

A. P. JORDAN.
STREET INDICATOR.
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930,186.

Patented Aug. 3, 1909.

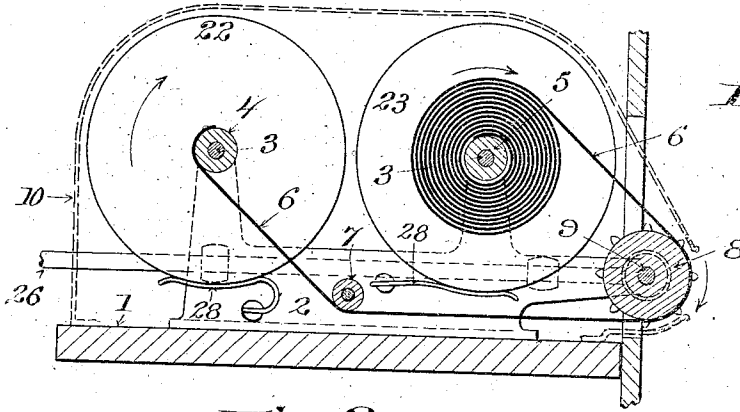


Fig. 1.

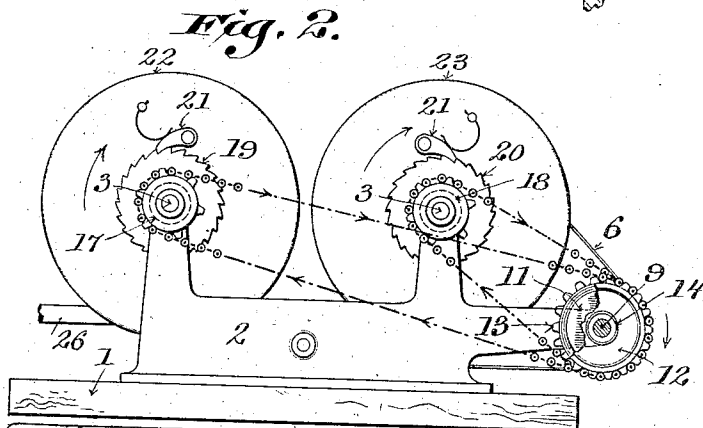


Fig. 2.

Fig. 4.

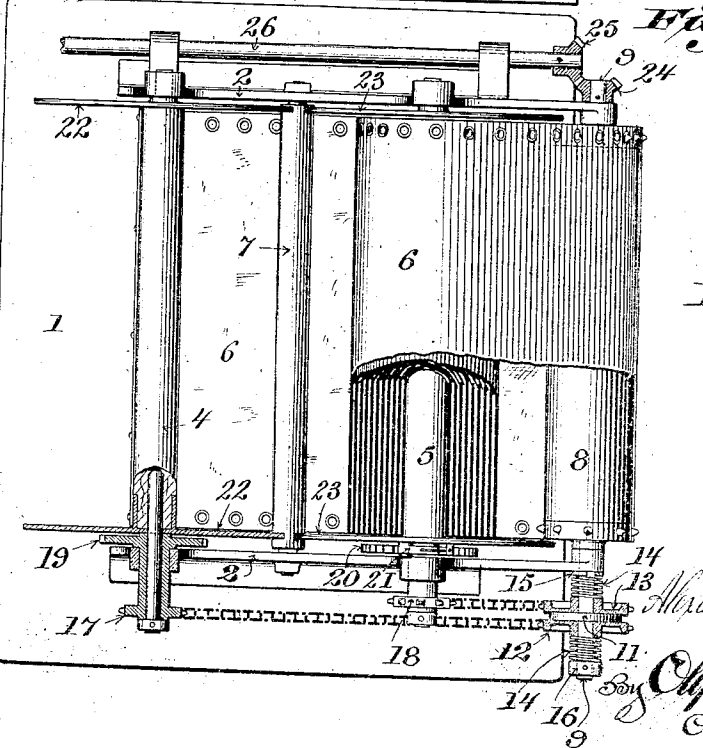
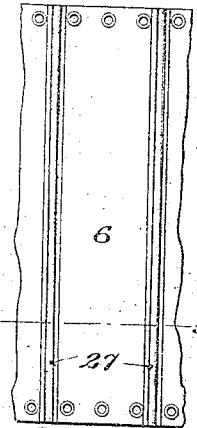


Fig. 5.

