(No Model.)

# M. N. FORNEY.

## RAILWAY TELL-TALE.

No. 266,802. Patented Oct. 31, 1882.

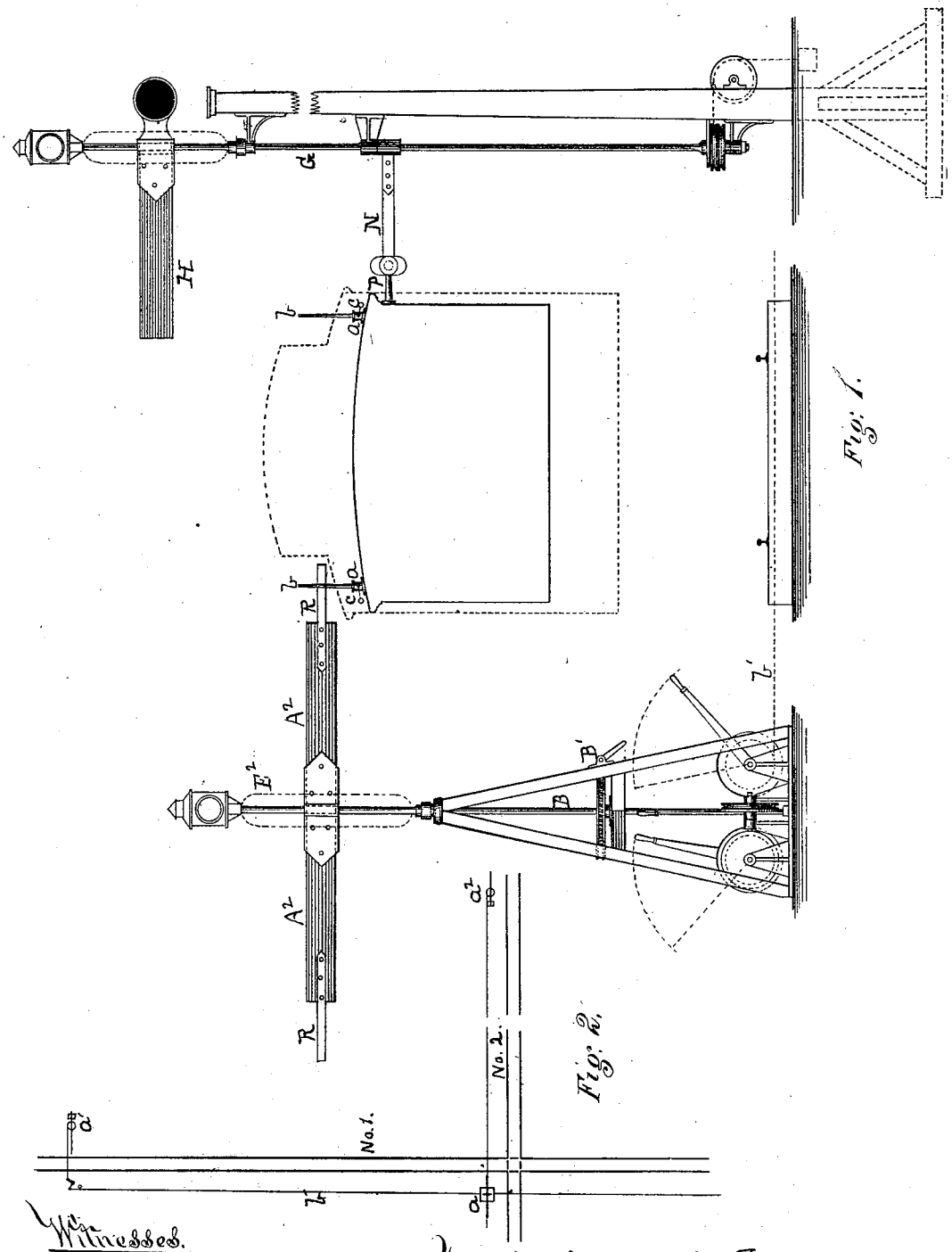


Fig. 1.

Fig. 2.

Witnesses.
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# UNITED STATES PATENT OFFICE.

MATTHIAS N. FORNEY, OF NEW YORK, N. Y.

## RAILWAY TELL-TALE.

SPECIFICATION forming part of Letters Patent No. 266,802, dated October 31, 1882.

