

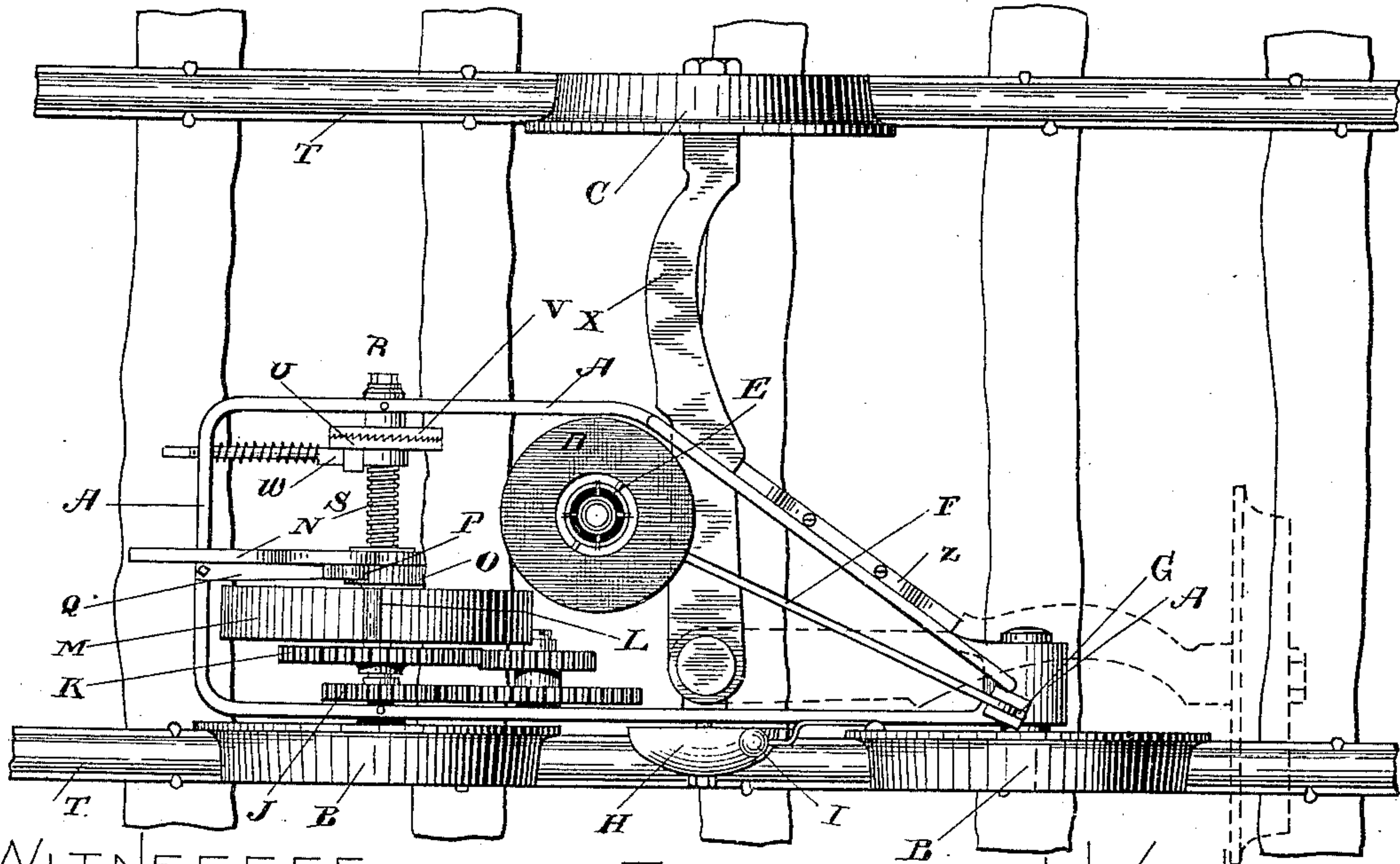
