No. 747,880. PATENTED DEC. 22, 1903.

J. FLOSS.

AUTOMATIC SIGNALING DEVICE.

APPLICATION FILED SEPT. 26, 1903.

NO MODEL.

Fig. 1

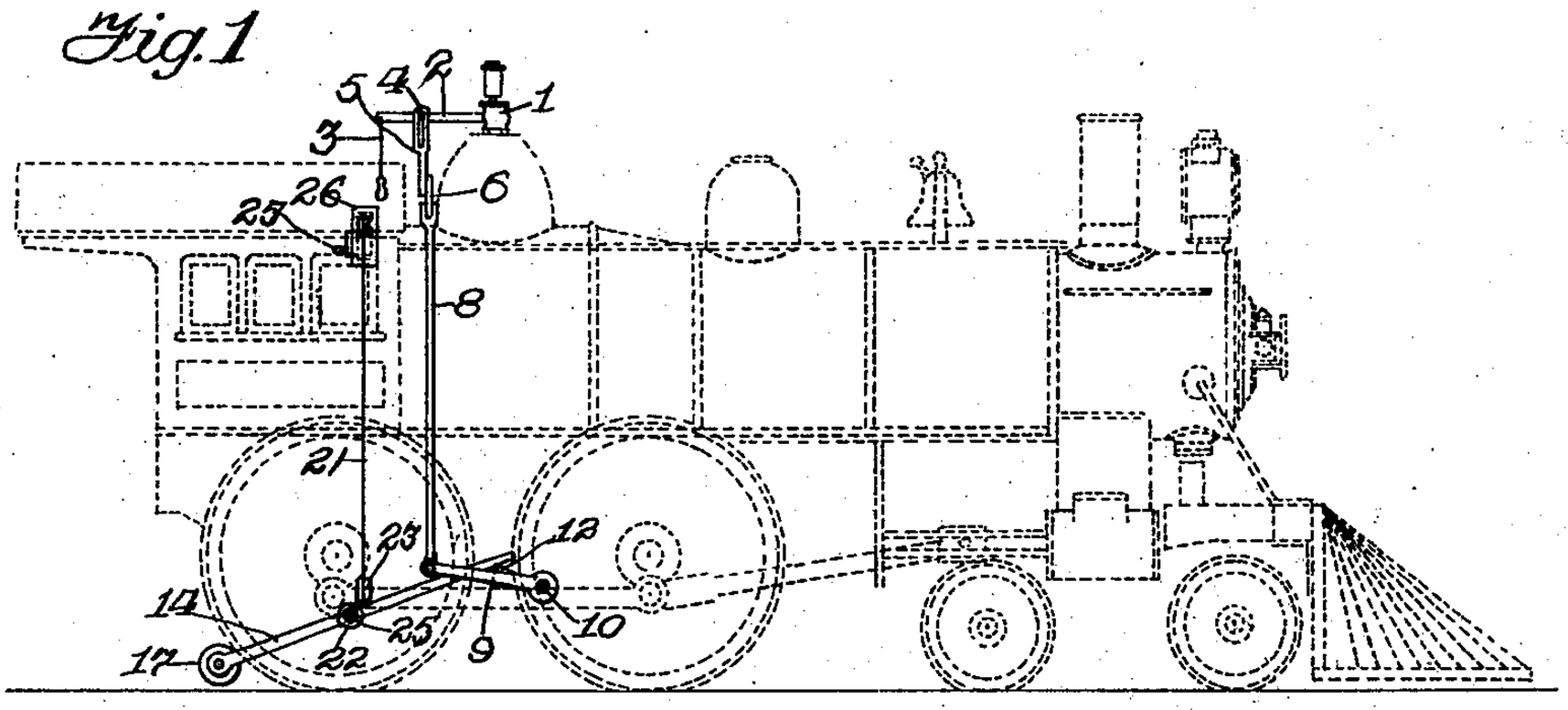

Fig. 2

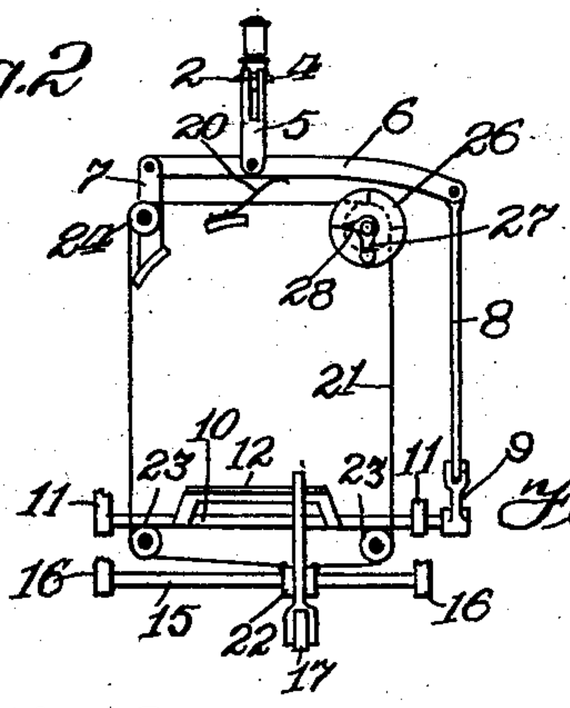

Fig. 3

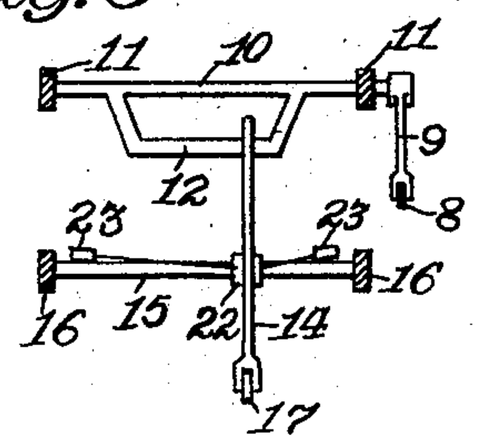

Fig. 4

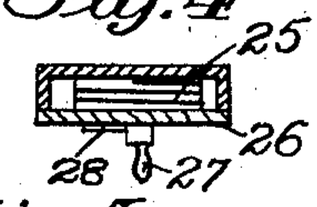

