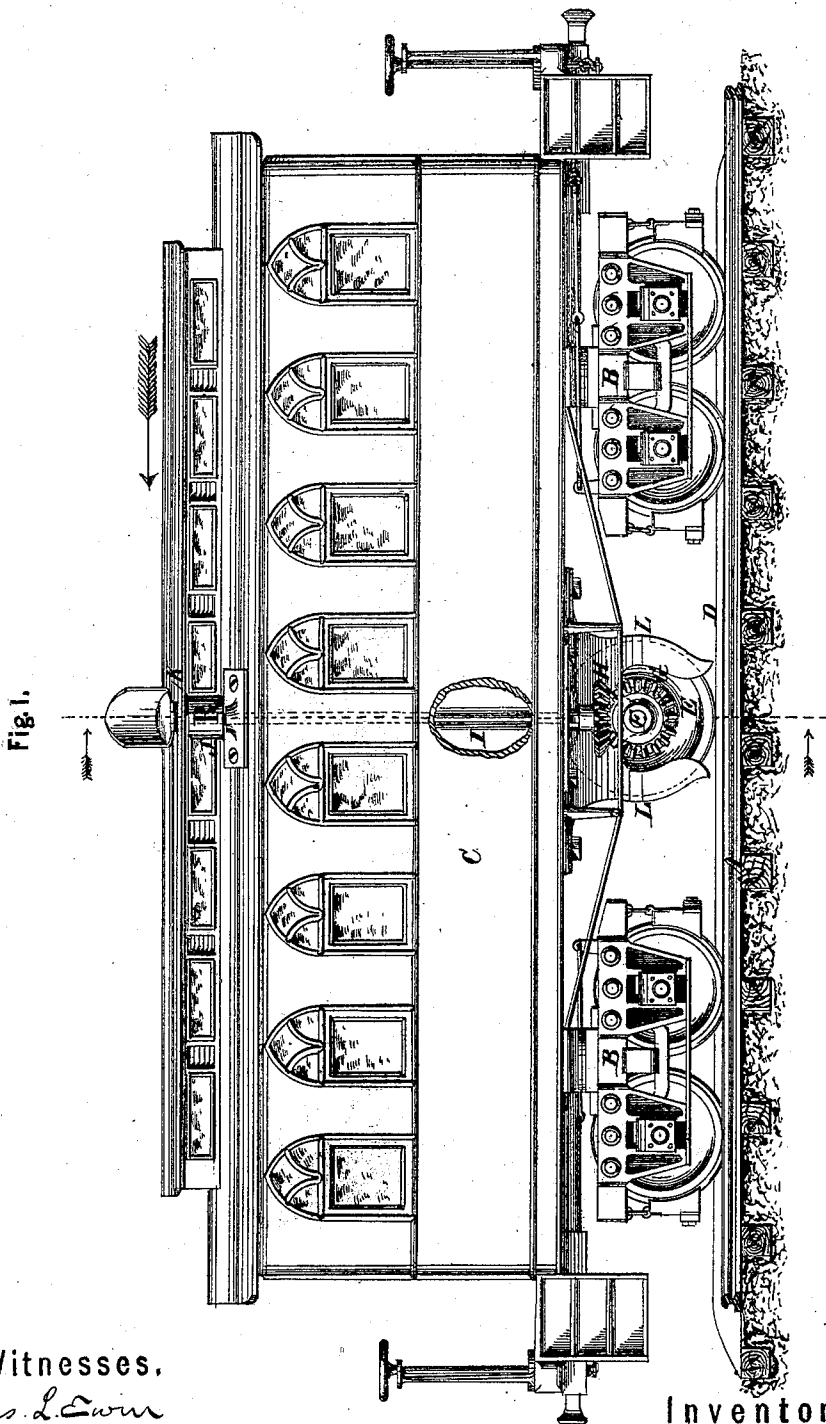


C. M. BOWMAN.

Station-Indicators for Railroad-Cars.

No. 131,421.

Patented Sep. 17, 1872.



Witnesses.
Jas. L. Cowie
Walter Allen

Inventor.
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Fig. 2.

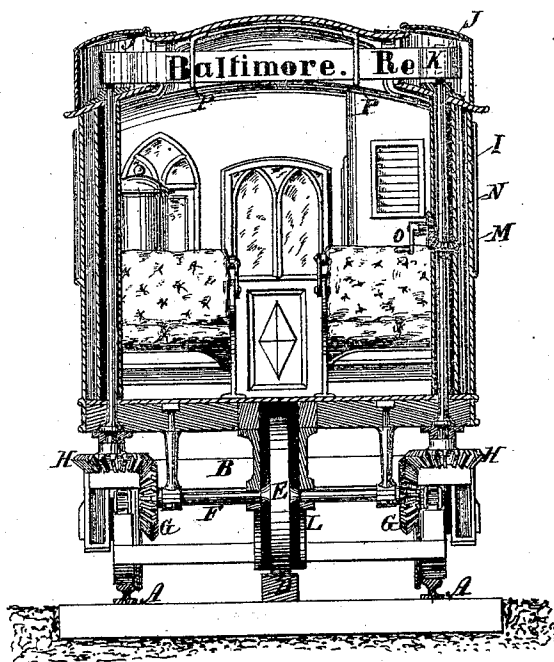
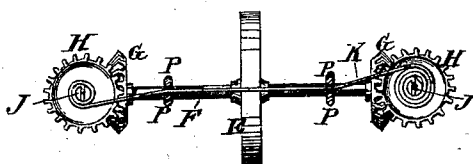


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES M. BOWMAN, OF LEBANON, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND JACOB L. RISE, OF SAME PLACE.

