

R. E. HORNBECK.
STREET OR STATION INDICATOR.
APPLICATION FILED JAN. 26, 1910.

1,039,746.

Patented Oct. 1, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

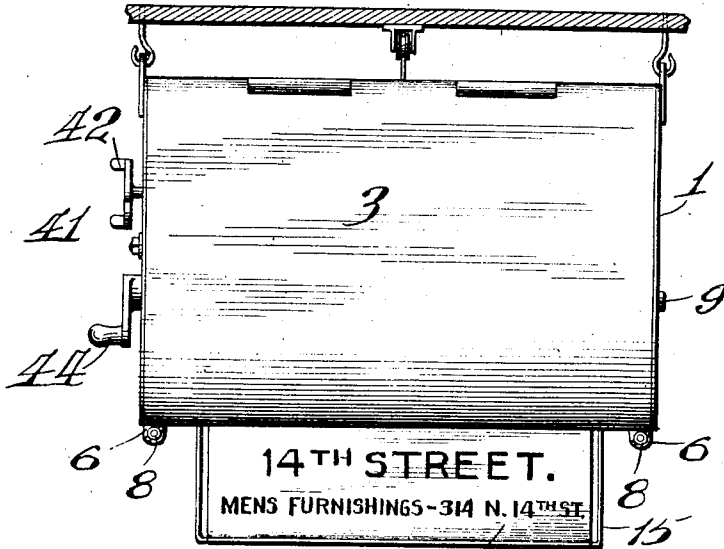


Fig. 2.

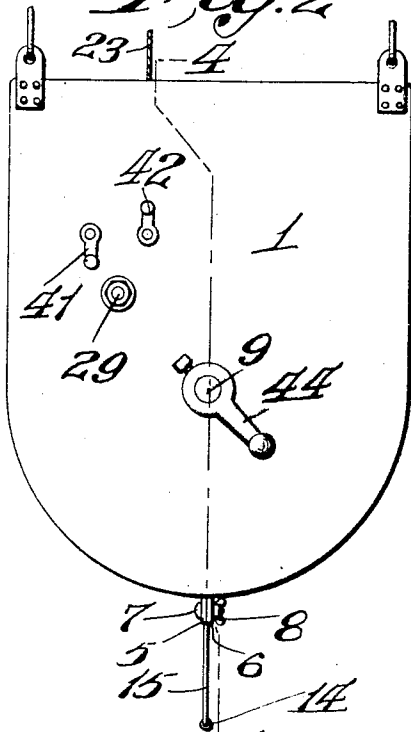
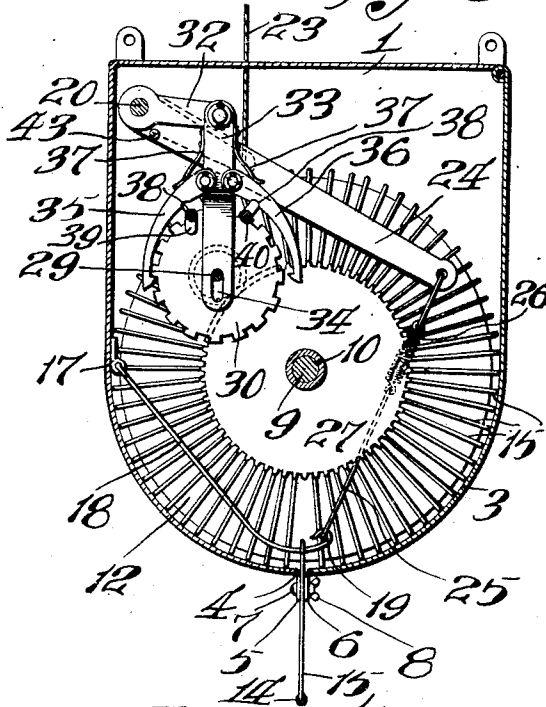


Fig. 3.