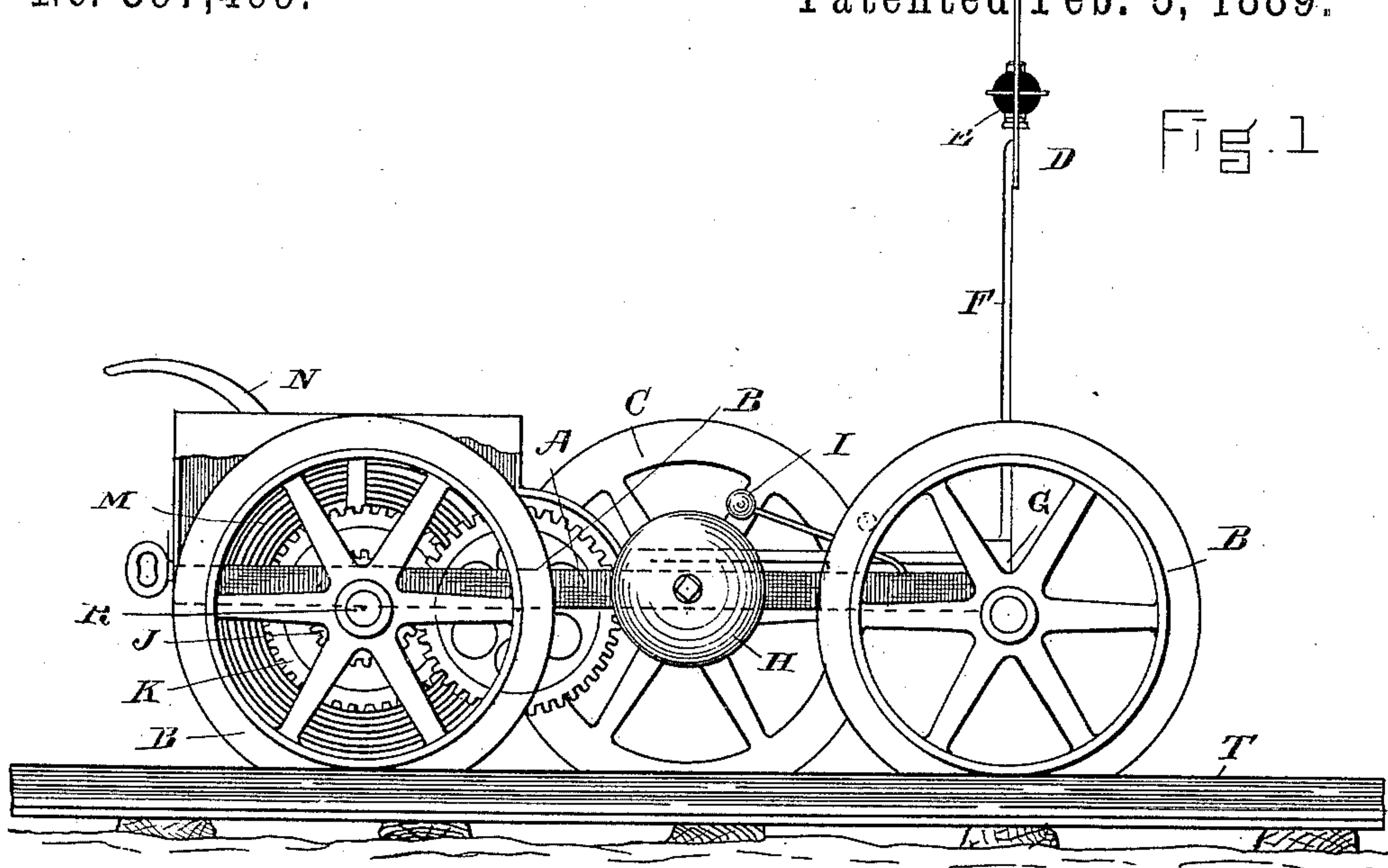
(No Model.)

