(No Model.)

M. V. WALKER.

STATION INDICATOR.

No. 297,320. Patented Apr. 22, 1884.

Fig. 1.

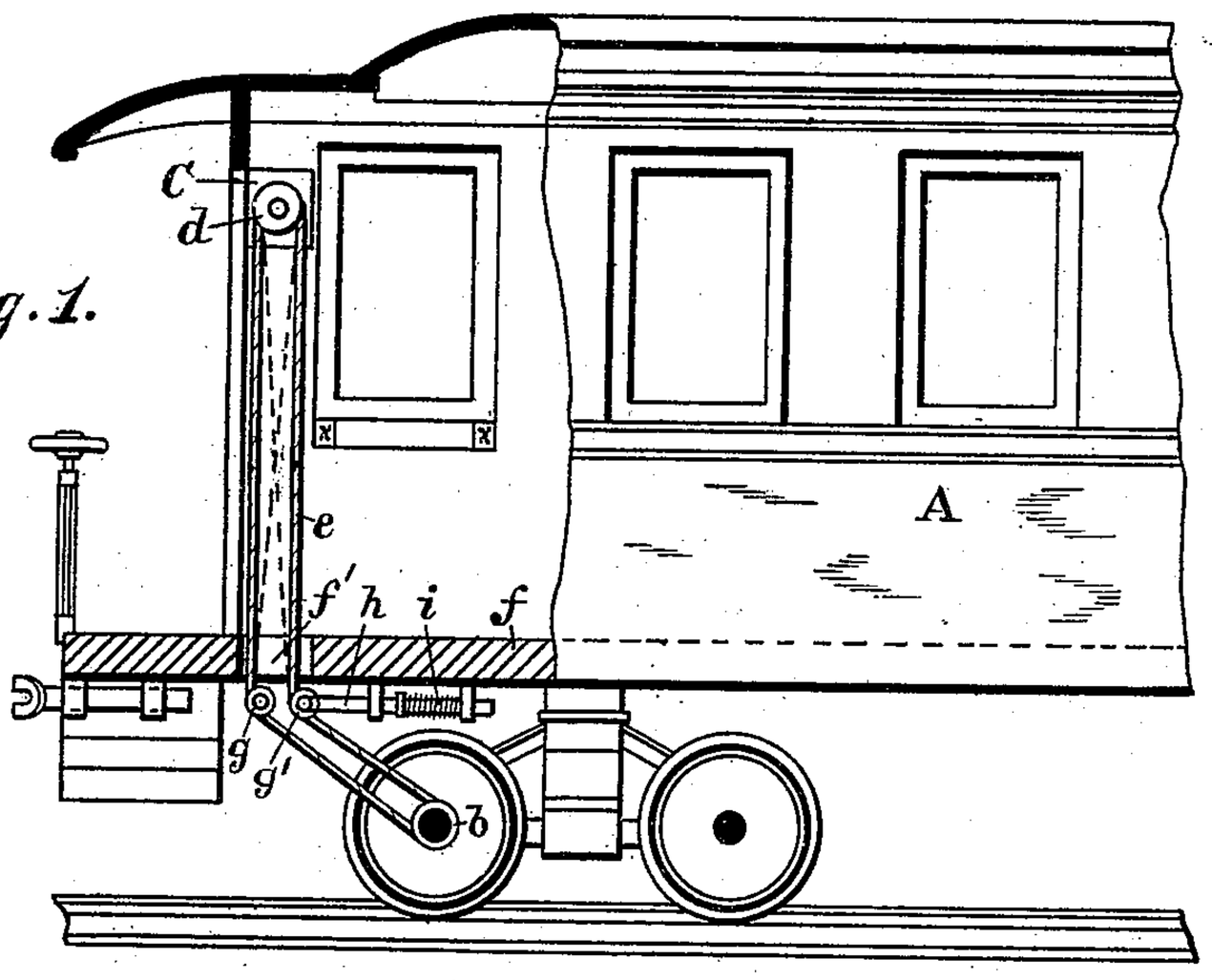


Fig. 2.