IMPROVEMENT IN STATION-INDICATORS FOR RAILROAD CARS.

Specification forming part of Letters Patent No. 131,421, dated September 17, 1872.

To all whom it may concern:

Be it known that I, CHARLES M. BOWMAN, of Lebanon, in the county of Lebanon and State of Pennsylvania, have invented an Improved Station-Indicator for Railway Cars, of which the following is a specification:

Nature and Objects of the Invention.

My indicator consists of a band or ribbon of suitable material, having the names of successive stations marked upon it, stretched across the center of the dome of the car, or in other convenient place, and coiled on drums, which are connected by vertical shafts with gearing beneath the car, operated at proper periods by a driving-wheel coming in contact with short sectional rails located at suitable points between the stations. The detached rails for operating the indicator may be placed centrally between the main track rails of the road and project to a sufficient height above the latter to permit the indicator driving-wheel to clear cross-tracks, switches, &c. The said driving-wheel is protected by guards to prevent its being turned by contact with ash-heaps or with snow, sand, or other matter. The vertical shafts which communicate motion from the driving mechanism to the indicator-drums may be concealed within the walls of the car or in suitable casings on either the inside or outside; and I further provide, in connection with one of said shafts, a pair of bevel-pinions, to be turned by a removable crank or key from within the car for the purpose of setting the indicator, as may be necessary when the driving-wheel thereof is not upon its track.

Description of the Drawing.

Figure 1 is a side elevation of a railway car, illustrating my invention, with a part of the side broken away. Fig. 2 is a vertical transverse section of the same on the dotted line in Fig. 1. Fig. 3 is a plan of the indicator mechanism detached.

General Description.

A A represent the customary rails, and B B trucks of a car, which may be of common construction. D represents a short supplemental rail, one of which rails is placed between the rails A A at a suitable point be-

tween each two stations. E is a driving-wheel, fixed to a horizontal shaft, F, which carries on its ends bevel-pinions G G, gearing with similar pinions H H on vertical shafts I I, terminating above in drums J J, on which the ribbon K is coiled. The successive stations are plainly marked on one or both sides of the ribbon K. The center rails D are located either midway between stations, or at suitable points on the approach to every station, so as to indicate the name of the place as the cars arrive. The said center rail must be higher than the main rails, but not so high as to interfere with the cow-catcher. Its ends are sloped or beveled, as indicated in Fig. 1, to permit the wheels to run easily onto it. It may be faced with gum or supported by springs to adapt it to adjust itself to the surface of the wheels. Its length may be proportioned to that of the name to be displayed; or if such rails are made of equal length for all names, the names on the ribbon must be disposed at equal distances from center to center, with room enough for the longest name. The indicator driving-wheel E may be flanged or not, as preferred. It may be provided with a tire of gum-elastic to give better traction on rails D. L L represent guards or a casing set in front and rear of the wheel E, in order to prevent the turning of said wheel at improper times by contact of snow, ashes, sand or other matter when the car is moving in either direction. One of the shafts, I, is provided with a bevel-pinion, M, gearing with a second bevel-pinion, N, which latter is turned by a removable crank or key, O, in order to set the indicator by hand whenever it is necessary to do so. P P are guides, causing the ribbon to be stretched directly across the car, and holding that part to which the name is applied in proper vertical position.

I further purpose to employ a bell to strike whenever the ribbon shifts and so give notice that a new name is displayed.

Operation.

The operation of the apparatus will be understood from the foregoing description. When a car has arrived at one terminus it may be supposed that the ribbon has been completely wound off one drum and onto the other, as the

car moves in the opposite direction, whether on the same or on another track, the motion of the drums and of the ribbon is reversed and the stations are again indicated as the car reaches them in reversed order. As the ribbon will be wound with greater speed onto a drum that is nearly full than it will be paid off by one that is depleted and running at the same speed, it is necessary to allow sufficient slack in winding the ribbons on the drums to prevent binding near the end of the route. The guides P P serve to preserve the proper vertical position of that part of the ribbon to which the name is applied although the ribbon may be quite slack. If, however, the drums be of sufficiently large size so that comparatively few coils of the ribbon will be need-

ed, the proportionate speed of winding and unwinding at different stages of depletion will not greatly vary.

Claim.

I claim as my invention—

The combined arrangement of the sectional or detached center rail D, wheel E to be turned thereby, gearing G H, shafts I I, drums J J, and ribbon K, adapted to be transferred from one drum to the other as the car moves in either direction.

C. M. BOWMAN.

Witnesses:

OCTAVIUS KNIGHT,
WALTER ALLEN.