J. PRINCE.

DANGER SIGNAL FOR RAILWAYS.

No. 397,469.

Patented Feb. 5, 1889.



WITNESSES.

Henry Marsh;
George L. Butterfield

FIG. 2.

INVENTOR.

Jerome Prince
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UNITED STATES PATENT OFFICE.

JEROME PRINCE, OF MILFORD, MASSACHUSETTS, ASSIGNOR TO WILLIAM E. MORRIS, OF BOSTON, MASSACHUSETTS, AND JOHN C. BATES, OF ASPEN, COLORADO.

DANGER-SIGNAL FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 397,469, dated February 5, 1889.

Application filed April 26, 1888. Serial No. 271,934. (No model.)

To all whom it may concern:

Be it known that I, JEROME PRINCE, of Milford, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Danger-Signals for Railways, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of this invention is to furnish for use on railroads a traveling danger-signal having wheels fitting upon the rails and adapted to run back or forward from a train which is stopped for any reason at a point on a track where another train is due. The device is provided with a train of gearing connected to the hub of one of its traveling wheels and actuated by a coiled spring suitably arranged to give motion thereto. The truck carries a signal disk, ball, or flag, and a lantern, so as to be visible day or night, and it has a gong so placed as to be struck automatically at each revolution of one of the wheels to give notice of its movement. The power of the spring and the adjustment of the gearing will serve to drive the signal a given distance, and when a proper point is reached a self-setting brake or an equivalent stop acts to hold the entire device stationary. The truck may have four traveling wheels; but three are preferable on account of greater lightness and ease of removal from the tracks when desired. The signal-standard is braced, and is made to fold down when not in use. The whole frame may be folded for greater compactness and convenience in transportation.

My invention is embodied in the signal apparatus herein shown and described, and particularly set forth in the appended claims.

In the drawings, Figure 1 is a side elevation of the device complete with the signal raised as in use. Fig. 2 is a top plan of the apparatus with the standard folded down and the folded position of the third wheel indicated by dotted lines.

A represents a suitable frame mounted upon wheels B B C, adapted to run upon the tracks T and to support the signal and the mechanism which drives the device along upon the rails. The drawings show the preferred form

of signals—a broad ring or plate, D, for use by day, and a red lantern, E, for use at night—mounted upon a standard, F, hinged at G to the frame, so that it may be raised for use and lowered for compact storage. The standard will be suitably braced or furnished with a stiff spring near its hinge, so as to be properly supported in position for use and to be capable of speedy folding. The lantern hangs on lateral pivots in a central opening in the ring or plate D, the face of which plate it illuminates, and by this suspension the lantern is always in vertical position. A gong, H, is struck by a hammer, I, at each revolution of one of the wheels B, having a lateral projection which deflects the elastic hammer-arm, thus striking a warning-note.

One or both of the wheels B is a driving-wheel, having fast upon its axis a pinion, J, which is the last of a train of gearing, the first one, K, being loose on said shaft and having a projecting pin or arm, L, connecting it with the outer end of the coiled spring M, which, being wound up, furnishes power to rotate the wheel B, and thus to drive the car along the track. The spring may be wound to the required tension by means of the vibrating lever N and a pawl, P, pivoted thereon to engage with the ratchet hub or sleeve O, to which the inner end of the spring is secured. There is a permanent dog, Q, extending from the frame and engaging with these ratchet-teeth to prevent retrograde movement of the hub O and spring M.

In order to regulate the distance to which the signal-car shall be driven by the spring and gearing, I furnish it with a self-setting brake, or with some equivalent stop-motion, by which the movement will be automatically checked at the desired point and the car held there stationary as a warning for approaching trains. The preferred form of apparatus for this purpose is indicated in the drawings, Fig. 2.

The shaft R of the driving-wheel B has an externally-threaded portion, S. Outside of this threaded portion is a non-rotary disk or stop, U, capable of lateral movement to any extent desired. The hub of this disk is recessed to receive the end of a spring-pressed

rod, W, the tip of which engages in one or more of the threads S of the shaft, so as to cause the stop U to move laterally thereon, until it comes in contact with another disk, V, rotating with the shaft R and driving-wheel B. This contact arrests the motion of said disk, shaft, and wheel, and stops the car at the point where it occurs. The rod W has a terminal handle, and is readily withdrawn from engagement with the threads S of the shaft, so as to reset the device whenever required. A suitable gage may be provided to determine the proper point of engagement for any specified distance to be traveled.

The car may be made with a permanent rectangular frame and four wheels, as is usual in hand-cars and the like. For greater lightness, compactness, and convenience of handling I, however, prefer to make it with three wheels, about as shown, and to mount the third wheel, C, on an axle at the end of a swinging arm, X, pivoted at Y to the frame. A suitable fastening device holds this arm in either position, preferably a stiff spring, Z, Fig. 2.

The car may be furnished with a seat and used for traversing the rails by track-viewers and others; or, by obvious changes in the wheels and other parts, it may be adapted

for use in parks and elsewhere for pleasure-riding.

I claim as my invention—

1. The car A, wheels B C, with driving spring and gearing suitably connected thereto, in combination with the folding signal apparatus D E F carried on said car, substantially as set forth.

2. The car, the driving spring and gearing, and the gong automatically sounded during movement of the car, in combination with a visible-signal device and with a self-acting stop apparatus, for the purpose set forth.

3. The car A, having one or more driving-wheels, B, and a swinging arm, X, carrying wheel C, in combination with the driving spring and gearing suitably connected to the wheel B, and with fastenings for the arm C, for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 5th day of March, A. D. 1888.

JEROME PRINCE.

Witnesses:

A. H. SPENCER,

B. MARVIN FERNALD.