

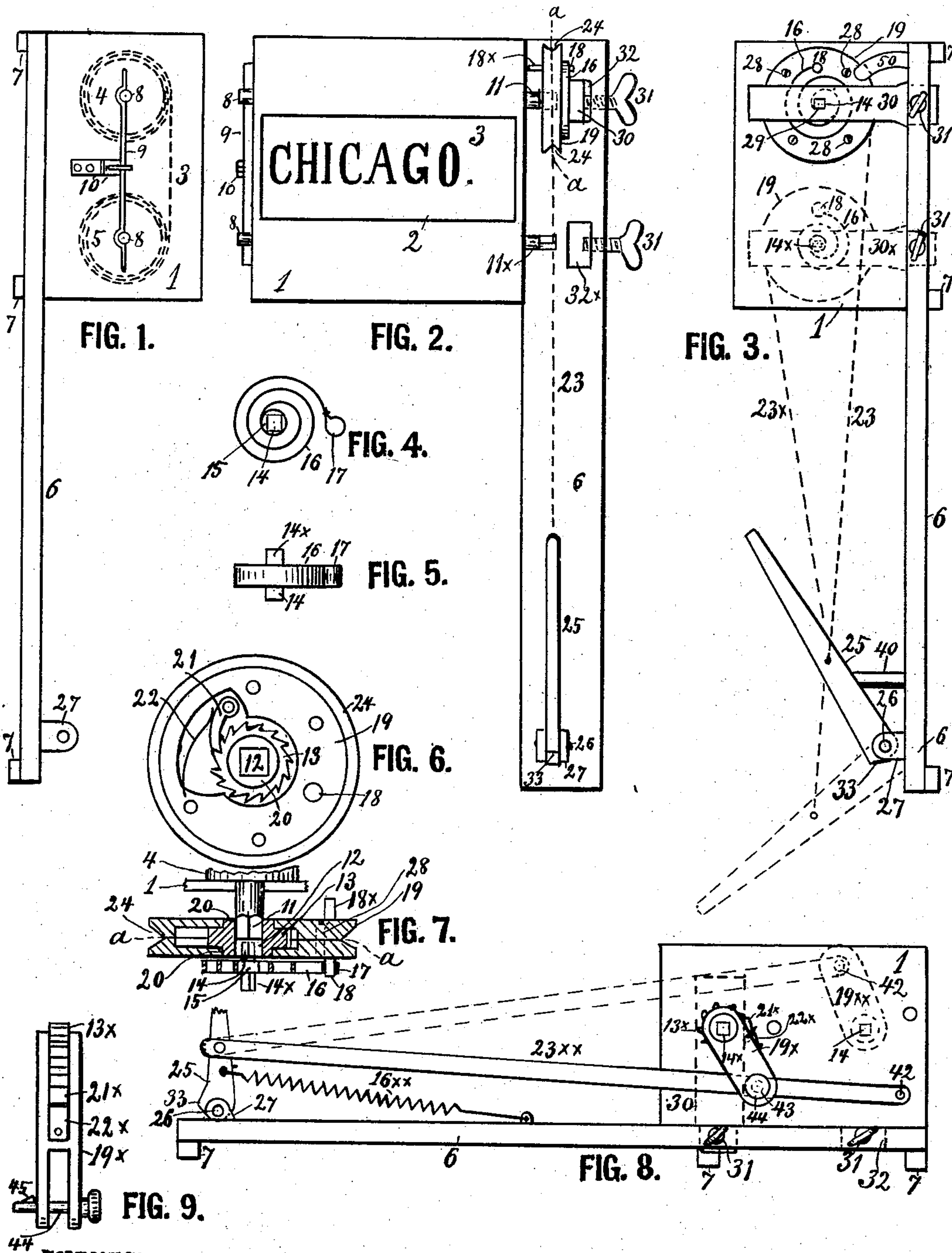
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Patented Sept. 30, 1902.

A. KUENTZ.
STATION INDICATOR.

(Application filed Feb. 20, 1902.)

(No Model.)



