

No. 777,977.

PATENTED DEC. 20, 1904.

G. M. RILEY.
RAILWAY SWITCH.

APPLICATION FILED OCT. 21, 1904.

NO MODEL.

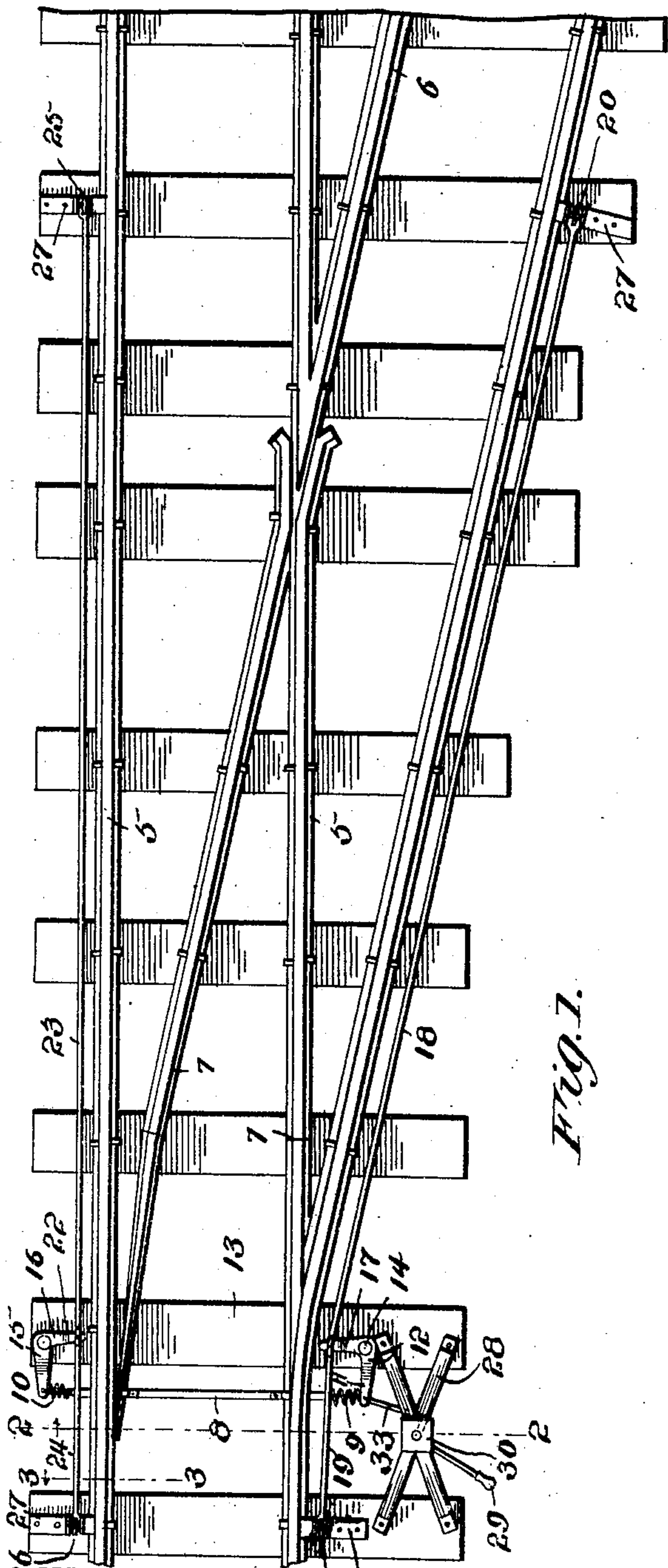


Fig. 1.

