

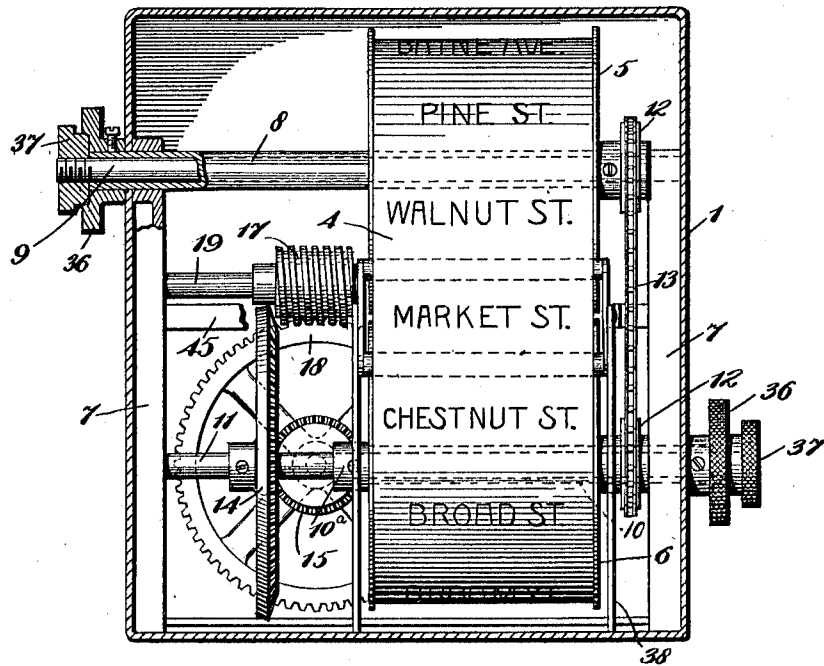
W. C. GRAY.
STREET INDICATOR FOR RAILWAY CARS.
APPLICATION FILED APR. 24, 1911.

1,003,897.