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H. G. Fletcher,
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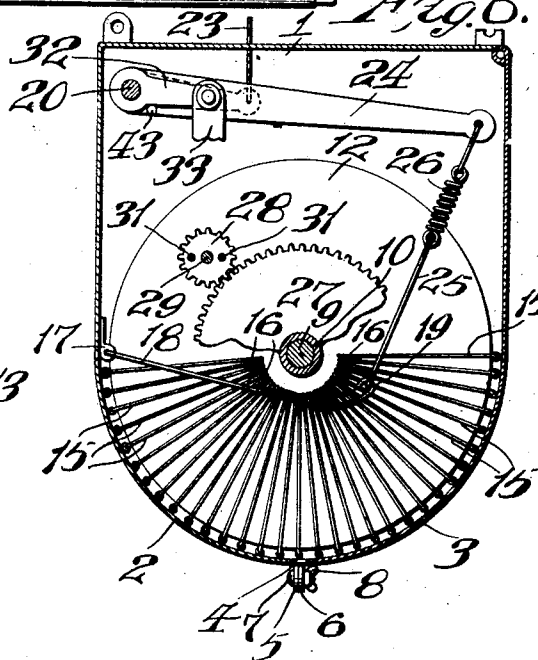
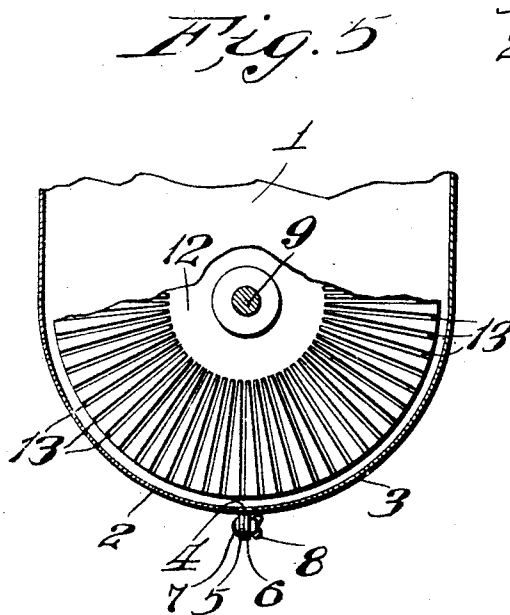
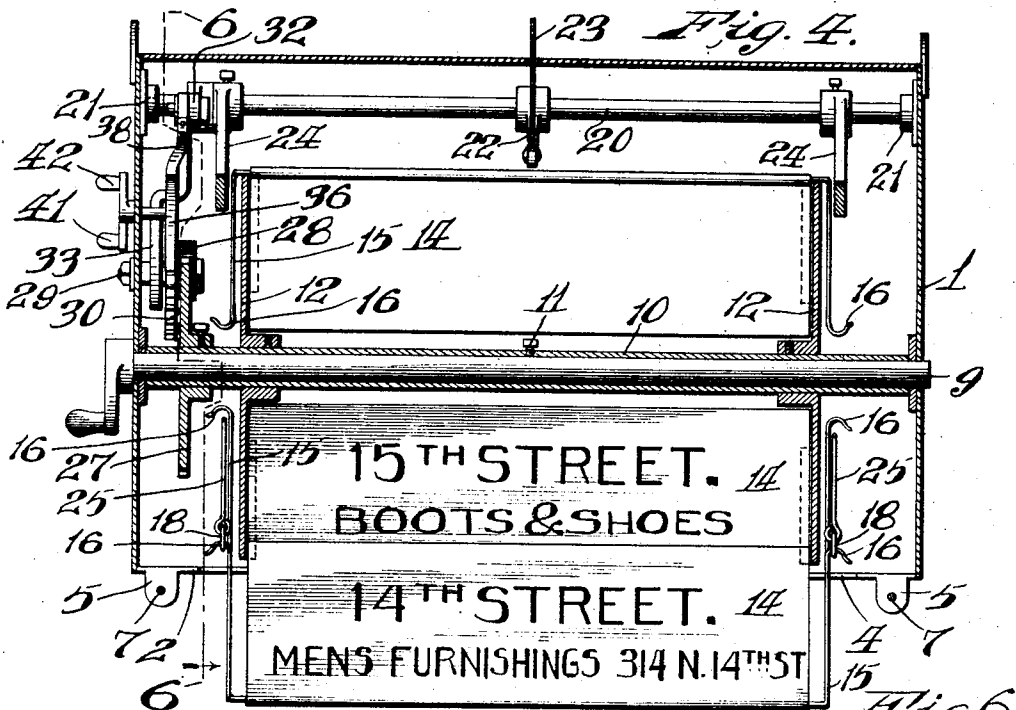
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

RICHARD E. HORNBECK, OF RICHMOND, CALIFORNIA.

STREET OR STATION INDICATOR.

1,039,746.

Specification of Letters Patent.