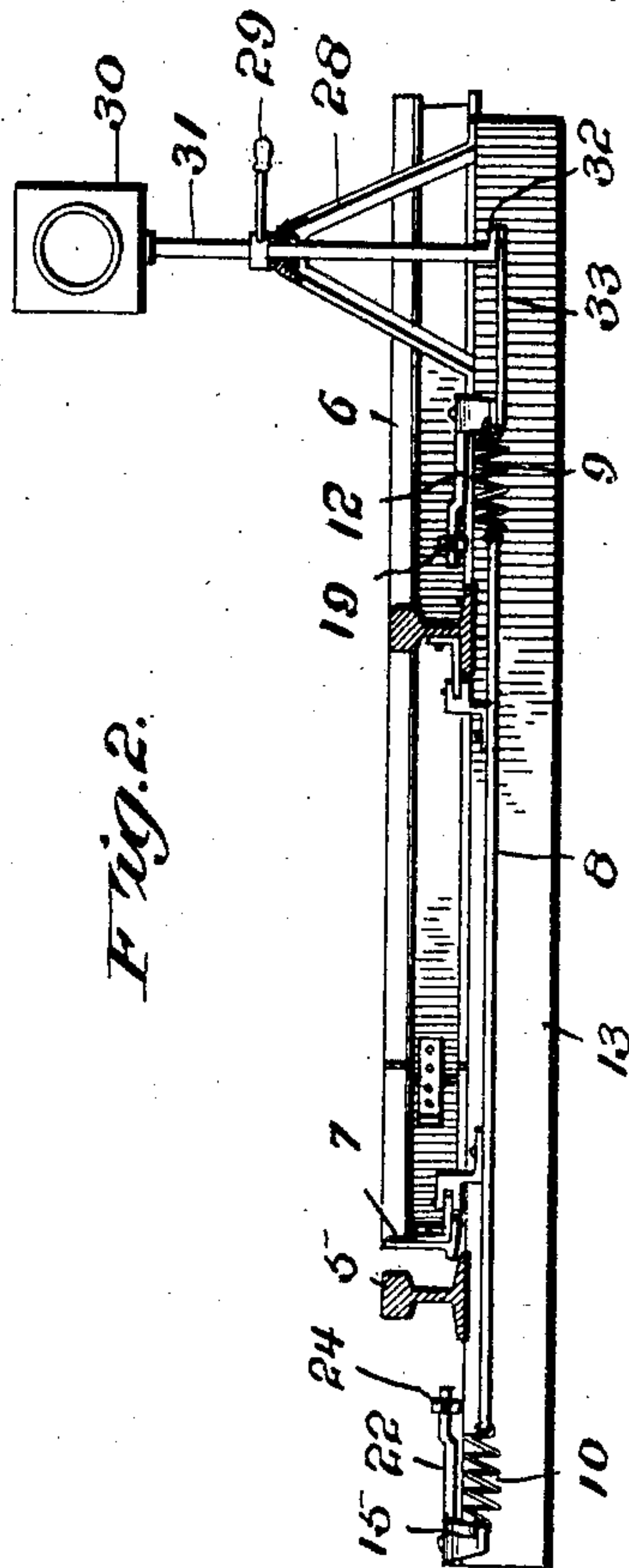
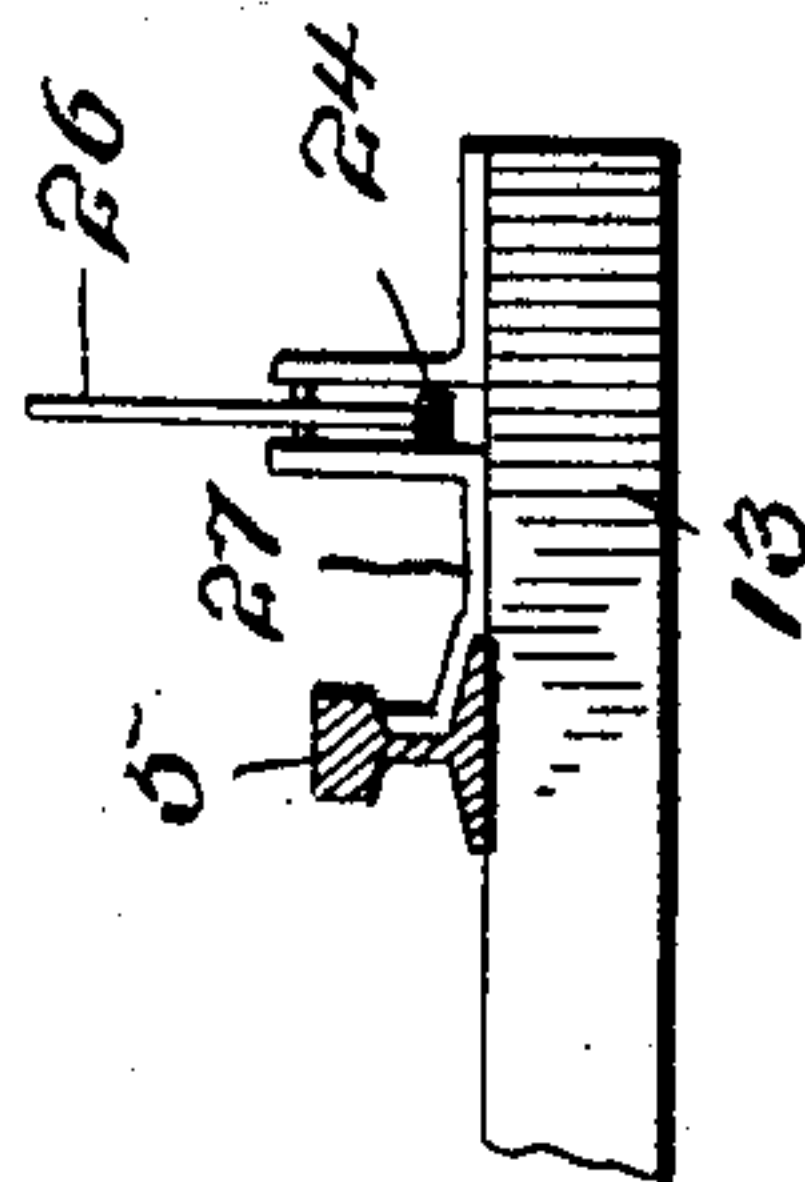


Fig. 2.

Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE MARSHALL RILEY, OF MYRTLE SPRINGS, TEXAS.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 777,977, dated December 20, 1904.

Application filed October 21, 1904. Serial No. 229,441.

To all whom it may concern:

Be it known that I, GEORGE MARSHALL RILEY, a citizen of the United States, residing at Myrtle Springs, in the county of Van Zandt and State of Texas, have invented new and useful Improvements in Railway-Switches, of which the following is a specification.

My invention relates to a railway-switch, and more particularly one which is operated by a train while the same is in motion.

The object of the invention is to provide an improved mechanism of this kind which shall be simple in construction and thoroughly reliable and efficient in operation.

Improved details in the construction and arrangement of the various parts of the invention will be apparent from the description hereinafter, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a switch constructed in accordance with my invention. Figs. 2 and 3 are transverse sections on the lines 2 2 and 3 3, respectively, of Fig. 1.

Referring specifically to the drawings, 5 denotes the rails of the main track, and 6 those of a siding.

At 7 are indicated the switch-rails, which are movable, as usual, and are thrown to either side, according to the track which the train is to take. The switch-rails are connected by a cross-bar 8, to which bar, at each end thereof, springs 9 and 10, respectively, are fastened. The spring 9 is connected to one arm 11 of a bell-crank lever 12, which is fulcrumed on one of the cross-ties 13 of the track, as at 14. The spring 10 on the opposite end of the cross-bar 8 is connected to one arm 15 of another bell-crank lever, 16, which is also fulcrumed on the cross-tie 13. The arm 17 of the lever 12 is connected by rods 18 and 19, respectively, to trip-levers 20 and 21. The arm 22 of the lever 16 is connected by rods 23 and 24, respectively, to trip-levers 25 and 26. These trip-levers are fulcrumed on suitable brackets 27, which are fastened to the ties, and they are arranged to normally project into the path of and are adapted to be operated by some suitable attachment carried by the train. The levers 21 and 26 are on one side of the switch, and the ones

20 and 25 on the opposite side thereof, the one 20 being on the side track. By this arrangement the switch can be operated by a train approaching from either direction and on either track.

The switch is automatic in its operation, but can also be manually operated, a switch-stand 28 being provided having the usual operating-lever 29 and signal-lamp 30. The rotatable post 31 of the stand has at its lower end a crank-arm 32, which is connected by a link 33 to the lever 12 or 16. By this connection the switch can be manually operated, and the connection will also operate the signal-lamp when the switch is operated automatically.

In the drawings the side track is shown closed. If it is desired to run a train on the side track, the attachment for operating the trip-levers is adjusted so that it will strike the lever 26, which then throws the switch to open the side track. If the signal-lamp shows that the siding is already open, the operating attachment on the train need not be put in use. If the siding is open and the train is to continue on the main track, the operating attachment on the car is adjusted so that it will strike the trip-lever 21, which will close the siding. A train approaching on the main track from the opposite direction will actuate the lever 25 to close the siding, while a train on the siding actuates the lever 20 if the siding is closed. The signal on the switch-stand of course discloses the condition of the switch, from which it is determined whether and which one of the levers is to be actuated by the train.

The springs 9 and 10, which connect the cross-bar 8 to the levers 12 and 22, respectively, are for the purpose of holding the trip-levers in elevated position, so as to be at all times in proper position to be reached by the operating device on the train. When said device strikes the levers, they are tilted, but are raised again by the springs as soon as the device clears them. The tension of the springs is so adjusted that they will lift the trip-levers, but not disturb the switch-rails. The said levers will therefore always be in proper position to be actuated by the train, while

the switch-rails will remain in position after they are thrown.

Having thus described my invention, what is claimed as new, and desired to be secured
5 by Letters Patent, is--

1. The combination with movable switch-rails; of a bar connecting the same; bell-crank levers fulcrumed adjacent the ends of said bar, and springs connecting the bar to the levers;
10 train-operated trip-levers; and connections between the trip-levers and the bell-crank levers for throwing the switch.

2. The combination with movable switch-rails; of a bar connecting the same; bell-crank

levers fulcrumed adjacent the ends of said bar 15
and springs connecting the bar to the levers; train-operated trip-levers; connections between the trip-levers and the bell-crank levers for throwing the switch; and a switch-stand operatively connected to one of the bell-crank 20
levers.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE MARSHALL RILEY.

Witnesses:

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J. C. FARRELL.