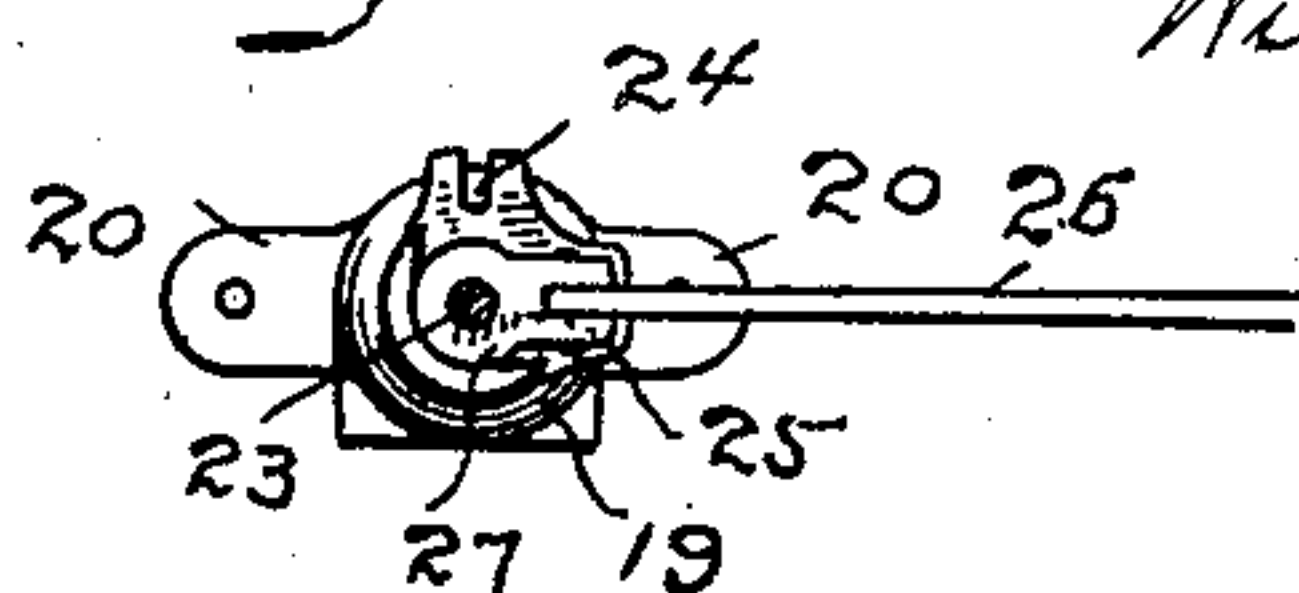
APPLICATION FILED JUNE 1, 1907.



WITNESSES

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Fig. 4.



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TOY SIGNAL AND TRAIN-STOPPING DEVICE.

No. 875,427.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed June 1, 1907. Serial No. 376,767.

To all whom it may concern:

Be it known that I, WILLIAM R. HABERLIN, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Toy Signal and Train-Stopping Device, of which the following is a specification.

This invention has for its object to provide a simple, inexpensive, easily operated and reliable signal and train stopping device for toy railway systems, which shall be so simple and inexpensive to produce as to enable toy railway systems to be provided with this desirable feature without appreciably adding to the cost of construction.

With this end in view I have devised the novel mechanism which I will now describe, referring to the accompanying drawing forming a part of this specification and using reference characters to indicate the several parts.

Figure 1 is a plan view of my novel signal and train stopping mechanism, the bumper appearing in full lines in the stopping position and in dotted lines in the normal or inoperative position; Fig. 2 a section on the line 2—2 in Fig. 1, looking in the direction of the arrows, the bumper and signal mechanism appearing in elevation in the stopping position; Fig. 3 a detail elevation illustrating the signal and the operating and locking mechanism; Fig. 4 a detail plan view of the operating and locking mechanism, the shaft being in section on the line 4—4 in Fig. 3; Figs. 5 and 6 are elevations of the plates comprising the signal detached; and Fig. 7 is a detail view of the signal partly in section and partly in elevation.

10 denotes the rails of a toy railway system, which are made of sheet metal formed to shape, and comprise treads indicated by 11, webs indicated by 12 and flanges indicated by 13.

14 denotes ties which are made of sheet metal, of broadly inverted U-shape in cross section and are provided with outwardly extending flanges 15 which strengthen the ties and provide bearings for the ties and rails upon the floor or ground, while enabling the ties to be made from relatively light metal. The ties are provided with attaching lugs 16 which are formed by striking out tongues from the metal of the ties, leaving one end of each tongue attached to the tie. These at-

taching lugs face each other and are just sufficient distance apart to engage the flanges of the rails upon opposite sides of the webs, as clearly shown in Fig. 2.

