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S. PAVILLARD

TRAIN ACTUATED SIGNAL FOR ROAD AND STREET CROSSINGS

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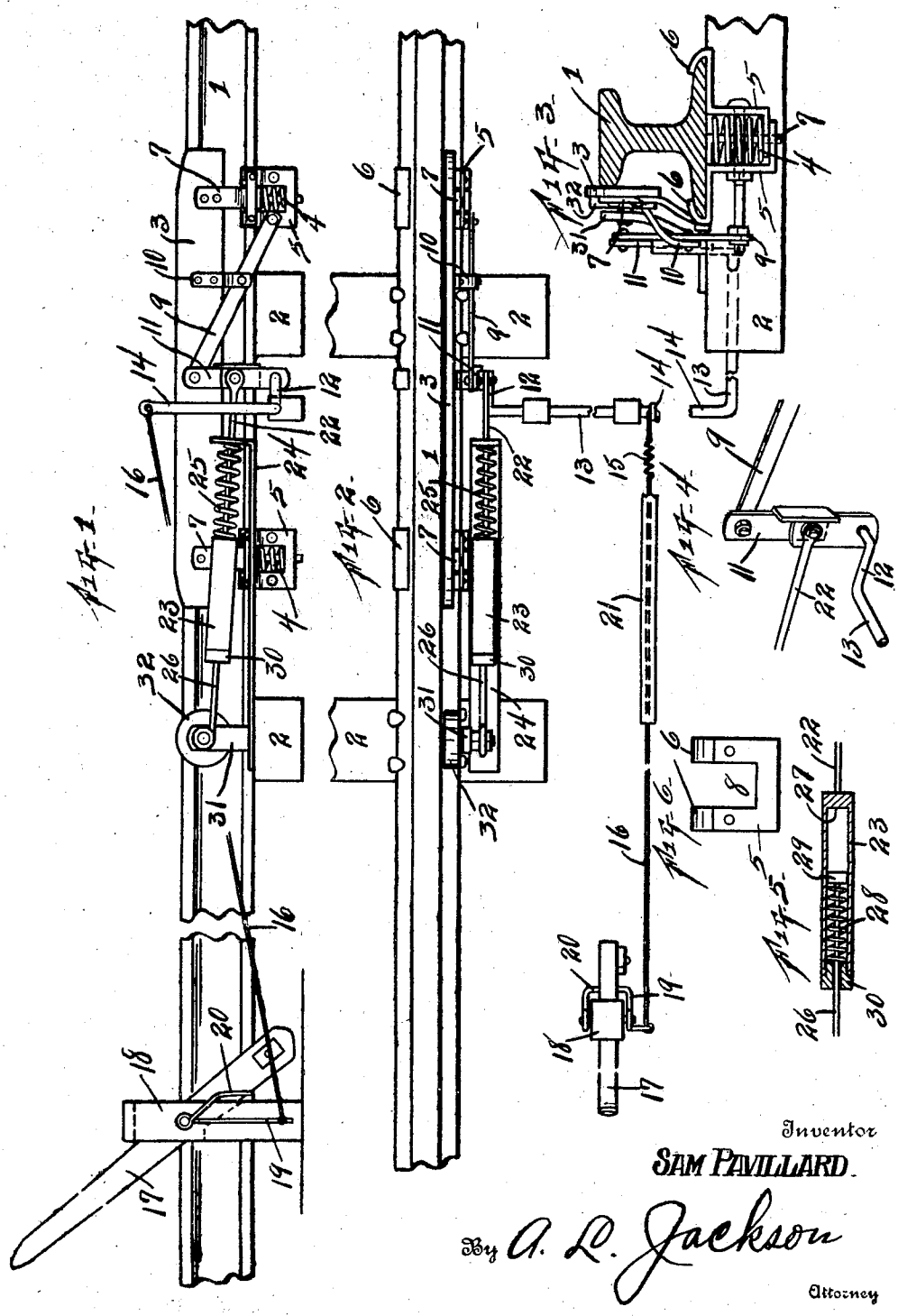

Inventor

SAM PAVILLARD.

By A. L. Jackson

Attorney

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UNITED STATES PATENT OFFICE.

SAM PAVILLARD, OF DECATUR, TEXAS.

TRAIN-ACTUATED SIGNAL FOR ROAD AND STREET CROSSINGS.

Application filed November 30, 1923. Serial No. 677,682.

To all whom it may concern:

Be it known that I, SAM PAVILLARD, a citizen of the United States, residing at Decatur, in the county of Wise and State of Texas, have invented certain new and useful Improvements in Train-Actuated Signals for Road and Street Crossings, of which the following is a specification.

My invention relates to signaling devices for railway crossings; and the object is to provide a simple device to be actuated by passing trains to warn people in time so that they will not attempt to cross the track in front of the train. The advantage of the signaling devices is that they will be automatically actuated by the wheels of the trains and they can be placed far enough away from the crossing to warn people long enough time so that they can stop before going on the tracks. Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application.

Fig. 1 is a side elevation of the signaling devices applied to a railway rail. Fig. 2 is a plan view of the same. Fig. 3 is a cross-section of the rail, showing a part of the signaling apparatus applied thereto. Fig. 4 is a perspective view of the joint breaker. Fig. 5 is a detail view of the spring control. Fig. 6 is a detail view of one of the spring hangers.