Fig. 5

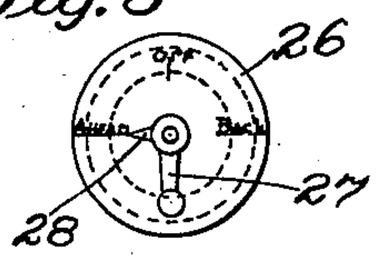

Fig. 6

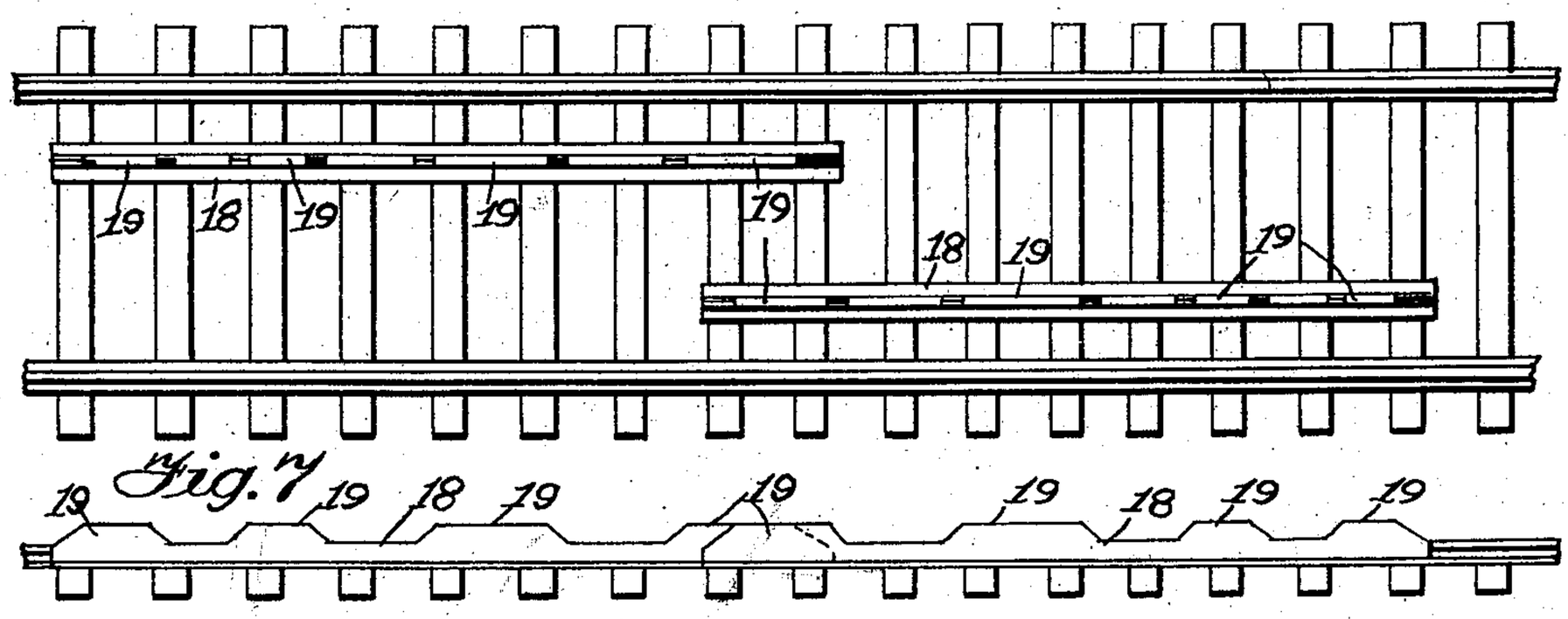

Fig. 7

Witnesses:
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No. 747,880. Patented December 22, 1903.

UNITED STATES PATENT OFFICE.

JOHN FLOSS, OF MEADOW LANDS, PENNSYLVANIA.

