B. H. TRAPP.

STREET INDICATOR.

APPLICATION FILED APR. 29, 1918.

1,323,931.

Patented Dec. 2, 1919.

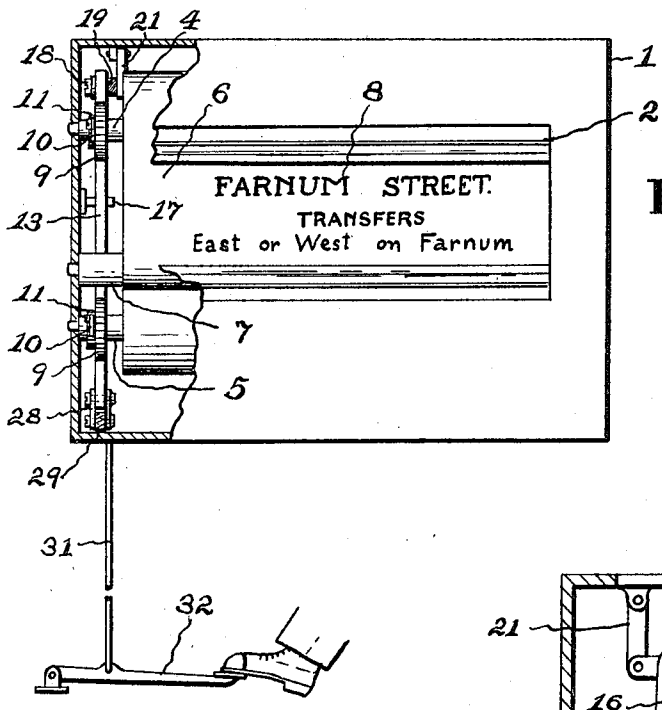


Fig. 1.

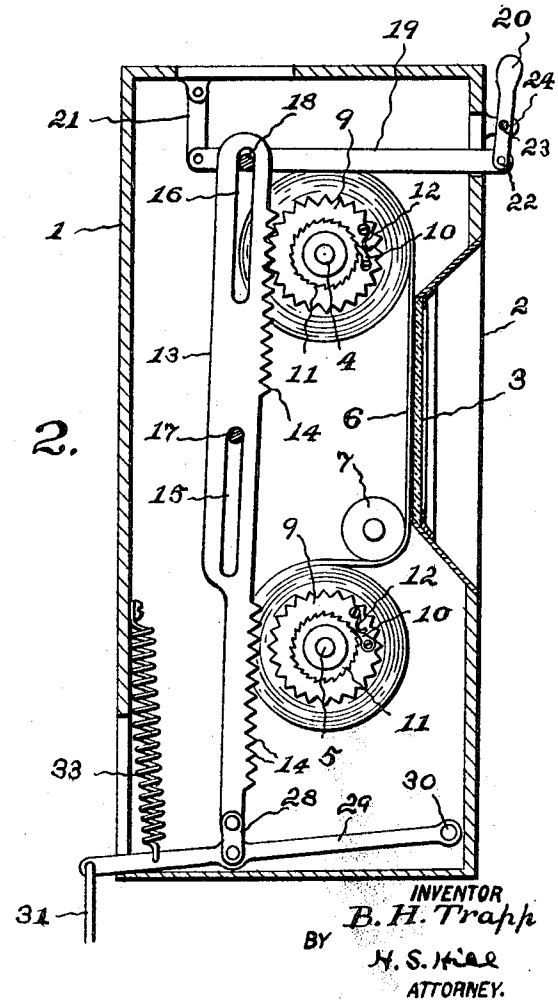


Fig 2.

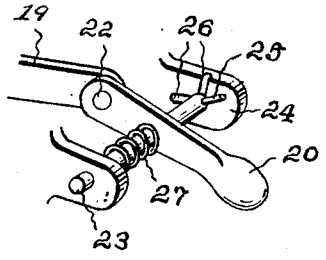


Fig. 3.

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STREET-INDICATOR.

1,323,931. Specification of Letters Patent. Patented Dec. 2, 1919.

Application filed April 29, 1918. Serial No. 231,384.