Patented Oct. 1, 1912.

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To all whom it may concern:

Be it known that I, RICHARD E. HORNBECK, a citizen of the United States, and resident of Richmond, California, have invented certain new and useful Improvements in Street or Station Indicators, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in street or station indicators, the object of my invention being to construct an indicator especially designed for use in passenger coaches and arranged to be suspended from the ceiling of the coach at a point visible throughout the greater portion of the coach. The indicator as designed is constructed of a minimum of parts and is arranged to be actuated either manually or automatically.

For the above purposes my invention consists in certain features of construction and arrangement of parts as will be hereinafter more fully described, pointed out in the claim and illustrated by the accompanying drawings, in which:

Figure 1 is a face view of the complete indicator showing in section a portion of the car with one of the indicating cards extended from the casing; Fig. 2 is an end elevation of the complete indicator; Fig. 3 is a sectional elevation taken approximately on a line immediately inside the left hand wall; Fig. 4 is a vertical, sectional elevation taken approximately on the line 4—4 of Fig. 2; Fig. 5 is a fragmental view illustrating a portion of the casing and a portion of one of the disks which carries the cards; and Fig. 6 is a vertical, sectional elevation taken approximately on the line 6—6 of Fig. 4.

Referring by numerals to the accompanying drawings: 1 designates the casing which is preferably formed rectangular and is provided with a rounded bottom 2.

3 designates the door of the casing the lower end of which is rounded and corresponds in shape with the rounded bottom 2. Portions of the meeting edges of the bottom 2 and door 3 are removed forming a slot 4.

5 designate perforated ears which are formed on or fixed to the bottom portion 2 and 6 designate corresponding perforated ears which are formed on or fixed to the door 3, said ears alining with each other and

arranged to be secured together by means of the threaded bolts 7 and winged nuts 8.

9 designates a shaft which is supported in the end walls of the casing and 10 designates a sleeve which embraces the shaft 9, which sleeve extends the full length of the shaft inside of the casing and which sleeve is secured to the shaft against rotation by the set screw 11.

12 designate disks which are mounted upon the sleeve 10 and secured thereto against rotation relative to the sleeve. The disks are provided on their inside faces with series of radial channels 13. The disks and channels are preferably formed by casting, there being upon the inner faces of each disk a series of radially disposed wedge-shaped ribs which form the channels 13.

14 designate the cards bearing the matter to be displayed, which cards are arranged to be held between the oppositely faced disks 12 and inserted in the channels 13 and be free to move in said channels. The display cards 14 are preferably constructed of light sheet metal and each card, at its one side margin, is crimped to embrace a rod 15 which rod projects laterally and thence in a plane parallel with the face of the disk and terminates at each end in a hook 16.

Secured to the rear wall of the casing, at a point adjacent the rounded bottom 2, is a pair of hangers 17 upon which are pivotally suspended the card elevating-rods 18, the outer free ends of which are curved upwardly and terminate in hooks 19.

20 designates a shaft which is rotatably mounted in the bearings 21 adjacent the upper wall of the casing and in proximity to the rear wall of the casing. At the approximate center of the shaft 20 is the lever 22 and secured to the free end of the lever is a rope or cable 23 which connects with any suitable actuating mechanism (not shown). Non-rotatably secured to the shaft 20 are the arms 24 which are positioned vertically alining with the hangers 17, and carried by the outer free ends of the arms 24 are the rods 25 which connect the arms 24 with the elevating-rods 18. The rods 25 are each provided with a spring 26 for purposes of cushioning the descent of the cards upon the elevating-rods 18. Embracing the sleeve 10, at a point between the left hand wall of the casing and the left hand disk 12, is a

gear wheel 27 the teeth of which are preferably the same number as the channels 13. Meshing with the gear wheel 27 is a gear wheel 28 which is mounted upon the stub-shaft 29 secured to the left hand wall of the casing. Embracing the stub-shaft 29 is the ratchet wheel 30 secured to the gear wheel 28 by means of the rivets or bolts 31. The number of teeth or points upon the ratchet wheel 30 are preferably the same as the teeth upon the wheel 28.

Loosely carried by the shaft 20 is an arm 32 arranged substantially in a vertical plane above the ratchet wheel 30. Pivotaly secured and pendant from the free end of the arm 32 is a link 33, the lower end of which is provided with a slot 34 which embraces the shaft 29. Carried by the link 33 are the detents 35 and 36 which are acted upon by the springs 37. Each of the detents is provided with a notch 38 on its lower face adjacent the point where it is pivotaly secured to the link 33.

