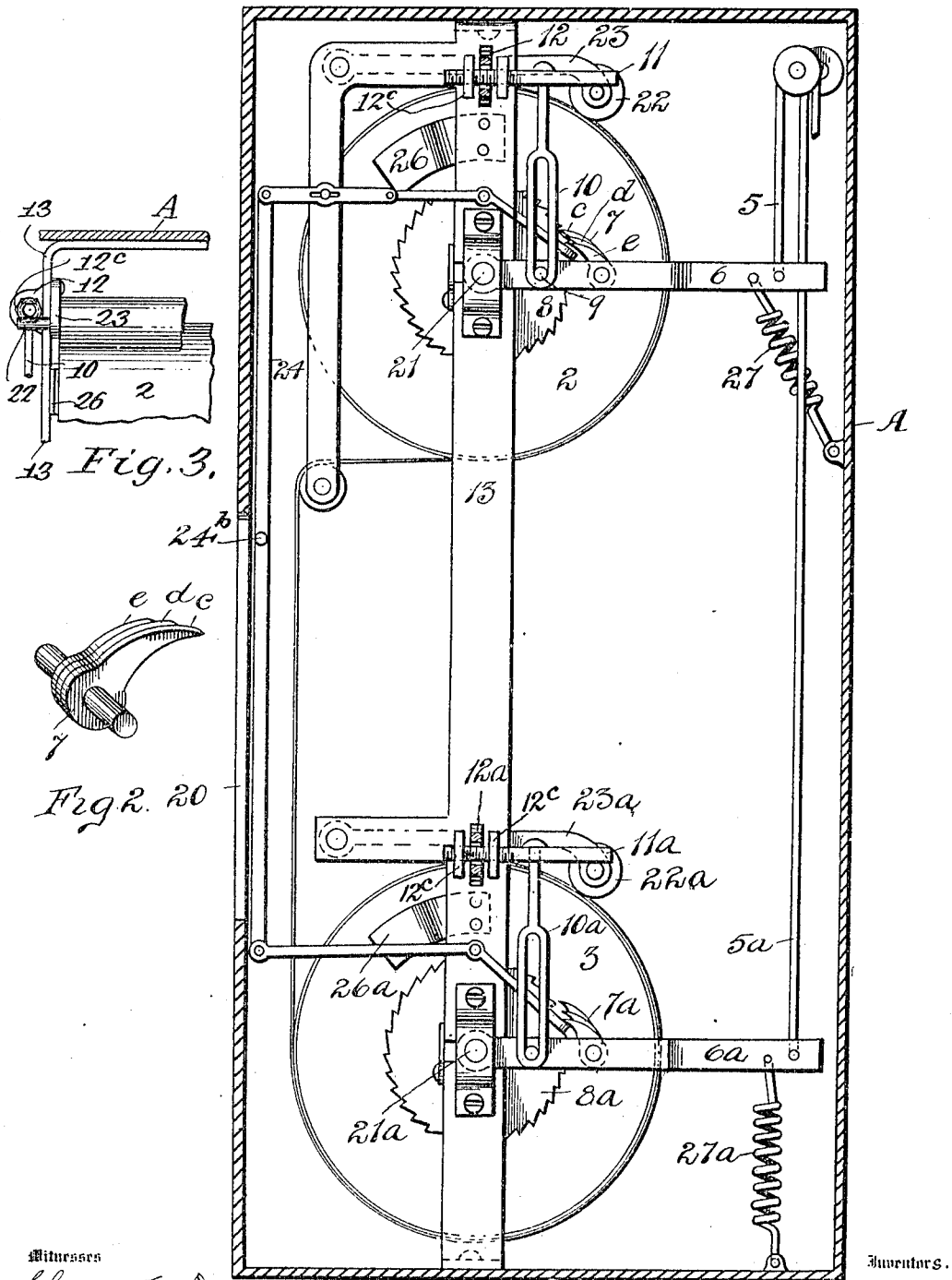


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STREET INDICATOR.

APPLICATION FILED JULY 22, 1908.

947,570.

Patented Jan. 25, 1910.



Witnesses
Clarice E. Day
W. B. Bell

Fig. 1. Frank D. Carson
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UNITED STATES PATENT OFFICE.

FRANK D. CARSON, OF DETROIT, MICHIGAN, AND DAVID CLARK JOHNSON, OF MOLINE, ILLINOIS.

STREET-INDICATOR.

947,570.

Specification of Letters Patent.

Patented Jan. 25, 1910.

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To all whom it may concern:

Be it known that we, FRANK D. CARSON and DAVID CLARK JOHNSON, citizens of the United States, residing at Detroit, county of Wayne, State of Michigan, and Moline, Rock Island county, Illinois, respectively, have invented a certain new and useful Improvement in Street-Indicators, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to street indicators.

It has for its object an improved indicating device, adapted to be used for the purpose of indicating to passengers upon a street car, or similar conveyance, the street which the car is approaching.

