

(No Model.)

A. W. CHORMANN.

2 Sheets—Sheet 1.

STATION INDICATOR.

No. 560,343.

Patented May 19, 1896.

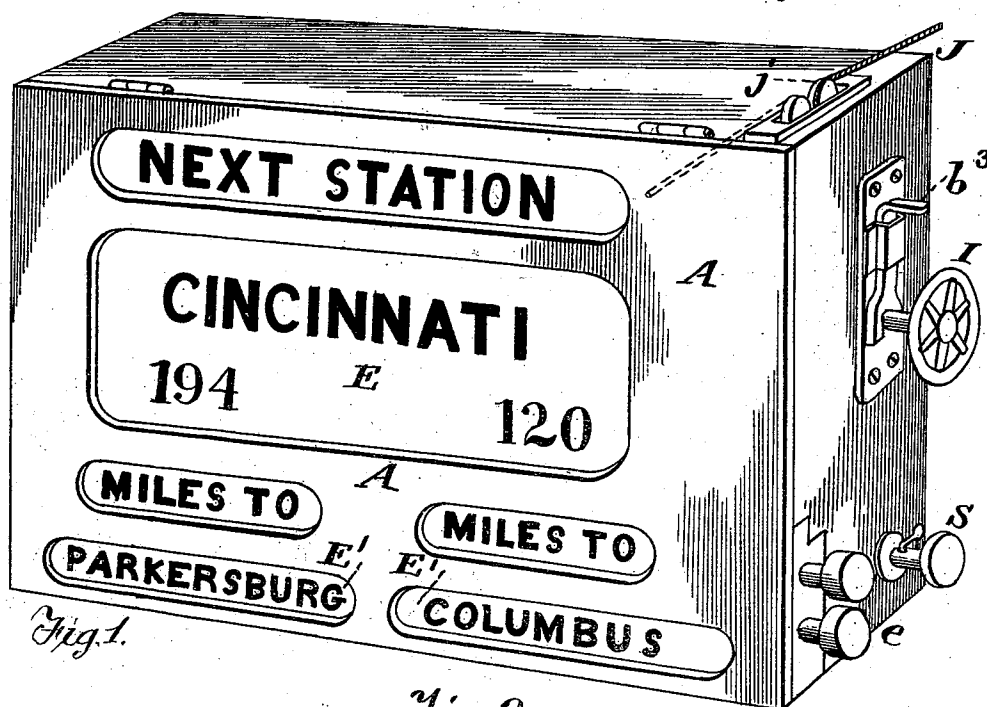


Fig. 1.

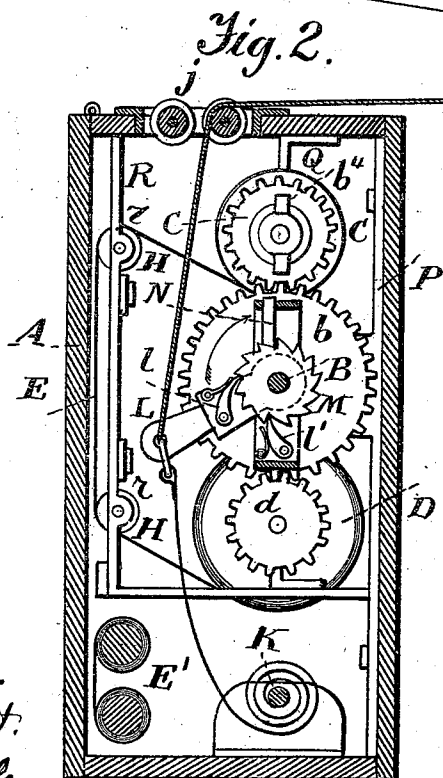


Fig. 2.

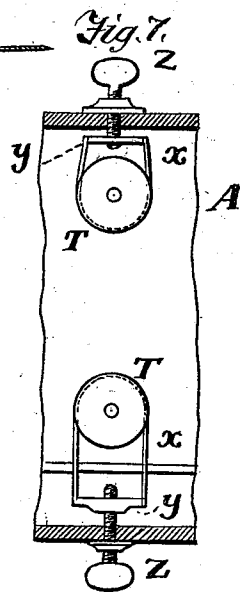


Fig. 7.