Fig. 3.

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UNITED STATES PATENT OFFICE.

ALEXANDER P. JORDAN, OF MADISON, WISCONSIN.

STREET-INDICATOR.

No 930,186.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed December 30, 1908. Serial No. 470,080.

To all whom it may concern:

Be it known that I, ALEXANDER P. JORDAN, a citizen of the United States, and resident of Madison, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Street-Indicators; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my present invention is to provide simple and efficient street-indicators for cars or similar public conveyances, the construction and arrangement being such as to eliminate all springs or like parts subject to wear as well as to insure accurate feed, whereby the name indicating the cross-streets is fully displayed to the occupants of the vehicle.

The invention therefore consists in certain peculiarities of construction and combination of parts as hereinafter set forth with reference to the accompanying drawings and subsequently claimed.

In the drawings: Figure 1 represents a longitudinal sectional view of a street-indicator embodying the features of my invention; Fig. 2, a side elevation of the same showing the independent driving gear for the rolls, which driving-gear embodies the essential features of my invention; Fig. 3, a plan view of the street-indicator, with parts broken away and parts in section to better illustrate the invention; Fig. 4, a detail face view of a preferred form of apron, and Fig. 5, a sectional view of the same, as indicated by line 5-5 of the preceding figure.

Referring by numerals to the drawings, 1 indicates a base having secured thereto parallel side standards 2, which standards are provided with aligned bearings for the reception of metallic shafts 3 of rollers 4 and 5 respectively. Each roller has fastened thereto an end of an apron 6, which apron passes from the roller 4 under a guide-roller 7 and over a feed-roller 8 to roller 5, upon which latter roller, as shown in Fig. 1, the apron is fully wound. The longitudinal edges of the apron 6 are provided with a series of gromets equally spaced apart and adapted to engage series of spur-teeth that project from opposite ends of the feed-roller. The feed-roller shaft 9 is mounted in bearings formed in the standards, said feed-roller being forward of the apron-roller 5, and arranged to project into an aperture in an end of the car-frame, as shown. Street names (not shown) which are imprinted upon the apron are displayed

upon that portion of the same which partly surrounds the aforesaid feed-roller.

In practice, it is desirable to provide the street-indicator with a hood or casing 10, as indicated by dotted lines in Fig. 1, the casing being slotted at the point where it partly surrounds the feed-roller, through which slot the street names are visible to the occupants of the vehicle, it being understood that the base of the indicator is secured to the roof of the vestibule of the vehicle or car and adjacent to the ventilator extension thereof. Fast on the feed-roller shaft 9 is a friction-disk 11, against the opposite faces of which disk are fitted a pair of sprocket-wheels 12 and 13, the same being loosely mounted upon said shaft. Coil-springs 14 surround the shaft 9 and are interposed between rollers 15 and 16 and the hubs of the sprocket-wheels, whereby the latter are held against the friction-disk under the desired tension. The collar 15 is held against lateral play by the adjacent standard 2, while the collar 16 is fast upon the end of the shaft 9, it being understood that if desired both of these collars may be adjustably set upon said shaft for the purpose of regulating the tension of their respective springs, this feature however being within the knowledge of skilled mechanics, and forming no part of the invention.

The shafts 3 of rollers 4 and 5 are respectively provided with sprocket-wheels 17 and 18 loosely mounted thereon, the sprocket-wheel 17 being in link-belt connection with the sprocket-wheel 12, and the sprocket-wheel 18 in link-belt connection with the sprocket-wheel 13. Sprocket-wheels 17 and 18 are provided with sleeves which extend through the bearings of the roller-shafts 3. These sleeves carry ratchet-wheels 19 and 20 respectively, having oppositely disposed or right and left teeth for engagement with spring-controlled pawls 21, which pawls are mounted upon flanged heads 22, 23 of the collars, there being similar heads secured to the opposite ends of said rollers, thereby constituting guides for the apron. The ratchet-wheels and pawls thus constitute right and left clutch-members in connection with the winding-rollers, whereby the latter are positively driven in opposite directions. The end of the feed-roller shaft 9, opposite the sprocket-wheels, is provided with a bevel-pinion 24, which meshes with a similar bevel-pinion 25 fast on a drive-shaft 26, which drive-shaft is mounted in bearing-lugs extending from the adjacent standard,

motion being imparted to the drive-shaft by any suitable power at intervals, when it is desired to actuate the indicator.