AUTOMATIC SIGNALING DEVICE.

SPECIFICATION forming part of Letters Patent No. 747,880, dated December 22, 1903.

Application filed September 26, 1903. Serial No. 174,750. (No model.)

To all whom it may concern:

Be it known that I, JOHN FLOSS, a citizen of the United States of America, residing at Meadow Lands, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Signaling Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in automatic alarms, and relates particularly to the improvements in means for automatically actuating the whistle-lever of a locomotive to sound the whistle at any desired or determined time.

As is well known, accidents frequently happen at railway-crossings owing to the failure of the engineer to give the signal during the approach to the crossing; and my invention aims to provide means whereby this signal will be automatically given without the aid of the engineer, so as to insure the proper warning-signal being given.

While my invention aims to provide means for automatically actuating the whistle-lever, so as to permit the sounding of the whistle, yet it in no wise interferes with the operating of the whistle-lever by the engineer independent of the automatic device when desired.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a side elevation of a locomotive in dotted lines, showing in full lines the application of my improved automatic alarm-sounding device. Fig. 2 is an end view of the apparatus. Fig. 3 is a plan view of a part thereof, showing the supporting-standards in cross-section. Fig. 4 is a sectional view of the winding-drum for the shifting-cords. Fig. 5 is a front elevation of the drum. Fig. 6 is a plan view of a part of the track, showing the third-rail actuating means. Fig. 7 is a side elevation thereof.

In the accompanying drawings, 1 indicates the whistle, and 2 the actuating-lever thereof, to the end of which is attached the usual cord 3, which extends into the cab of the engine to a point convenient for operation by the engineer. In order to operate the lever 2 automatically, I provide in said lever a pin 4, extending therethrough on each side of the lever, and connect with this pin the slotted link 5, bifurcated at its upper end, so as to straddle the lever 2, and having its lower end pivotally connected to the lever 6. This lever 6 has its one end pivotally supported on the bracket 7, attached at a convenient point on the engine, and the other end of said lever 6 is connected by a link or rod 8 to a crank 9, carried on the end of the rock-shaft 10, mounted in standards or braces 11, suitably secured to the engine. The rock-shaft 10 carries a bracket 12, adapted to be engaged by the actuating-lever 14, hinged on the rock-shaft 15, carried in standards or brackets 16, suitably attached to the engine. This actuating-lever 14 carries a roller 17, forming a shoe for engagement with the actuating device or devices that may be located in the track. The track actuating device may of course be of any desired form and may be placed in the bed of the track, so as to give the desired signal at the desired time. The present illustration shows this track actuating means as comprising third-rail sections 18, cams 19 thereon adapted to be engaged by the shoe 17, whereby to cause lever 14 to actuate the lever 2 through the intermediate connections. The parts are held whereby the shoe 17 will normally be in the position to engage with the third-rail actuating means by the action of a spring 20, that bears against the underneath face of the lever 6. The third-rail actuating means is preferably placed in the track, so as to give the desired signal. For instance, as shown, were the train running toward the right two long blasts and two short blasts of the whistle will be given, and were the train running toward the left the same signal would be given by the engagement of the shoe with the opposite third rail.

For crossings, stations, &c., the third rail of course will be constructed to give the desired signal. In order that the device may be made to operate irrespective of the position in which the engine is running—that is, whether running forward or backward—the lever 14 is shiftable on the shaft 15, and to this end I connect the ends of the cord 21 to oppo-

site ends of the head 22 of lever 14 and pass the strands of this cord around pulleys 23, one of the strands around the pulley 24, and both strands around the drum 25, mounted at a suitable point in the engine-cab and the casing of which is provided with a suitable dial 26. The crank 27 for operating the drum is or may be provided with a pointer 28, and the dial-face may have suitable inscriptions thereon, as shown in Fig. 5, so that when the pointer 28 is opposite one of said inscriptions it will indicate the position of lever 14. As shown in Fig. 5, the pointer indicates that lever 14 is in position for engagement with the third rail when the engine is running ahead. When it is not desired to use the device, the crank 27 may be turned so as to move the pointer 28 to the position marked "Off," which will move the lever 14 on its shaft 15, whereby it will pass the third rails in the track without engagement therewith.

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

1. In a device of the character described, the combination with the third rail in the track, the whistle, and the actuating-lever for the whistle, of the slotted link connected to the actuating-lever, a pivoted lever to which said slotted lever is pivotally attached, a rock-shaft, a crank carried thereby, a link or rod connecting the said crank to said pivoted lever, a bracket carried by the rock-shaft, and a lever for engagement with the third rail and bearing against said bracket of the rock-shaft, substantially as described.

2. In a device of the character described, the combination with the third rail, the whistle, the actuating-lever for the whistle, of the slotted link connected to the actuating-lever, the rock-shaft carrying a bracket, the connections between the rock-shaft and the slotted link, the shoe-lever for engagement with the third rail, and the means for shifting said shoe-lever, as and for the purpose described.

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

JOHN FLOSS.

Witnesses:
A. M. WILSON,
E. E. POTTER.