In the drawings:—Figure 1, is a vertical cross section, showing the mechanism within the case. Fig. 2, is a detail of the multiple pawl used. Fig. 3 is an elevation of the roll-regulating arm and its supporting bracket, taken at right angles to the showing in Fig. 1.

Within a case A, upon suitable framework, is mounted a pair of drums 2 and 3; connected with the drums is mechanism by means of which a ribbon or web may be alternately wound from one of the drums onto the other. Upon the web are printed the indicating characters which indicate the streets across which the car passes, and the indicating parts of the web are consecutively brought in front of an opening 20 in the case. The mechanism which actuates the one drum is exactly similar to that which actuates the other, and in each case the drum is actuated manually. The mechanism connected with the upper drum 2 will be explained, and the explanation of it will apply to the lower drum 3, if it be understood that the indicating characters employed in connection with the upper drum 2 are repeated as indicating characters, with the addition of a letter.

The drum 2 is mounted upon a shaft 21, upon which shaft is also mounted a ratchet wheel 8, and a ratchet lever 6. The ratchet lever carries a multiple pawl 7, which engages with the ratchet wheel 8. It also carries a pin 9, which projects at the side of the ratchet lever, and which engages through

a slot in the link 10, which connects the lever to a regulating arm 11. The regulating arm 11 is mounted somewhat loosely in a bracket 12, that projects from a frame member 13. The regulating arm 11 is held adjustably with respect to the drum 2 by means of nuts 12^c, one on each side of the bracket member 12, which hold the bracket arm in position, not so firmly, however, but what it may swing slightly and be adjusted to regulate the position of the upper end of the yoke member 10, which hangs from the regulating arm 11. The outer or free end of the regulating arm 11 rests on the shaft or axle of a roll 22 that engages upon the accumulating or diminishing mass of web material wound on the drum 2. The roll 22 is itself mounted in a swinging frame 23, which permits the roll to move toward the drum, or away from the drum to a sufficient extent to insure its constant rest upon the surface of the web, and it consequently, by its own position, determines the position of the lower end of the link 10. The arm 11 is capable of such a degree of rocking within its holding nuts and bracket that, with this point as a fulcrum, when its outer end, which rests upon the end of the shaft 22, is raised by its rise, due to the increasing thickness of the web on the drum, it also causes an extra upward pull upon the yoke member 10.

In the elongated slot at the lower end of the link 10 rests the pin 9 on the ratchet lever 6, and the position of this arm is consequently determined by the thickness of the web wound on the drum 2. As the thickness increases, the free end of the ratchet lever rises, and the amount of swing given to it in actuating the ratchet diminishes consequently, as the effective radius of the drum upon which the web is wound increases, the amount of feed given to it diminishes. This can readily be regulated by means of the regulating arm 11, so that the feed movement of the web is practically constant throughout its entire period of winding or unwinding from the drum. The feed movement of the ratchet arm 6 is produced manually by pulling the cord 5 that runs over a sheave to any convenient place for manual actuation by the operator. When the web reaches the end of its travel in one direction, say from the drum 3 to the drum 2, the rod or arm 24 is raised, preferably manually, by lifting upon the

pin 24^b, thereby raising the pawl 7 out of engagement with its ratchet wheel 8, and at the same time dropping the pawl 7^a into engagement with the ratchet wheel 8^a. Similarly, when the drum 3 is again filled by the rolling of the web thereon from the drum 2, the pawl 7^a is thrown out of engagement with the ratchet wheel 8^a and the pawl 7 thrown into engagement with the ratchet wheel 8 by manual actuation of the rod 24, through the medium of the pin 24^b, in the reverse direction.

The pawl 7 is a multiple or plural pawl, consisting of a number of fingers *c*, *d*, *e*, having different engaging lengths; the use of a plurality of pawls on the single bar is equivalent to the use of a single pawl with a ratchet wheel of much shorter pitch, and more numerous teeth.

The drum 2 is held in frictional contact with a spring 26, which acts as a brake to prevent the undue return movement, but is not sufficiently strong to resist the return movement caused by rewinding the ribbon on its return travel. The ratchet arm 6 may

be brought back to its engagement with the stirrup or slotted end of the hanger 10, or by gravity aided by a spring 27.

What we claim is:—

1. An indicator, having in combination a pair of drums and a web adapted to wind and unwind therefrom, a ratchet and pawl feed for said drums, and a regulator for said feed controlled by the mass of web wound on the drum, substantially as described. 30 35

2. In a street indicator, in combination with a web and drums on which said web is wound, a manually actuated ratchet lever for turning said drums, a feed regulator controlled by the mass of material wound on said drum, and means for adjusting the said feed regulator, substantially as described. 40

In testimony whereof, we sign this specification in the presence of two witnesses.

FRANK D. CARSON.

DAVID CLARK JOHNSON.

Witnesses:

CHARLES F. BURTON,
VIRGINIA C. SPRATT.