T. TANNER.

STATION INDICATOR.

APPLICATION FILED SEPT. 16, 1907.

921,181. **Patented May 11, 1909.**

2 SHEETS—SHEET 1.

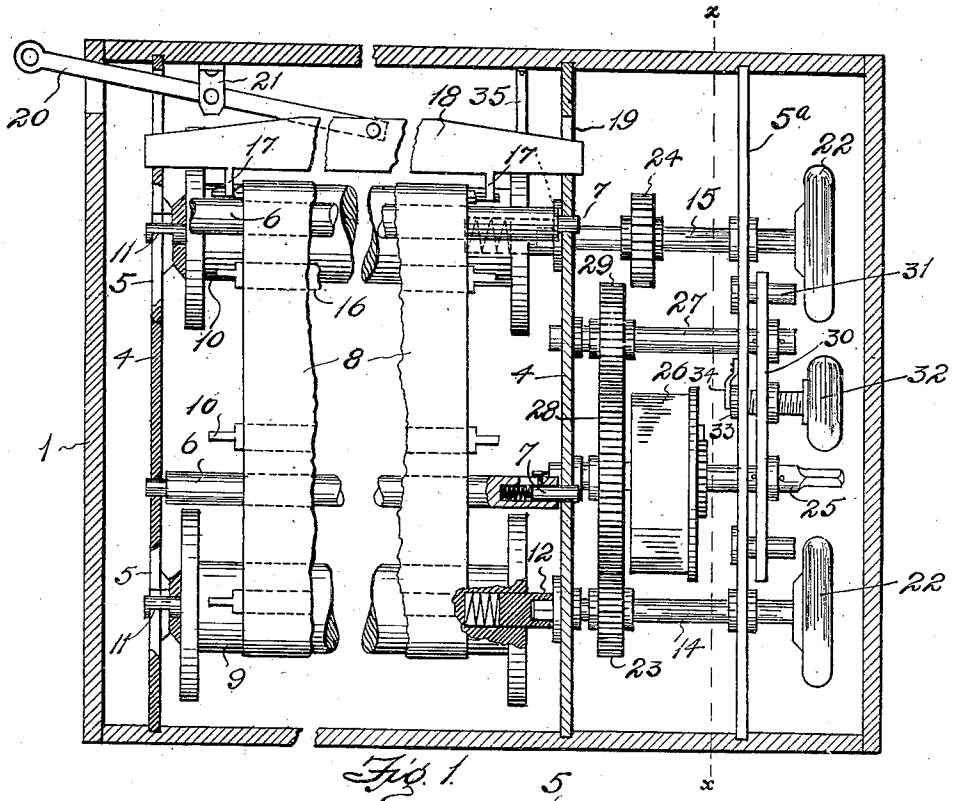


Fig. 1.

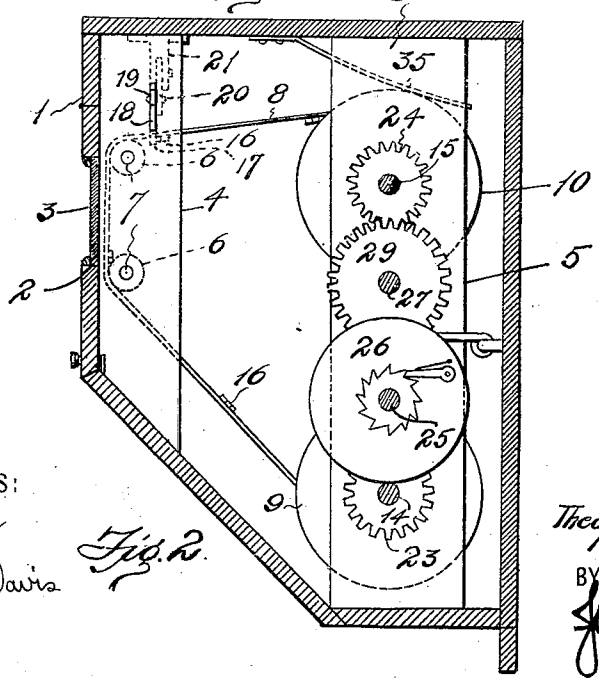


Fig. 2.