As shown in Figs. 4 and 5, the apron may be provided with cross-lags 27 placed at suitable intervals apart in order to add rigidity to said apron and prevent buckling of the same as it is coiled upon the rollers. When the parts are in the position, as shown in Fig. 1, the indicator must be reversed, and as indicated by the arrow, motion being imparted to the feed-roller 8, will cause roller 4 to be put in motion to rewind the apron thereon. For example, if the feed-roller is rotated so as to move the apron two inches at each intermittent movement of the drive-shaft, this length is wound by the chain and sprocket-gear upon roller 4, the proportions of the driving-gear and roller being such as to insure the take-up, which take-up would in this instance require the maximum movement of said roller 4. It follows that while the winding-movement takes place with relation to roller 4, roller 5 will only make its minimum rotary movement in order to release the two inches of apron, and consequently the chain and sprocket-drive of said roller 5, while moving its full distance in the direction indicated by the arrows, will run ahead of the aforesaid roller 5, due to the pawl and ratchet-wheel connection. As the apron coils increase upon the roller 4, it is evident that the maximum drive imparted to said roller will be in excess of the movement required. This excess is compensated for by the friction-clutch connection of the sprocket-wheel 12 and disk 11, which connection permits a slip of said sprocket-wheel at the instant the apron is drawn taut. Thus it will be understood that the same effect is obtained when the apron is being wound upon the forward roller 5, the drag springs 28 in either case being provided to prevent over-run of that roller from which the apron is unwinding, until such time as the coiled apron has been reduced to a diameter approximately the same size as the roll, at which time the ratchet-wheel and pawl will move in unison.

From the foregoing it will be seen that each apron-roller is provided with an independent driving-gear, whereby motion is received from the feed-roller, and each driving-

gear is capable of being released from the positive motion of said feed-roller by the friction-clutch mechanism when less than a maximum movement of the winding-roller is required for winding the apron.

I claim:

1. A street-indicator for vehicles, comprising standards having a pair of winding-rollers mounted therein, an apron fitted to the winding-rollers adapted to be alternately wound from one roller to the other, a right-hand clutch-member in connection with one of the winding-rollers, a left-hand clutch-member in connection with the other winding-roller, sprocket-wheels carried by the clutch-members, a feed-roller, a shaft for the feed-roller, the shaft being mounted in standards in advance of the winding-rollers, a friction-disk secured to the feed-roller shaft, spring-pressed sprocket-wheels loosely mounted upon said feed-roller shaft in engagement with the faces of the disk, and chain-belts connecting the spring-pressed sprocket-wheels, and the sprocket-wheels carried by the winding-roller clutch-members.

2. A street-indicator for vehicles comprising standards having a pair of shafts mounted therein, flanged headed winding-rollers secured to the shafts, a ratchet-wheel loosely mounted upon each shaft, the ratchet-wheels being provided with oppositely inclined teeth, respectively spring-controlled pawls carried by the winding-roller heads for engagement with said ratchet-wheels, a feed-roller, a shaft for the feed-roller, the shaft being mounted in the standards in advance of the winding-rollers, a friction-disk secured to the feed-roller shaft, spring-pressed sprocket-wheels loosely mounted upon said feed-roller shaft in engagement with the faces of the disk, and chain-belts connecting the spring-pressed sprocket-wheels and the sprocket-wheels carried by the winding-roller shaft.

In testimony that I claim the foregoing I have hereunto set my hand at Madison, in the county of Dane and State of Wisconsin in the presence of two witnesses.

ALEXANDER P. JORDAN.

Witnesses:

LENORA M. ROSS,
GEORGE KRONCKE.