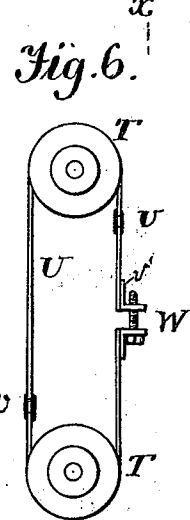
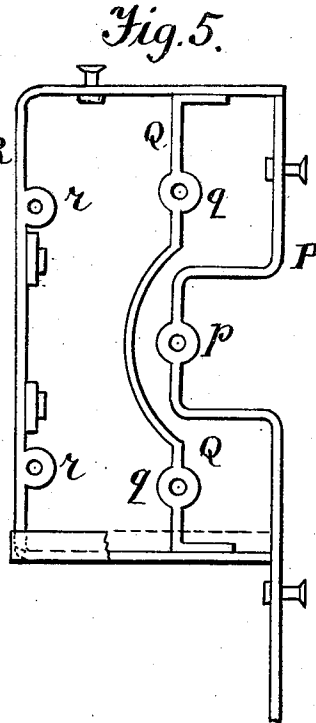
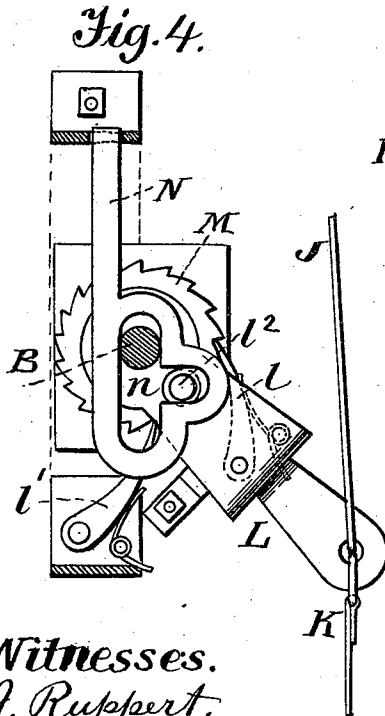
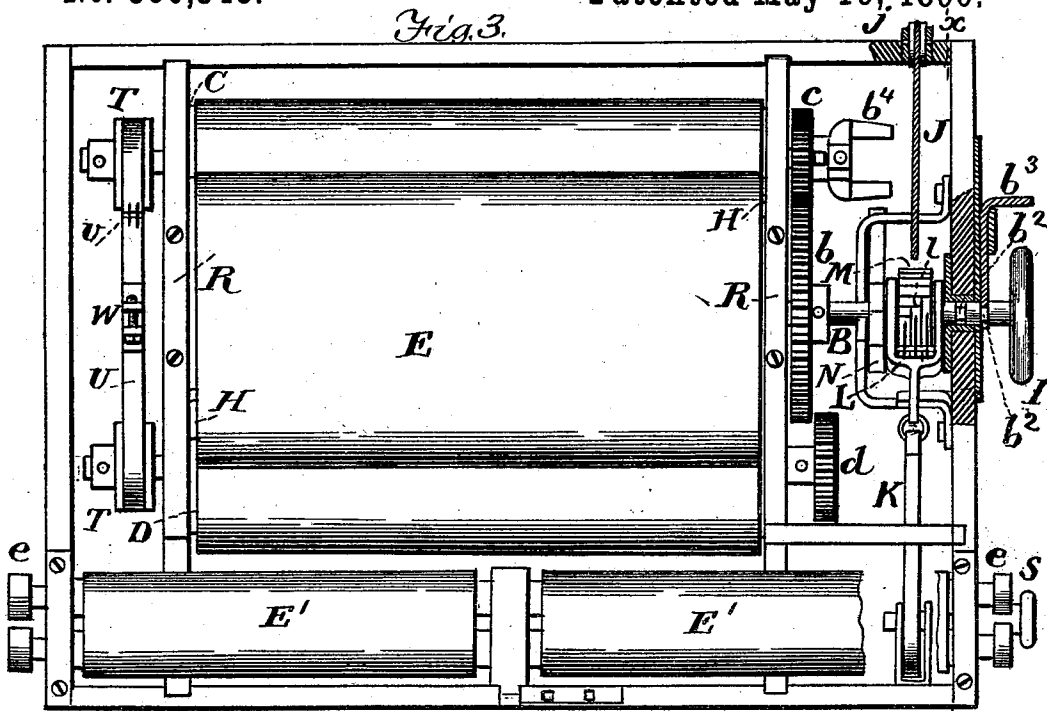
Witnesses.
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UNITED STATES PATENT OFFICE.

ALVIN W. CHORMANN, OF WASHINGTON, PENNSYLVANIA, ASSIGNOR TO
MOLLIE R. CHORMANN, OF SAME PLACE.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 560,343, dated May 19, 1896.

Application filed June 18, 1895. Serial No. 553,182. (No model.)

To all whom it may concern:

Be it known that I, ALVIN W. CHORMANN, a citizen of the United States, residing at Washington, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Station-Indicators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The special object of the invention is to make a railway-car indicator convenient to handle, not liable to get out of order, and without a complication of parts.

Figure 1 of the drawings is a perspective view of my indicator; Fig. 2, a vertical section on dotted line *xx* of Fig. 3. Fig. 3 is a front elevation with the cover removed; Fig. 4, a detail view of the reversing mechanism; Fig. 5, a detail view of the roller-frame; Fig. 6, a detail view of the evener pulleys and belt, and Fig. 7, a modification thereof.

In the drawings, A represents the casing, provided with a top-hinged front door, in which are secured plates of glass or windows through which the figures or letters may be read at a distance, the object being to indicate to passengers the name of the next station and its distance from the terminal points of the road.