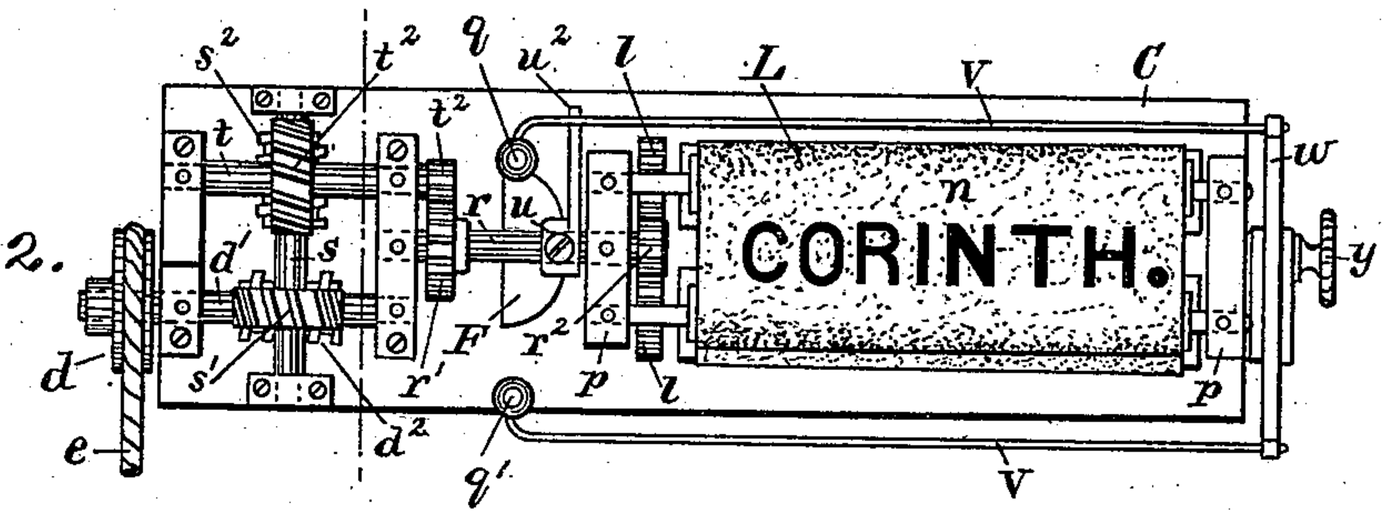


Fig. 4.

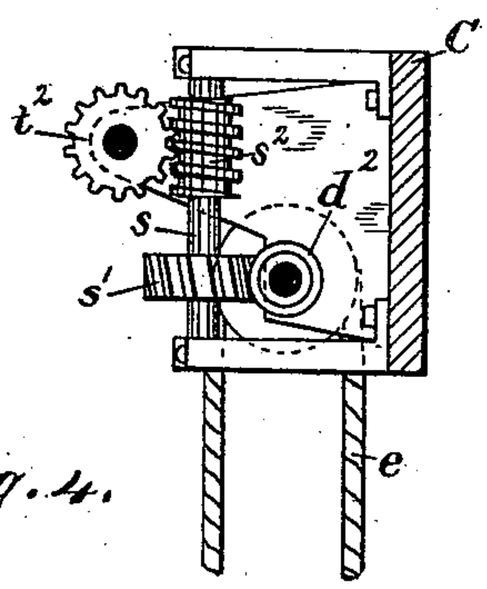
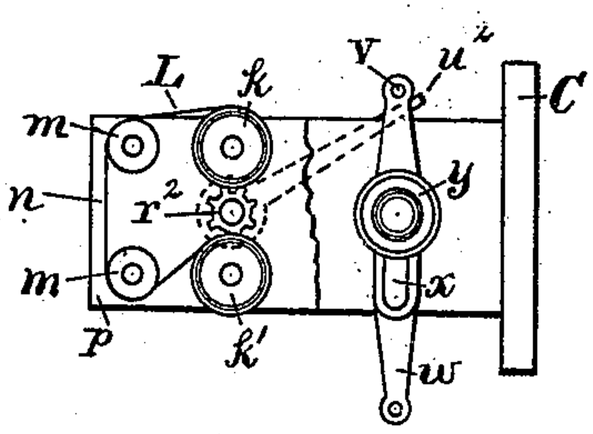


Fig. 3.



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UNITED STATES PATENT OFFICE.

MARTIN V. WALKER, OF WENASOGA, MISSISSIPPI.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 297,320, dated April 22, 1884.

Application filed January 3, 1884. (No model.)

To all whom it may concern:

Be it known that I, MARTIN V. WALKER, a citizen of the United States, residing at Wenasoga, in the county of Alcorn and State of Mississippi, have invented certain new and useful Improvements in Station-Indicators for Cars, of which the following is a specification.

My invention relates to certain improvements in station-indicators for cars, and will first be described, and then designated in the claims.

The invention is shown in the accompanying drawings, in which Figure 1 is a view of part of a railway-car with the side partly broken away to show the position of the station-indicator and the driving-cord which connects with the pulley on the axle. Fig. 2 is a front view showing the interior parts of the indicator, the case or box being removed for this purpose. Fig. 3 is an end view of the indicator, in which one of the brackets is partly broken away, particularly showing the signal mechanism. Fig. 4 is a section across the indicator-box, showing a portion of the mechanism.

The letter A designates the car; *b*, a pulley on the car-axle; C, the indicator-box, secured on the wall of the car at an elevated position, where it may be readily seen by the passengers; *d*, the drive-pulley on a shaft which has bearings in the box, and *e* the driving-cord, which passes over said drive-pulley and the pulley *b* on the axle.

The car-floor *f* has an opening, *f'*, through which the driving-cord *e* passes. It will be seen the position of this opening, instead of being directly over the car-axle, whereon the pulley *b* is placed, is in advance thereof, and that the drive-cord extends vertically from the indicator-box to and through the floor-opening, and from thence extends inclined—*i. e.*, down and back to the axle-pulley.