Located in the left hand end wall of the casing are the bell cranks 39 and 40 and secured to the bell cranks on the outside of the casing are the cranks 41 and 42, the crank 41 being for the purpose of operating the bell crank 39 to position the detent 35 into or out of engagement with the ratchet wheel 30 and the crank arm 42 being for the purpose of operating the bell crank 40 to move the detent 36 into or out of engagement with the ratchet wheel 30. Carried by the left hand arm 24 and on the face thereof toward the left hand wall of the casing, is a pin 43 which pin is arranged for engagement with the arm 32 for purposes hereinafter made clear.

If, for any reason, the disk operating-devices become temporarily deranged, I have provided the crank 44 which is secured directly to the shaft 9 which supports the disks. By a manipulation of the crank 44 the disks 12 and cards carried thereby may be rotated without employing the actuating shaft 20, the arrangement of the hooks carried by the cards relative to the rod 18 being such as to permit a complete rotation of the disks and cards, if desired, for purposes of positioning the card desired to aline with the opening in the casing.

In practical operation the indicator is suspended in any suitable manner at a point in a passenger coach or other public place, it being assumed that the cards, having thereon the matter to be displayed, are properly positioned, together with the rods to which they are secured in the channels on the inner faces of the disks 12 with the hooks on the said rods being in positions to engage with the rods 18. As shown in the drawings, one of the cards is normally extended through the slot in the bottom of the casing and suspends from the rods and hooks over the rods

18. When it is desired to change the cards, that is withdraw the displayed card and display a second card, the rope or cable 23 is manipulated either manually or by some automatic means (not shown) and the shaft 20 is partially rotated by means of the lever 22. This partial rotation of the shaft 20 imparts a rocking movement to the arms 24, and by reason of the connection between the free ends of the arms 24, the rod 18 is elevated to a position as shown in Fig. 6, thus elevating the card which was displayed to a position with its lower end in a plane above the inner face of the rounded bottom of the casing, that is in a position above the slot in the casing. By reason of the pin 43 which is positioned upon the arm 24, the arm 32 is elevated, it being understood that the movements of the arm 24 and arm 32 are synchronous. By reason of the moving of the arm 32, the link 33 carrying the detents 35 and 36, is elevated, the elevation of the link, by reason of the slot formed therein, in no wise effects the positions of the ratchet wheel 30 and gear wheel 28 relative to the gear wheel 27. By reason of the movement of one of the detents the ratchet wheel is rotated, thus imparting motion to the gear wheel 27 through the medium of the wheel 28, in this manner, by reason of the gear wheel 27 being connected to the sleeve 10 the disks 12 are partially rotated to a position alining a second card over the slot in the casing, there being nothing to oppose the downward movement of the card it will descend, by gravity, until the hooked ends of its rod will engage with the rod 18. As pressure is raised from the operating cable 23 the lever 22 and arms 24 will descend, by gravity, thus permitting the rod 18 and the card carried thereby to descend thereby displaying a second card. By the arrangement of the bell crank levers 39 and 40 and the cranks 41 and 42 the direction of travel of the disks 12 may be varied, either forwardly or rearwardly as required to successively display street or station signs.

While I have particularly described my device to be employed as a station indicator, it is obvious that the same may be employed for advertising purposes only. In such instances a continuously operated motor would be employed to impart motion to the operating cable 23.

I claim;

In a street and station indicator, a housing having a semicylindrical bottom with a longitudinal slot therein, a shaft supported in the housing concentric with said bottom, a pair of disks radially grooved on their inside faces, a plurality of cards arranged in said grooves, a hook at each end of each card, pivoted arms in the path of travel of said hooks, levers for supporting the free ends of said arms, yielding connections be-

tween the free ends of said levers and said arm, a ratchet wheel, a gear connection between said ratchet wheel and said disks, a single lever arranged adjacent one of the
5 pair of levers, a link carried by said single lever, a pair of spring held pawls carried by said link for engagement with said ratchet wheel, means whereby either one or both of said pawls may be held out of operative en-
10 gagement with said ratchet wheel, and means

carried by one of said pair of levers to engage with said single lever after said pair of levers have been partially moved.

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

RICHARD E. HORNBECK.

Witnesses:

J. C. AYERS,

FRED C. SCHRAM

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