Similar characters of reference are used to indicate the same parts throughout the several views.

The drawings show a rail 1 mounted on the usual cross-ties 2. The main actuating bar 3 is supported on springs 4 which are mounted in U-shaped housings 5 which are made in two parts and lapped below the springs 4 and provided with hooks 6 which engage the edges of the rail base, as shown in Fig. 3. The bar 3 is mounted on the depressible supports 7 which extend downwardly and then through slots 8 in housing 5 and thence under the rail 1 to the central part thereof and thence downwardly through the coil springs 4 and thence through the lapped portions of the two part housings 5. This construction supports the bar 3 in position to project upwardly slightly in the path of the wheels of passing trains. There is a bar on each side of the railway crossing and this bar actuates the signalling devices. A lever 9 is fulcrumed on the housing 5 which is towards the approaching train and a strap 10 is pivotally connected to the bar 3 and to the lever 9 and a jointed bar 11 is pivotally connected to the lever 9 and pivotally connected to a crank 12 on a crank shaft 13. The crank-shaft 13 has an upstanding crank 14 to which is connected a spring 15. This spring 15 is connected to a pull rod 16, the spring 15 being for the purpose of preventing sudden hammering on the signaling device. A signal device 17 is pivotally mounted in a post 18. The rod 16 is pivotally connected to a bell crank lever 19 or throwing device and this lever is fulcrumed on the post 18. The lever 19 is provided with an arm or stirrup 20 which is adapted to lift the signal device 17. The rod 16 may run through a pipe or housing 21. The housing 21 protects the rod 16 against interfering devices and also prevents the bending or sagging of the rod and so prevents lost motion.

Means are provided for preventing the operation of the signal by a train after the train has crossed the road or street. A joint breaking rod 22 is pivotally connected to the jointed bar 11 and also connected to the tension housing 23. A spring seat 24 is provided for a spring 25 and the rod 22 runs through the spring seat 24 and through the spring 25. A tension rod 26 is projected into the housing 23 and normally rests against the bottom 27 of the housing 23. A spiral spring 28 in the housing 23 bears against the head 29 of the rod 26 and tends to hold the head against the bottom 27. The tension of the spring 28 is maintained by a plug 30 which is screwed into the housing 23. The rod 26 is pivotally connected to a pivotally mounted standard 31 which carries a roller 32. The spring 28 holds the standard 31 in upright position and the spring 25 holds the jointed bar 11 in upright position. When a train is leaving a crossing, the wheels will strike the roller 32 and cause the rod 22 to break the joint in the bar 11 and this will throw the crank 14 in inoperative position so that the depressing of the bar 3 will not affect the signal 17.

What I claim, is:—

1. A train-actuated signal and means for operating the same comprising a bar to be

actuated by the wheels of passing trains, spring supported uprights carrying said bar, a lever provided with a stationary fulcrum, a strap pivotally connected to said bar and to said lever, a crank-shaft having cranks on the ends thereof, a link bar pivotally connected to said lever and to one of the said cranks, and a pull rod connected to the other crank and operatively connected to said signal.

2. A signal for road and street crossings and means for operating the same comprising a bar to be actuated by wheels of passing trains to be located by a railway rail, spring supported uprights carrying said bar, guiding means for said uprights, a lever fulcrumed at one end, a strap pivotally connected to said lever and to said bar, a crank shaft having cranks on the ends thereof, a link bar pivotally connected to the other end of said lever and to one of said cranks, a throwing device operatively connected to said signal, and a pull rod pivotally connected to the other crank and to said throwing device.

3. A signal for road and street crossings and means for operating the same comprising a bar to be actuated by wheels of passing trains approaching a crossing to be located against a railway rail, uprights attached to said bar, springs supporting said bar, housings for said springs hung on said rail, a lever fulcrumed on one of said housings, a strap pivotally connected to said bar, a crank-shaft having cranks on the ends thereof, a link bar pivotally connected to said lever and to one of said cranks, a throwing device operatively connected to said signal, and a pull rod pivotally connected to said throwing device and to the other crank.

4. A signal for road and street crossings and means for operating the same comprising a bar to be actuated by the wheels of passing trains approaching a crossing to be located against a railway rail, a crank-shaft having cranks on the ends thereof, a lever actuated by said bar, a jointed link bar pivotally connected to said lever and to one of said cranks, a pull rod pivotally connected to the other crank and operatively connected to said signal, and means for throwing said cranks out of operative position to be actuated by the wheels of a train leaving a crossing.

5. A signal for road and street crossings and means for operating the same comprising a bar to be actuated by the wheels of passing trains approaching a crossing to be located close to a railway rail, a crank shaft having cranks on the ends thereof, a lever actuated by said bar, a jointed link bar pivotally connected to said lever and to one of said cranks, a pull rod pivotally connected to the other crank and operatively connected to said signal, and means for throwing said cranks out of operative position including joint-breaking mechanism to be actuated by wheels of a train leaving said crossing for breaking the joint in said link bar.

In testimony whereof I set my hand, this 16th day of November, 1923.

SAM PAVILLARD.