WITNESSES:

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ADAM KUENTZ, OF COLBY, WISCONSIN.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 709,912, dated September 30, 1902.

Application filed February 20, 1902. Serial No. 95,003. (No model.)

To all whom it may concern:

Be it known that I, ADAM KUENTZ, a citizen of the United States, residing at Colby, in the county of Clark and State of Wisconsin, have
5 invented certain new and useful Improvements in Station-Indicators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in
15 station-indicators; and the object of the invention is to provide a cheap and easily-operated device adapted to be put in a conspicuous place in a passenger-car and which by a single touch of the conductor's hand causes
20 the name of the next station to appear on the device, so that the passengers may at any time by glancing at the device know what is the next station, or the next street when the device is used on a street-car. This object I
25 attain by the novel construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my station-indicator with the lever 25 and cord 23 in Figs. 2 and 3 omitted. Fig. 2 is a front elevation of the complete device. Fig. 3 is a right-hand side view of Fig. 2. Fig. 4 is a detail view of the retraction-spring 16 in Figs. 2, 3, and 7. Fig. 5 is a top view of Fig. 4. Fig. 6 is
35 an inside view of the pulley 19, separated on the line *a a* in Figs. 2 and 7. Fig. 7 is a diametrical section of pulley 19 with some adjacent parts. Fig. 8 is a side view of the whole indicator as made with some modifications. Fig. 9 is a detail view of the ratchet-arm 19^x in Fig. 8.
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Referring to the drawings by reference-numerals, 1 designates a box or case provided in its front side with an opening 2, through
45 which appear the names of the streets or stations, as indicated in Fig. 2 by the word "Chicago," which are printed below each other along a strip 3, of paper or other flexible material, which is secured with one end
50 to each of the two rollers 4 and 5, (see dotted lines in Fig. 1,) so that by rolling the strip onto one roller it unrolls from the other.

The bottom or back of the box 1 and the extension 6 of same are provided with cleats 7 to hold the box slightly from the wall of the car, to which it is secured in any suitable
55 manner.

The projecting journals 8 of the rollers are friction-held by a spring-bar 9, having notches fitting the journals, and a central
60 support-keeper and tension device 10, by which the spring-bar is adjusted against the journals. The opposite journals 11 11^x are square near their ends, so as to fit in a square central hole 12 in a ratchet-wheel 13, into
65 which either journal may enter about half-way through the ratchet-wheel, as shown in Fig. 7, while the rest of the opening in the ratchet-wheel serves as a clearing or space for either of the two square projecting ends
70 of a stem 15, secured at the inner end of a spiral spring 16, having its outer end formed with a loop or eye 17, which may readily be exchanged from the pin 18 to the pin 18^x at the opposite side of the pulley 19, which em-
75 braces the ratchet-wheel 13, revolving on the hubs 20 of it and imparting rotary motion to the ratchet-wheel by the pawl 21, held against the ratchet-teeth by the spring 22 when the pulley is oscillated by the cord 23, secured in
80 the groove 24 of the pulley and to the operating-lever 25, pivoted at 26 to a bracket 27, secured on the extension or tail 6 of the box, as will presently be more fully described.

The pulley 19 is made in halves and secured together by screws 28 after the ratchet-wheel 13 and its pawl are placed within the pulley.
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The square end 14 or 14^x of the spring-holding stem 15 fits in a square hole 29 in a
90 post 30, which is secured by a thumb-screw 31 in one of the pockets or apertures 32 32^x, which are wide enough to permit the post to lean outward, and thus permit the opposite end (14 or 14^x) to slip into the clearing 12 in
95 the center of the ratchet-wheel. The screw 31 is then adjusted and holds the post rigid and the spring in position. 50 is a guide for the cord 23 to keep it on the pulley when slack.