Patented Sept. 19, 1911.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

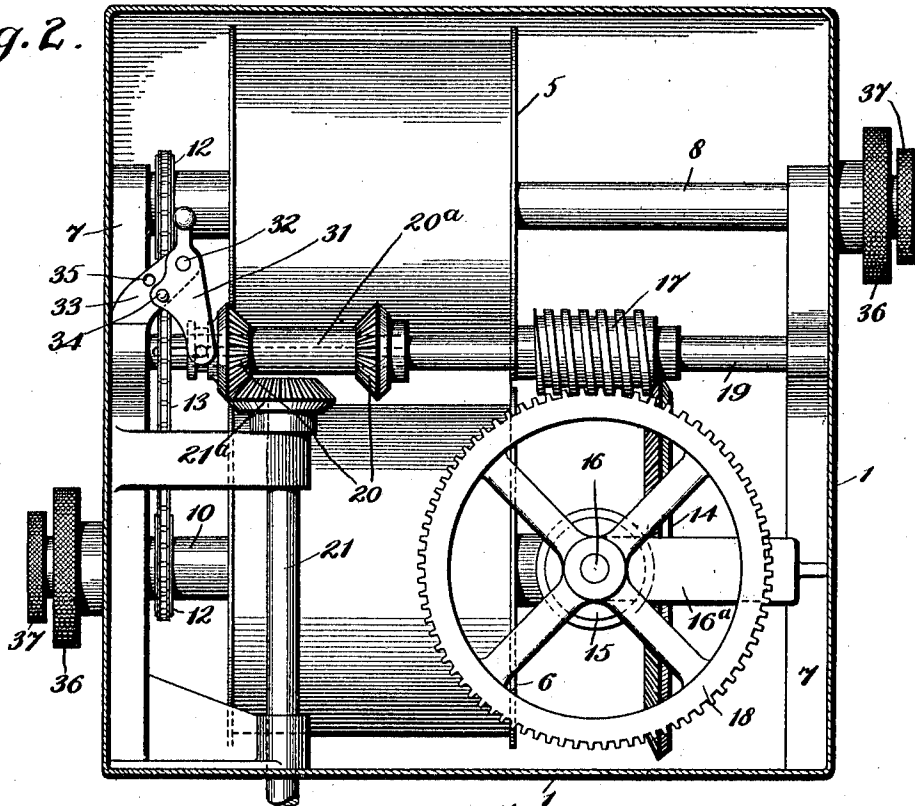
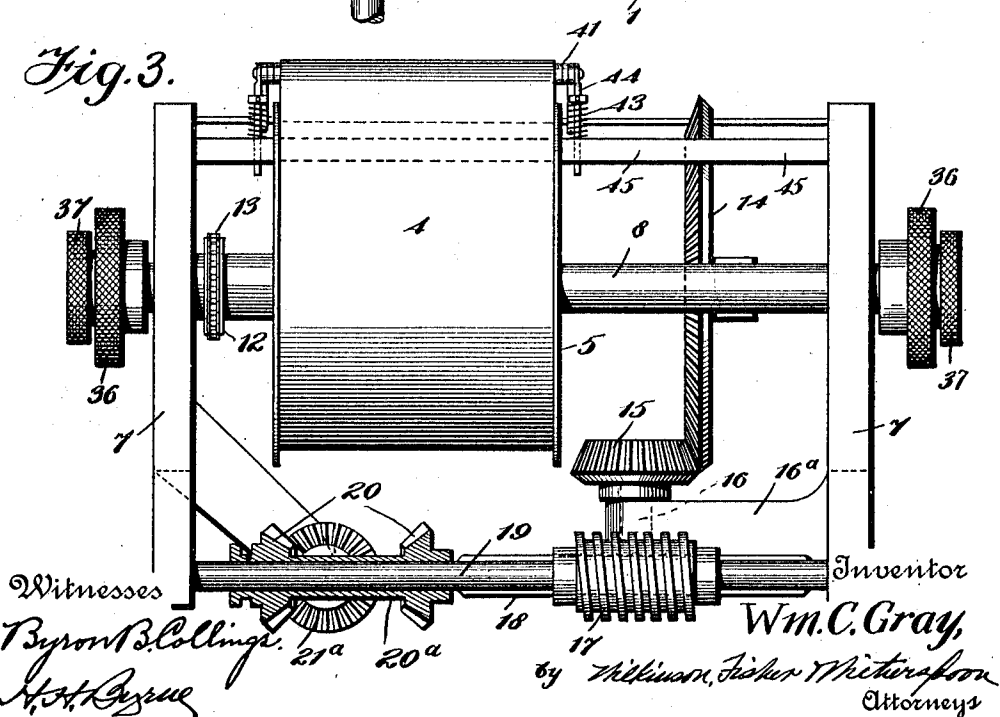


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM C. GRAY, OF PHILADELPHIA, PENNSYLVANIA.

STREET-INDICATOR FOR RAILWAY-CARS.

1,003,897.

Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed April 24, 1911. Serial No. 623,058.

To all whom it may concern:

Be it known that I, WILLIAM C. GRAY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Street-Indicators for Railway-Cars; and I do hereby 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.

The present invention relates to indicators for street railway cars and has for its purpose to provide a device of that character which will accurately indicate to the passengers in the car the several streets crossing the route of the car at the time of such crossings, and wherein the indicator actuating mechanism is operated solely through the travel of the car, thus relieving the conductor from announcing the streets as approached and leaving him free and unhampered to attend to his more important duties.

The invention further contemplates providing the apparatus with means whereby a movable strip bearing the street designations is capable of independent manipulation to the end that said strip may be readily adjusted at any time while the car is *en route*, and may be removed and replaced by another strip when the route of the car is to be changed, and wherein the strip is, at all times kept at the proper tension regardless of the varying diameters of the strip winding reels.