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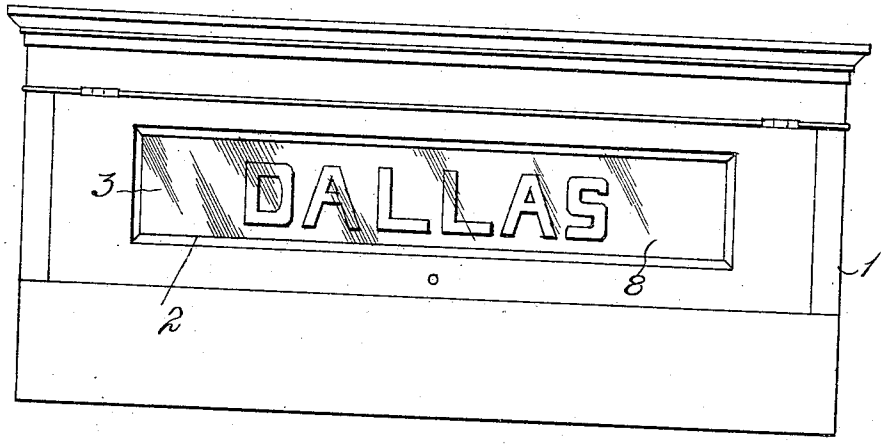


Fig. 3

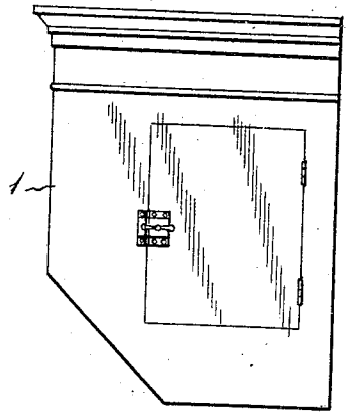


Fig. 4

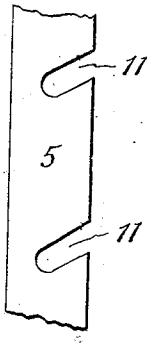


Fig. 5.

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UNITED STATES PATENT OFFICE.

THEOPHILE TANNER, OF DALLAS, TEXAS.

STATION-INDICATOR.

No. 921,181. Specification of Letters Patent. Patented May 11, 1909.

Application filed September 16, 1907. Serial No. 393,002.

To all whom it may concern:

Be it known that I, THEOPHILE TANNER, citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Station-Indicators, of which the following is a specification.

My invention relates to new and useful improvements in indicating mechanisms.

The object of the invention is to provide a device of the character described, easy and simple of operation, strong and durable, positive in its working, and one in which the several parts will not be liable to get out of working order.

With the above and other objects in view, the invention has particular relation to certain novel features, an example of which is described in the specification and illustrated in the accompanying drawings, wherein:

Figure 1 is a vertical sectional view of the indicator, Fig. 2 is a transverse vertical sectional view taken on the line *x*—*x* of Fig. 1, Fig. 3 is a front elevation of the indicator, Fig. 4 is an end elevation of the same, and Fig. 5 is a side elevation of one of the supporting plates.

In the drawings the numeral 1 designates a suitably shaped casing or cabinet provided at its front side with an exhibiting or indicating opening 2, closed by a glass or other transparent material 3. Within the casing vertical supporting plates 4 and 5 are disposed. These plates are arranged in pairs properly spaced to support the indicating mechanism. Above and below the opening 2 horizontal guide rollers 6 are mounted between the plates 4 in close relation to the said opening as indicated in Fig. 2. Each of these rollers is provided at one end with a retractable trunnion 7 which may be forced inward and disengaged from the support 4 to permit the removal of the roller from its bearings.