17 denotes the bumper which consists of a U-shaped bend in a shaft 18 which passes through the webs of a pair of rails and is adapted to oscillate therein, the bumper lying midway between the rails, as clearly shown in Fig. 2. One end of the shaft is extended outwardly from the rails in which it is mounted to oscillate and the end thereof is journaled in a standard 19. The standard is provided with lugs 20 by means of which it is riveted or otherwise rigidly secured to the tie, the special tie to which the standard is attached being longer and preferably wider than the other ties.

21 denotes a bevel pinion on shaft 18, lying within the standard. This pinion is engaged by a bevel gear wheel 22 carried by a vertical signal shaft 23 which is mounted to oscillate in the standard. The upper end of the standard is provided with notches 24 and 25 which are adapted to be engaged by an operating lever 26 which is pivoted to a collar 27 rigidly secured to the signal shaft. When the operating lever is in engagement with notch 24, the bumper will be locked in the stopping position, as in full lines in Figs. 1 and 2, and when said lever is in engagement with notch 25 the bumper will be locked in the inoperative position, as in dotted lines, and the track will be clear. At the upper end of the signal shaft is rigidly secured a hub 28 which has upon its upper side a smaller central hub 29.

30 denotes a double signal which consists of two plates 31 and 32. Plate 31 is provided with a slot 33 extending from the bottom upward, and plate 32 is provided with a slot 34 extending from the top downward. The lower ends of both plates are provided with recesses 35 which receive central hub 29. The signal is formed by interlocking the plates together at right angles to each other by means of the slots and is secured to hubs 28 and 29 by soldering the parts together. Plate 31 is painted green on both sides to indicate that the track is open, and plate 32 is painted red on both sides to indicate danger. The parts are so assembled that when the red or danger signal shows from either direction

the bumper will be turned upward into position to stop a train, as in full lines in Figs. 1 and 2; and when the green signal shows from either direction the bumper will be in the inoperative position, as in dotted lines, and the track will be clear.

The operation is as follows: Suppose the red or danger signal to be in view and the bumper to be locked in the stopping position, as in full lines, by the engagement of operating lever 26 with notch 24. To open the track the operator raises the lever out of the notch and swings it around outward, giving signal shaft 23 a quarter turn. This swings the bumper from the full line position in Figs. 1 and 2 to the dotted position in said figures and places the green or clear track signal in view, in which position it is locked by swinging the operating lever downward into engagement with notch 25. When the red or danger signal is in view and the bumper is in the raised or operative position, a train of cars running in either direction will be brought to a standstill by engagement with the bumper.

Having thus described my invention, I claim:

1. A device of the character described comprising a shaft provided with an integral bumper, an oscillatory shaft carrying a double signal comprising red and green plates, for the purpose set forth, and operating connections between said shafts.

2. A device of the character described comprising a pair of rails, a shaft mounted to oscillate therein and provided with an integral U-shaped bend to form a bumper, an oscillatory signal shaft and connections whereby the bumper is operated by oscillation of the signal shaft.

3. A device of the character described comprising a pair of rails, a shaft mounted to oscillate therein and provided with an integral U-shaped bend to form a bumper and a bevel pinion, a standard in which the end of the shaft is journaled and a signal shaft mounted to oscillate in the standard and provided with a bevel gear wheel meshing with the pinion on the bumper shaft.

4. A device of the character described comprising a pair of rails, a shaft mounted to oscillate therein and provided with an integral bumper, a shaft carrying a signal comprising plates set at right angles to each other, said plates being of different colors,

for the purpose set forth, and operating connections between the signal shaft and the bumper shaft.

5. A device of the character described comprising an integral shaft provided with a bumper, a signal shaft, a standard in which the signal shaft is mounted to oscillate, operating connections between said shafts and an operating lever pivoted to the signal shaft.

6. A device of the character described comprising a shaft provided with an integral bumper, a signal shaft, a standard in which the signal shaft is mounted to oscillate and which is provided with notches, a collar secured to the signal shaft and an operating lever pivoted to said collar and adapted to engage the notches to lock the bumper in either the operative or inoperative position.

7. A device of the character described comprising a shaft provided with an integral bumper, a signal shaft, a standard in which the signal shaft is mounted to oscillate and which is provided with notches, a collar secured to the signal shaft, a signal on said shaft comprising plates of different colors set at right angles to each other, and an operating lever pivoted to the shaft and adapted to engage the notches to set either signal and to place the bumper in either the stopping or inoperative position.

8. A toy railway signal comprising a shaft, a hub secured thereto and provided with a smaller central hub, a plate slotted from the bottom upward, a plate slotted from the top downward, said plates engaging each other at right angles by means of the slots and both plates being provided with recesses to receive the central hub.

9. A device of the character described comprising an inverted U-shaped tie having inclined sides and tops attaching lugs, rails secured to the tie by means of said lugs, a shaft mounted to oscillate in said rails and provided with an integral bumper between the rails, an oscillatory signal shaft, operating connections intermediate said shafts and means for operating and for locking the signal shaft and bumper.

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

WILLIAM R. HABERLIN.

Witnesses:

A. M. WOOSTER,
S. W. ATHERTON.