With these and other objects in view the invention consists in the arrangement and combination of parts hereinafter claimed, and while the invention is not restricted to the exact details shown and described, still for the purpose of disclosure reference is had to the accompanying drawings, in which like reference characters designate the same parts in the several views, and in which:—

Figure 1 is a front elevation of the elements within the casing with parts broken away for clearness, and showing the casing in section. Fig. 2 is a rear elevation of the parts shown in Fig. 1 and with the casing in section, and; Fig. 3 is a top plan view thereof with the casing removed.

The apparatus comprises a suitable metallic casing 1 which may be suitably cut away to provide an opening which exposes the

street designations on a movable strip or film 4. The strip 4 is wound upon a pair of reels or drums 5 and 6 that are journaled in superposed relation on a pair of frames or brackets 7 that are secured within and against opposite sides of the casing 1 (see Figs. 1 and 2). The upper reel 5 is secured to a sleeve 8 that is mounted on a shaft 9 journaled within said brackets; and the lower reel 6 is secured to a similar sleeve 10 that is mounted on a shaft 11. A collar 10^a is secured on the shaft 11 against said sleeve 10. The shaft 9 and the sleeve 10 are each provided with a sprocket 12 and both of said sprockets are of the same diameter and carry a chain 13 the purpose whereof will be understood. The means for rotating said reels to cause the travel of the indicator strip comprises a beveled gear 14 secured to rotate with the shaft 11 and meshing with a relatively smaller beveled gear 15 that is mounted on one end of a stub shaft 16 journaled in the arm 16^a. The shaft 16 is driven by a screw and worm gear 17 and 18, the elements whereof are mounted respectively on the shafts 19 and 16; and the shaft 19 is in turn adapted to be driven through a miter gear comprising two beveled pinions 20 on a sleeve 20^a splined on the shaft 19, and either of which pinions may be brought in mesh with the bevel gear 21^a on the shaft 21.

From the foregoing it will be readily seen that when the shaft 11 is rotated the same movement is imparted to the drum 6 on said shaft 11 and is transmitted to the drum 5 through the agency of the chain and sprocket gear (13 and 12); and for throwing out the driving connection between said drum or reversing the direction of travel of the strip, a lever 31 is connected with the sleeve 20^a of the pinions 20 and is adapted to shift said pinions as will be understood. The lever 31 is pivotally mounted at 32 to an arm 33 projecting from one of the side frames 7 and for holding said lever in its different adjusted positions, the same is provided with a resilient catch 34 adapted to engage within notches 35 (one being shown) formed in said arm 33.

To the end that the reels 5 and 6 may be wound independently of each other and independently of their respective shafts 9 and 11 said reels have the sleeves 8 and 10 thereof each provided with a knurled head 36 that coöperates with a similar but smaller

head 37 that has screw-threaded connection with the shaft. The knurled heads 36 and 37 are adapted to be coupled together by jamming the sleeve 8 against the sprocket 12 of the upper reel for effecting a driving connection between said shaft and the sleeve and in like manner the sleeve 10 is adapted to be jammed against the collar 10^a to couple the knurled heads of the lower reel. The driving connection between the shafts and sleeves may be disconnected simply by separating said knurled heads which is done by unscrewing the heads 37. The sleeves 8 and 10 and the reels mounted thereon are then free to be rotated independently of the driving gear by turning the knurled heads 36.

It is obvious that those skilled in the art may vary the details of construction and arrangement of parts without departing from the spirit of my invention, and there-

fore I do not wish to be limited to such features except as may be required by the claim.

What I claim is:—

In an indicator for street railway cars the combination of a casing, a reel, a strip adapted to be wound on said reel, a sleeve secured to said reel, a shaft mounted in said casing and on which said sleeve is mounted, a knurled head screw threaded on said shaft, a knurled head fixed to said sleeve and adapted to have driving and non-driving engagement with said shaft knurled head, and a gearing for driving said reel, substantially as described.

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

WILLIAM C. GRAY.

Witnesses:

JOHN P. RICHTER,
JOSEPH L. CASTLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."