A suitable web or belt 8 upon which the names of the stations or streets to be indicated or other matter to be exhibited are suitably placed, has its ends engaged about spools or drums 9 and 10 mounted between the supports 5. This web is passed over the rollers 6 so as to cause it to travel vertically past the opening 2 as indicated in Fig. 2 to display the names and other matter placed or printed thereon. In operation the belt is wound from one spool to the other, suitable mechanism for winding the belt and controlling its travel, which will be hereinafter described, being provided. In order that the belt may be readily replaced by another bearing different names or symbols, one of the supports 5 is provided with inclined bearing slots 11 which receive one end of the rollers, while at its opposite end each roller carries a spring pressed bearing 12 adapted to receive the squared ends of winding shafts 14 and 15. By pressing the bearing 12 inward it is disengaged from the end of the winding shaft permitting the drum to be removed as is obvious, so that by first removing the rollers 6, the belt and its drums may be readily removed and another substituted.

It is obvious that the names or symbols are disposed at intervals on the belt and that some means for moving the belt and arresting its travel at regular intervals to bring the names or symbols into view at the opening 2 must be provided. In carrying out this operation metallic strips 16 having reduced ends are mounted on the under side of the belt 8 at regular intervals. The ends of these strips project beyond the belt and are adapted to engage stop lugs 17 projecting down from a cross plate 18 mounted transversely of the belt and adapted to slide vertically in slots 19 in the supports 4. A lever 20 projecting outside of the casing is pivotally supported within the casing by a bracket 21 and has its inner end pivotally connected to the center of the cross plate 18; so that by simply pulling down on the outer end of the lever the plate 18 is raised carrying the lugs 17 up out of the path of the strips 16 and permitting the belt to travel until the plate is lowered and the lugs projected into the path of the next strip 16.

While the drums 9 and 10 might be propelled by various means I prefer to employ a spring motor. As before stated the drums have engagement with winding shafts 14 and 15. These shafts have bearings in the plate 5 and a similar vertical supporting plate 5ª and project beyond the latter, carrying on their projecting ends knobs 22 by which they may be turned to revolve the drums. A pinion 23 is fixed on the shaft 14 and a similar pinion 24 is fixed on the shaft 15, the said pinions however being disposed out of alinement with each other. Between the shafts 14 and 15 a key shaft 25 carrying a suitably arranged spring motor 26 and a counter shaft 27 are slidably supported between the plates 5 and 5ª. A driving gear 28 is fixed on the

key shaft 25 and meshes with a pinion 29 fixed on the shaft 27. The gear 28 at its under side meshes with the pinion 23 as clearly shown in Fig. 1. Motion is thus imparted to the drum 9 and the belt wound thereon, unwinding from the drum 10 which is free to revolve, it being obvious however that the parts are held in check by the engagement of the strip 16 with the lugs 17.

For reversing the travel of the belt and winding it back on to the drum 10, a plate 30 is mounted to slide on studs 31 projecting outwardly from the supporting plate 5^a. The slidable shafts 25 and 27 have connection with this plate 30 which has a thumb screw 32 threaded through it and provided with a head 33 bearing against the inner side of the plate 5^a. This screw is held against longitudinal movement by a clip 34 mounted on the plate 5^a and bearing against the head 33. By turning this screw in one direction the plate 30 is drawn outward sliding the shafts 25 and 27 outward so that the gear 28 is moved out of mesh with the pinion 23 and the pinion 29 drawn into mesh with the pinion 24 thus imparting motion to the shaft 15 and drum 10 and reversing the direction of travel of the belt 8 as will be apparent. Upon turning the screw 32 in the opposite direction the parts are returned to their normal position and the direction of travel of the belt 8 again reversed.

For retarding the unwinding of the belt a flat spring 35 secured to the under side of the top of the casing 1 has its free end bearing on the flange of the drum 10. Any suitable operating device may be attached to the outer end of the lever 20 and the same may be either manually or mechanically operated.

What I claim, is:

In an indicating mechanism, the combination with two spaced rollers and an indicating belt having its ends attached thereto, of a driving mechanism comprising two shafts having connection with the rollers, pinions mounted on the shafts out of vertical alinement, a motor operated gear adapted to engage one of the pinions, a pinion meshing with the gear and adapted to engage the pinion of the other shaft, and means for laterally moving the motor operated gear and its pinion to alternately impart motion to the pinions mounted on the shafts.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THEOPHILE TANNER.

Witnesses:

GLYNN DAVIS,

M. HEAFER.