In the operation of the device the conductor or other operator, as the train has passed
100 one station, sets the indicator so that the name of the next station appears at the aperture 2. This he does by simply throwing

the lever 25 into the position shown in dotted lines in Fig. 3, so that the shoulder 33 touches the tail-board 6 and releases it, so that the spring 16 returns the pulley 19 until the lever 5 stops against the peg 40. The downward swinging of the lever pulls on the cord 23 and through the pulley 19, the dog 21, and ratchet-wheel 13 imparts a partial rotation of the upper roller 4, which thereby moves the strip 3 10 sufficiently to bring the name of the next station into the aperture 2, and the action of the spring 16 draws the lever back to its normal position, while the dog 21 plays over the ratchet-teeth and gets into position for the 15 next operation of the lever and change of station. When the end of the road or line is reached and the car is to return the way it came from, and thus need the stations indicated in the reverse order, the conductor 20 loosens the thumb-screw 31, moves the post 30 into the pocket 32^x in Fig. 2, as indicated in dotted lines 30^x in Fig. 3, and before he secures the post in the new place he moves the pulley 19 onto the journal 11^x in Fig. 2, 25 taking care to turn its formerly outer side now toward the box, and the spiral spring 16 is placed near the post, as before, but turned upside down, so that it pulls in the opposite direction to what it did before and against 30 the rope, which is now at the top of the pulley, like 23^x. By this arrangement the same operation of the lever already described pulls the strip 3 in the reverse or downward direction, and thus indicates the stations in the reverse order. 35

The variation in the length of the cord or chain 23 when the pulley is moved from one roller to the other is adjusted by winding more or less of the cord on the pulley.

40 If on a very long road the great number of stations require so long a strip of names that the pulling-roller gets thereby an increased diameter and might move the last names of stations too close to the upper or lower edge 45 of the aperture 2, then the slight deficiency may easily be corrected by the operator in swinging the lever 25 a trifle, more or less.

In the modifications Fig. 8 and 9 I show an equivalent for the pulley 19—namely, a 50 ratchet-arm 19^x—embracing the ratchet-wheel, and instead of the cord 23 I use a rod 23^x, with two holes 42 43, of which 43 is pivoted by a pin 44 to the free end of the ratchet-arm 19^x, and the hole 42 is used when the 55 arm is turned upward, as 19^x. Said pin is retained in place by the umbrella-spring 45,

near its point. In this case the lever 25 is returned by the coiled spring 16^x. In Fig. 8 the post 30 is shown only in dotted line to avoid obscurity. It will be understood that 60 the post stands outside the rocker-arm 30 simply to keep it and its ratchet-wheel on the square part of the roller-shaft and that the post changes place and the ratchet-arm or rocker-arm is turned outer side in and placed 65 on the other roller-shaft at each end of the car-line, as shown at 19^x in Fig. 8. It will also be understood that any other means than the post 30 may be used for keeping the ratchet-wheel in place on the roller shafts or 70 journals.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a station-indicator adapted to be carried 75 in a car, and suitably framed, the combination with a box having an aperture in its front side of two rollers journaled in the box, a slip of flexible material secured with one end on each roller and having the names of stations 80 or streets marked upon the side adjacent to the aperture in the front of the box, a friction spring-bar pressing upon one journal of each roller; each roller having a square end portion, a ratchet-wheel having a square cen- 85 tral hole adapted to fit upon either of said journals with either side of the wheel toward the roller, a pulley surrounding the ratchet-wheel and revolving on the hubs of it, a spring-pressed pawl pivoted in the pulley and 90 engaging the ratchet-wheel, the pins 18 and 18^x projecting from both sides of the pulley, the spiral spring 16 having a loop at its outer end adapted to go on the pins 18 and 18^x, the central stem 15 secured to the inner end of 95 the spring and having square ends, the post 30 having a square hole adapted to fit the square ends of the spring-stem, two set-screwed pockets in the framework for holding the post 30 near either of the roller-journals, 100 the chain or cord 23 secured to the pulley, and hand-lever 25 pivoted on an extension of the framework and connected to said cord or chain, and means for limiting the motion of the lever, substantially as and for the pur- 105 pose set forth.

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

ADAM KUENTZ.

Witnesses:

CHARLES HOLZHAUSEN,
K. ANDREWS.