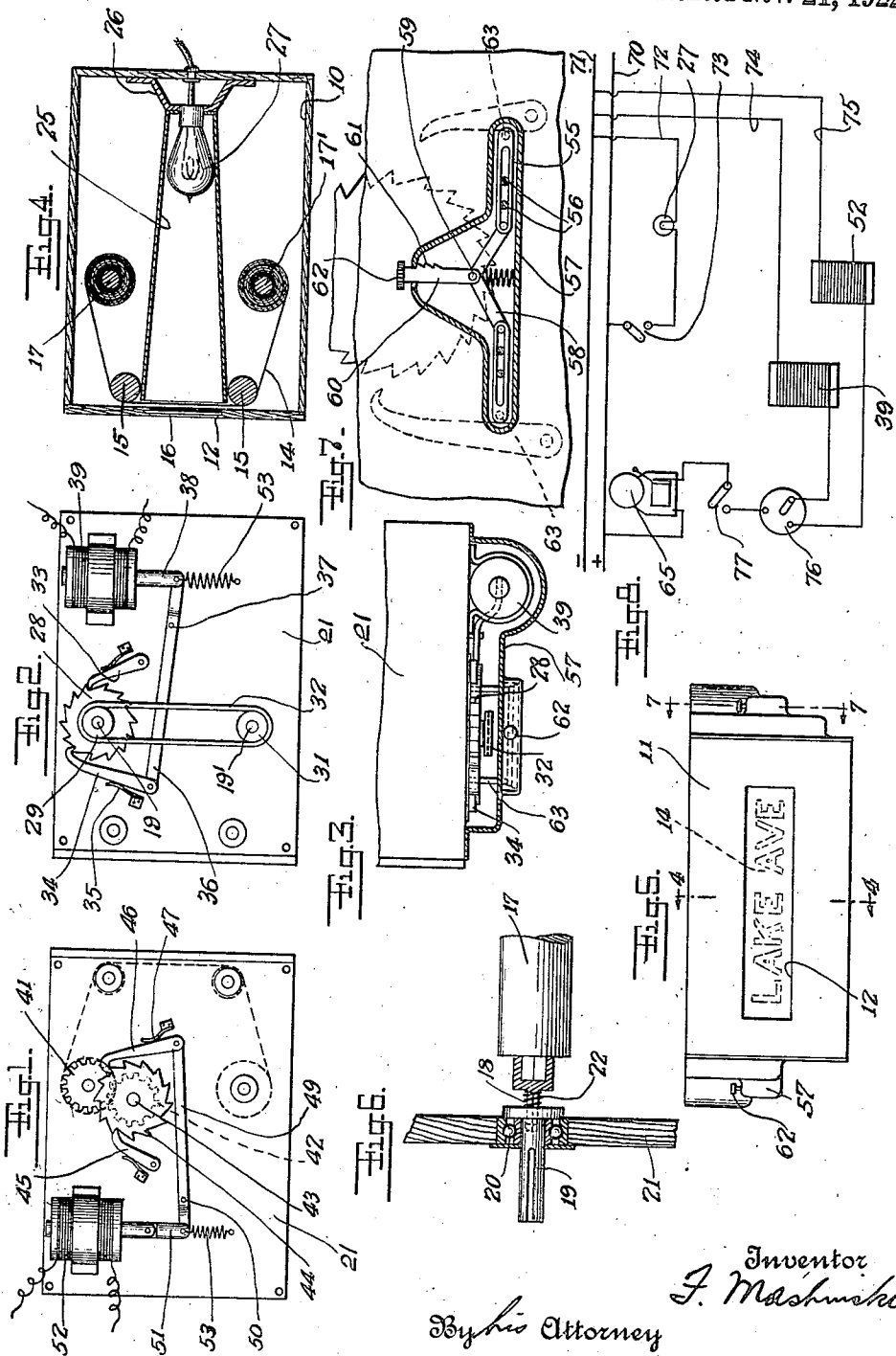


1,436,183.

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Inventor
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By his Attorney
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UNITED STATES PATENT OFFICE.

FRANK MASHINSKI, OF LA GRANGE, OHIO.

STATION INDICATOR.

Application filed April 23, 1921. Serial No. 464,052.

To all whom it may concern:

Be it known that I, FRANK MASHINSKI, a citizen of the United States, residing at La Grange, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Station Indicators, of which the following is a specification.

This invention has as its principal object to provide a street or station indicating apparatus adapted for use in street or other cars.

Another object is to provide an audible signal operative at the time a change is made in the display portion of the apparatus whereby attention is called to it.

A further purpose is to produce a light used in connection with the displayed sign so that the same can be easily read in the dark.

Finally, to provide an actuating means for the several devices which are under the operation and control of the person in charge of the car.

These and other like objects are attained by the novel construction, combination and arrangement of parts hereinafter described and shown in the accompanying drawings, forming a material part of this disclosure, and in which:—

Figure 1 is a side elevational view of the operating mechanism.

Figure 2 is a similar view looking from the opposite side.

Figure 3 is a partial plan view, the outer casing being removed.

Figure 4 is a sectional view of the outer compartment taken on line 4—4 of Figure 5 showing the station display roll and lighting means.