Application filed December 22, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, MATTHIAS N. FORNEY, of New York, county of New York, State of New York, have invented or discovered a new and useful Improvement in Railway Tell-Tales; and I do hereby declare the following to be a full, clear, concise, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—like letters indicating like parts—

Figure 1 shows in cross-section a railway-track, the outline of a cab, home and distant signals in elevation, in connection with the appliances to which the present application more especially appertains; and Fig. 2 is a diagrammatic view of a track-crossing illustrative of one manner of arranging the signals with reference to using the present invention therein.

In United States patent granted to me December 6, 1881, No. 250,517, I showed and described certain tell-tale and alarm devices adapted to be used as an attachment to signaling apparatus; but the same being held to be a separate invention I made no claim therefor therein, but reserved the right to claim them in a separate patent. The present application is designed for this purpose, and while I have shown in part the same signaling apparatus as in said patent I have done so only to illustrate one out of many practicable ways in which the signals themselves may be actuated, and hence, as regards the tell-tale and alarm herein described, I do not limit myself to the use, in connection therewith, of any particular means of actuating the signals. Such work may be done by an ordinary hand-lever or other like known device, either with or without the addition thereto of any of the known forms or construction of locking or interlocking appliances. Hence I do not deem it necessary in this application to describe any particular means of actuating the signals, except that the upright home-signal shaft B may receive the proper motions by means of a worm-gear, B′, or otherwise, at pleasure, and a rope, cord, or equivalent connection, *b′*, may extend to the distant-signal shaft, so that by a single motion the home and distant signals shall both be operated at the same time or successively by separate motions, as may be preferred.

In the accompanying drawings I have represented a home danger-signal as consisting of a double semaphore-arm, $A^2$, attached to a vertical signal-shaft, B, which may be operated in any suitable way. The safety-signal may consist of a vertical board or plate, $E^2$, (shown in dotted lines,) and placed at right angles to the danger-signal $A^2$. Consequently when at a crossing the latter is at right angles to one line of track and indicates "danger" or "stop" to an engineer approaching thereon, the safety or "line-clear" signal is displayed to the other. On top of the cab or in any suitable position socketed castings *a* are placed. These carry what may be called "safety-staffs" *b*. Holes are made through the sides of the socket and through the staff, and the two are secured together by a string or wire and seal, *c*.

On the ends of the semaphore-arm $A^2$ arms R R are attached. These are so arranged that in case an engine should pass the signal while displaying "danger" to the engineer one of the arms R R would break off the staff *b*, and as the engineer could not place and reseal another the breaking of a staff would be a tell-tale which would show that he had passed a danger-signal. I also provide for giving an alarm to an engineer in case he runs past a danger-signal; and while such alarm may also be applied to a home signal it is of most value as applied to a distant signal, and I have so represented it, H being the signal in a "danger" position, and adapted to be operated in any suitable way by a rotary shaft, G. N is a stout arm attached to the shaft, so as to stand out toward the track when H is at "danger." It has an iron weight or anvil at its outer end, and placed in a proper position to strike a torpedo or detonator attached to the side of the engine-cab by a suitable support, P. Then in case—say in a fog—the engineer fails to observe the signal at "danger" the explosion of the detonator will at once call his attention to the fact.

Among other convenient arrangements of such apparatus as applied to a track-crossing, I have illustrated one in Fig. 2. The home signal may be arranged at *a* and the distant signals at *a′* $a^2$, the signals being here set so as to block track No. 1 and give safety to track No. 2. The signals may be duplicated for the

other tracks. The form of the signal is not essential. A single board $A^2$ may be employed for line-signals, and it may be arranged to rise and fall instead of turn by a rotary motion, and if made long enough its extended end will be the mechanical equivalent of the arm R for the purposes in view.

No claim is made herein to the alarm N P, and the right to claim the same in a separate application is hereby reserved; nor do I claim herein a frangible signal attached to a signal-post and adapted to be engaged by the train, as described in English Patent No. 2,520 of 1856, which construction is open to the objection that road-signals should be kept unbroken, so as to be in condition for use with any and every train.

I claim herein as my invention—

1. As a means of detection in case a train or a part thereof runs past a danger-signal, a frangible signal-staff or other frangible object or device and a seal for securing the same, arranged on some part of a train and in position to be struck or engaged by a device thrown into its path by or on the setting of a signal at "danger," substantially as set forth.

2. The combination of a frangible signal-staff, *b*, socket *a*, seal *c*, and arm R, substantially as described.

In testimony whereof I have hereunto set my hand.

MATTHIAS N. FORNEY.

Witnesses:
WILLIAM H. BEST,
PIERRE W. WILDEY.