To the car-floor is secured a fixed friction-roller, *g*, and one part of the drive-cord bears thereon, while another friction-roller, *g'*, for the other part of the cord, is mounted on a slide frame or rod, *h*, which has a spiral spring, *i*, around it, whereby the last-named roller is made to bear normally on the cord with some pressure, but will yield to accommodate the springing up or rocking motion of the cars.

The canvas or roll L contains the names of all the stations in consecutive order on the line of road. This roll is wound on one geared roller, *k*, from which it unwinds, to be wound on another geared roller, *k'*; or the rollers may wind in the reverse direction. Between these two rollers are two loose rollers, *m*, which stretch the canvas or roll. The vertical part of the roll stretched over these loose rollers comprises the face *n*, where the name of the station is exposed to view. In the present instance the name of the station exposed is "Corinth." The rollers *k*, *k'*, and *m* have bearings in the brackets *p*. A signal-bell, F, is mounted in the case near the roll, and two hammers, *q q'*, are arranged so that at each mile of road the car passes over one hammer will make one stroke on the bell. While the car moves in one direction one of the hammers strikes, and when the car moves in the opposite direction the other hammer is intended to strike.

Mechanism drives a single shaft, *r*, which latter moves or actuates both the station-name roll and signal-hammers. This mechanism consists of a shaft, *d'*, on which the cord-pulley *d* is mounted. A worm, d^2, is also on this shaft.

Crosswise of the worm d^2 is a shaft, *s*, carrying a spiral gear-wheel, *s'*, which gears with said worm. A worm, s^2, is also on this shaft.

Crosswise of the worm s^2 is a shaft, *t*, carrying a spiral gear-wheel, *t'*. At the end of this shaft is a pinion, t^2, which gears with a pinion, *r'*, on the shaft *r*, and thereby this latter shaft is driven.

The foregoing-described gearing, by the aid of the drive-cord *e*, is arranged to turn the shaft *r* one revolution for each mile of track the car passes over. The shaft *r* moves the roll to expose consecutively at the face part *n* the names of the different stations, and also actuates the signal-hammers. This is done by a pinion, r^2, on the end of the shaft gearing with the two pinions *l*—one being on each of the rollers *k k'*. One roller is thereby turned in one direction, (to unwind,) and the other roller in the opposite direction, (to wind.) A collar or hub, *u*, is fitted upon the shaft *r*, and is set fast thereon by a set-screw. This collar has a finger, u^2, which projects, so as to strike the spring-arm *v* of one signal-hammer. As the shaft *r* turns, the projecting finger

w^2 presses the spring-arm hammer away from the bell F, and when by a continuation of the turn the spring-arm is released from the finger it reacts, and the hammer it carries strikes the bell, thereby signaling that a mile has been passed. When the car has reached the end of the road, it is made ready to start back on the return-trip (the car moving in the opposite direction from that in which it came) by shifting the spring-hammers so that the one, q, which struck the bell on the up-trip will be out of reach of the projecting finger on the return-trip, and the other, q', will be acted on by said finger.

The spring-hammers are shifted as follows: A bar, w, has at its center a slot, x, extending lengthwise of the bar, and a set-screw, y, passed through the slot, enters the bracket p. The ends of both spring-arms v are rigidly secured in this bar. It will be seen that by loosening the set-screw y the bar may be shifted endwise to the extent of the length of the slot. By shifting the bar one hammer may be moved out of the reach of the rotating finger w^2 and the other hammer moved within its reach. By the use of the rotating finger two hammers are necessary, for the reason that the spring-arm of the hammer can be actuated only when it is pressed away from the bell. When the car moves in one direction, the rotating finger by its turn is adapted to actuate only one hammer—to wit, that one which by its movement will be pressed away from the bell—and when moving in the opposite direction the finger is adapted to actuate the other hammer. Should the car start back on a return-trip after being itself turned, (by which the car would be in position to again move in the same direction it had before moved,) it would then be necessary to cross the drive-cord, in order to unwind the station-name roll the right way.

That part of the drive-cord within the car may be inclosed within a tin tube or other suitable protecting-case, (not shown,) and the inclined part of the drive-cord below the car-floor, or the opening through the car-floor, may be protected by a fender of any suitable kind adapted to exclude the dust or dirt from entrance to the car. By this arrangement passengers in the car are notified by the stroke of the bell of each mile passed over, and also of the name of each station.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a station-indicator for cars, the combination of a station-name roll, L, mounted on rollers, a bell, F, a shaft, r, having a pinion, r^2, to move the rollers of the name-roll, a projecting finger, w^2, and two bell-hammers, each having a spring-arm, v, and adapted to be shifted so that only one of the spring-arms is within reach of the said projecting finger, as set forth.

2. In a station-indicator for cars, the combination of a station-name roll, L, two rollers, k k', a bell, F, two bell-hammers to be used alternately on the one bell, both being attached to a slotted bar, w, a set-screw, y, for holding the bar in either position to which it may be shifted, and a shaft, r, to operate the roll and hammers, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MARTIN V. WALKER.

Witnesses:
J. C. MARTIN,
J. A. GREEN.