Figure 5 is a front elevational view of the complete apparatus.

Figure 6 a fragmentary sectional view showing the drum spindle mounting.

Figure 7 is a partial side and sectional view taken on line 7—7 of Figure 5.

Figure 8 is a diagrammatic view showing the electric circuit wiring.

In the drawings the numeral 10 designates a metal receptacle adapted to be secured to the wall of a car where it can best be seen by the passengers.

At the front end is a plate 11 containing an elongated opening 12 through which the station signs are displayed.

These signs are arranged in consecutive

order upon a strip of paper, tape or like material 14, the same passing over a pair of spaced rollers 15 mounted adjacent the opening 12, this aperture being preferably covered by a transparent plate 16.

The ends of the roller band 14 are secured upon winding drums 17 and 17' having spaced spindles 18 (see Fig. 6) fitting axial sockets formed in the flanged ends of shafts 19 and 19', mounted in anti-frictional bearings 20, carried in the casing walls 21, coiled compression springs 22 being interposed between the flanges of the shaft and projections of the drums from which the spindles 18 extend.

A conical reflector 25 is disposed in the compartment between the drums 17, its front end extending to the guide rollers 15 and its rear end secured to a bracket 26, carrying an electric light bulb 27 later on explained.

One of the extending ends of the shafts 19 has keyed to it a ratchet wheel 28 and pulley 29 on one side of the end plate 19', the other shaft end having on it another pulley 31 and trained over these pulleys is a friction band 32.

This friction band, which is of elastic material, transmits rotary motion from the pulley 29 to the pulley 31 and obviously causes the drums to rotate, winding the strip 14 from one to the other, maintaining it in taut condition, but allowing the driven drum to slip, as the strip is transferred, in accordance with its increasing diameter.

Engaging the ratchet wheel 28 is a pivoted, spring actuated pawl 33 on one side adapted to prevent return movement of the ratchet, and on the other side the ratchet teeth are engaged by a pawl 34 held in operative position by a spring 35, this pawl being pivoted to an arm 36 fulcrumed on the pin 37 and having its short end pivoted to the armature stem 38 of a solenoid 39, carried by clips secured to the plate 21.

On the same shaft, at the opposite side of the plate 21 is secured a gear 41, meshing with a mating gear 42, mounted on a revolvable stud 43, and fixed to the stud is a ratchet wheel 44 held from return motion by a spring pressed pawl 45 and engaged by a movable pawl 46 held in operative position by a spring 47.

The pawl 46 is pivoted to the long end of a lever 49 pivoted on the pin 50 set in the plate 21 and having its short end pivotally

engaged with the armature stem 51 of the solenoid 52, both solenoid armatures being normally drawn outward by springs 53 as shown.

5 Means for releasing either set of actuating levers are indicated in Figure 7, the same consisting of pairs of opposed slotted slides 55 movable on support pins 56 set in casings 57 at the respective ends of the apparatus, 10 these slides being connected at their inner ends by links 58 pivoted at their intersecting raised ends by the pin 59 to a plunger 60 having teeth 61 on one edge engageable with the edge of the opening in the casing through 15 which the plunger passes and exterior of the casing a knob 62 is fixed to the plunger by which it can be operated.

The outer ends of the slide 55 carry pins 63 adapted to engage the inner surfaces of 20 either pair of pawls 33 and 34 or 45 and 46, releasing them from engagement with their corresponding ratchet wheels in a manner clearly apparent.

Thus the drums may be driven by the solenoid in either direction and reversed at will. 25 In addition an audible signal, as the bell 65 may be used in connection with the apparatus at any preferred point.

It will also be apparent that the drums, together with the display strips may be readily 30 changed by depressing the springs 22 and taking the squared ends of the drums from the sockets in which they rest.

Referring now to the electrical diagram, 35 shown in Figure 8, positive and negative currents of electricity are represented by the line conductors 70 and 71, a branch 72 from

the latter being used to cause the lamp 27 to glow when the switch 73 is closed.

Another branch 74, energizes the solenoid 40 39, or branch 75 may energize the solenoid 52 according to the disposition of the three-way switch 76, providing the central switch 77 be closed, which will also cause the bell 65 to ring, it being understood that push buttons 45 conveniently located, will be actuated by the motorman, causing the selected solenoid to operate and move the strip at any desired time.

The push knobs 62, one of which is arranged on each side of the structure, determine the direction in which the display strip travels, and due to the band 32, one end will be wound on the drums as the other is unwound. 55

Having thus described my invention and set forth the manner of its construction, application and use, what I claim and desire to secure by Letters Patent is:—

In a street car indicator having a pair of 60 drums and ratchet wheels operatively engaged therewith, pivoted pawls engageable with said ratchets, means for actuating said movable pawls, said pawls being arranged in opposed relation and spring impelled to 65 normally engage the ratchets, a pair of slides adjacent said ratchets, guides for said slides, pins carried by said slides adapted to retract said pawls, a single means for manually moving said slides in unison, and means for 70 maintaining said slides in position when adjusted outwardly.

In witness whereof I affix my signature.
FRANK MASHINSKI.