B is a rotary shaft above and below which are arranged, respectively, the rollers C D, all in suitable bearings. The ends of the roller-shafts are provided with equal pinions *c d*, which are intended to gear alternately with the spur-wheel *b* on the main shaft B, the latter being adjustable longitudinally in its bearings and provided with the annular grooves *b² b²*, in which works a slide-fork *b³* to hold it in either of two positions. By this means the spur-wheel of the drive-shaft is brought into gear with the pinion of either roller-shaft, so as to carry the main apron in either direction. The main apron E is attached to the rolls C D, so as to be wound from one to the other alternately, according

to the direction in which the cars are to travel, and passes over the small guide-rolls H H to bring the lettered and figured portions of apron into full view.

The drive-shaft B, which operates the indicator, has an outside end disk I, which may be turned by hand, so that each indicator may be worked separately, or all the indicators on a train of cars may be operated by pulling a single cord, as follows: Each indicator is provided with a cord J, which passes between the pulleys *jj* to the train-cord and is fastened thereto, while its lower end is attached to a coiled spring K in the bottom of the indicator-case. Intermediately the cord J is connected with a bar L, pivoted at one end to the shaft B and provided with the carrier-pawl *l* to turn the ratchet-wheel M and with it the shaft B. A detent-pawl *l'* is pivoted to the frame, and this pawl, as well as the pawl *l*, is held to the ratchet-wheel by a spring in the usual way. N indicates a slide-bolt which is loose on the shaft B and has a T-slot *n*, into which extends a stud *l²* on the bar L. The latter thus carries the bolt N, raising it to position for contact with a two-pronged stop *b⁴*, which is secured to the end of the shaft of roller C and rotates therewith, so that the shaft B is prevented from making more than half a revolution to bring into view the name of a station on the main apron. When the cord *J* is drawn, the bar L being raised, the shaft B is turned by means of the ratchet connection with bar L, and the bolt N is raised to connect with the stop *b⁴* by the stud *l²* on said bar. One of the journals of the shaft B extends beyond the case and the other has a bearing *p* in the frame P, which is bolted to the casing.

Q Q are parallel frames, in which are formed the bearings *q q* for the rolls C D of the main apron, the bearings *q p q* being arranged in the same vertical plane. The frames Q Q are mounted in the frames R R, which are two parallel frames bolted to the case and provided with the bearings *z z* for the journals of the guide-rolls H H, one being placed above the other in the same plane. The frames P Q are cranked, bowed, or bent in the middle, so that they take up as little space as

possible. They may be readily taken out with the main apron and rolls by simply unscrewing a few bolts, so that any part may be easily repaired or replaced. The glass or window in the upper slot of the door is imprinted with the words "Next Station" and the next to the lowest slots with the words "Miles to," while the main apron carries at intervals the names of the stations and the small aprons E E' carry the names of the terminal stations. The rolls which carry the aprons with the names of the terminal stations have one end of their shafts extended beyond the case and provided with a finger-disk *e*, by which they may be turned.

S represents a device by which the tension of the coil-spring F may be graduated.

At the ends of the shafts of the rolls C D which do not gear with the main shaft B, I arrange the pulleys T T and apply tension devices to said pulleys. One form of such devices is shown in Fig. 6, which represents a belt connecting said pulleys, said belt being made in sections, which are connected by the elastic pieces *v*. To the ends of the belt are secured the rectangular metallic pieces *v'*, and a tension-screw W is passed through threaded apertures in said pieces *v'*, and by means of said screw the belt may be tightened or loosened. Another form of tension devices is shown in Fig. 7, which shows a belt *x*, passed about each of the pulleys T, the ends of said belt being connected with a plate *y*. Thumb-screws *z* are mounted in the casing or framework and passed through threaded apertures in the plates *y*, and by means of said screws each pulley may be regulated separately.

What I claim as new, and desire to protect by Letters Patent, is—

1. In a station-indicator, the combination, with a frame, of two apron-rolls journaled therein, a drive-shaft B, and gearing for connection with either of said rolls, a two-pronged stop secured to the shaft of one of said rolls, a vertical, sliding bolt, provided with a T-formed slot, said bolt being movably connected with shaft, B, and adapted to connect with said two-pronged stop, a bar L, pivotally connected with shaft, B, and having a projecting stud, adapted to engage said sliding bolt, a ratchet-wheel on shaft, B, and a spring-pawl carried by bar L, and a draw-cord having a retracting-spring at one end, said cord being intermediately connected with said bar, L, whereby the shaft, B, and said sliding bolt may be simultaneously actuated, substantially as and for the purposes described.

2. The combination, with the frame of an indicator, of a roll mounted therein, a two-pronged stop secured to the shaft of said roll, a drive-shaft with gearing connecting said shaft with said roll, a bar L, pivotally connected with said drive-shaft and provided with a projecting stud, a vertical slide-bolt, provided with a T-slot by which it is movably connected with said drive-shaft and may be engaged by said projecting stud, substantially as set forth and described.

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

ALVIN W. CHORMANN.

Witnesses:

E. E. JACKSON,
J. P. MCKEE.