To all whom it may concern:

Be it known that I, BENJAMIN H. TRAPP, a citizen of the United States, residing at Omaha, in the county of Douglas, State of Nebraska, have invented a new and useful Street-Indicator; 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 a street indicating device for cars and vehicles, and has for its object to provide a device of this character which embodies novel features of construction whereby a web carrying the names of intersecting streets and stopping places can be given a step by step movement so that the name of each street or stopping place will be displayed at the proper time. The passengers on the car or vehicle will then be enabled to get off at the proper street without difficulty.

Further objects of the invention are to provide a street indicator which is simple and inexpensive in its construction, which can be readily mounted upon any conventional street car or vehicle, which can be easily actuated, and which can be readily reversed at the end of the route.

With these and other objects in view, the invention consists in certain novel combinations and arrangements of the parts as will more fully appear as the description proceeds, the novel features thereof being pointed out in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a front elevation of a street indicator constructed in accordance with the invention, portions of the casing being broken away.

Fig. 2 is an end view of the street indicator, with portions broken away and shown in section, and

Fig. 3 is a detail perspective view of the reversing lever.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates a casing which is intended to be mounted at a convenient position in a street car, preferably at one of the ends thereof so that it can be readily seen by all of the passengers. A view opening 2 is formed in the front of the casing, and a transparent window 3 is fitted in the view opening. Extending transversely across the interior of the casing are an upper horizontal shaft 4 and a lower horizontal shaft 5, said shafts having a parallel relation to each other and being arranged above and below the view opening, respectively. A web 6 has the ends thereof secured to the respective shafts, said web being carried downwardly from the front of the roller on the upper shaft and extending around an idler 7 to the back of the roller on the lower shaft. The names of the different street intersections or stopping places are printed or indicated upon the web 6, as indicated at 8, and the names of these streets are successively displayed through the window of the casing as the web is moved back and forth across the window by rolling or unrolling it upon the two shafts. A pinion 9 is loose upon each of the shafts 4 and 5, said pinions carrying pawls 10 which are held in a yielding engagement with ratchet wheels 11 by means of springs 12. The ratchet wheels are rigid with the respective shafts, and it will be obvious that with this construction the shafts will be rotated when the pinions are moved in one direction, although the pawls will slip over the teeth of the ratchet wheels when the pinions are moved in the opposite direction.

An upright reciprocating rack bar 13 is arranged at the rear of the pinions 9 of the upper and lower shafts, said rack bar being provided with upper and lower sets of teeth 14 which mesh with the teeth of the respective pinions. The rack bar is provided at its middle portion with a longitudinal slot 15 and at its upper portion with a similar slot 16. The slot 15 loosely receives a fixed pivot pin 17 which projects from one end of the casing, while the slot 16 loosely receives a pin 18 on a shifting link 19. The rack bar 13 is intended to be swung back and forth upon the pivot pin 17 to bring either set of gear teeth 14 into mesh with the respective pinion 9, the lower set of teeth 14 being out of mesh with the lower pinion 9, when the upper set of teeth 14 is in mesh with the upper pinion 9, and vice versa. The position of the rack bar is controlled by the shifting link 19 and reversing lever 20, the latter being located in a

convenient position at the front of the casing. The rear end of the link 19 is pivotally supported by a hanger 21, while the forward end thereof is pivotally connected at 22 to one end of the reversing lever 20. The latter is shown as rigid with a short horizontal shaft 23 which is loosely received in ears 24 projecting from the front of the casing. This short shaft 23 may be mounted to have a slight sliding movement as well as a rotary movement, and one end of the shaft is shown as provided with a lateral pin 25 which is adapted to be positioned in either one of two notched seats 26 in one of the ears 24 to hold the lever in an adjusted position. A coil spring 27 which is interposed between the opposite ear 24 and the lever 20 serves to hold the pin 25 in position within either one of the seats 26. However, when the car has reached the end of its route and it is desired to manipulate the lever 20 to reverse the position of the reciprocating rack bar 13, it is merely necessary to apply sufficient lateral pressure to the lever to slide the shaft 23 against the action of the spring 27 and thereby disengage the lateral pin 25 from the notch 26 in which it has been seated.

The lower end of the reciprocating rack bar 13 is loosely connected by a short link 28 to the intermediate portion of an operating lever 29. One end of this lever 29 is pivoted at 30 upon the casing 1, while the opposite end thereof projects through the casing and is operatively connected in some suitable manner, as by means of a link 31, to a foot lever 32. This foot lever may be arranged in a convenient position for operation by the motorman, and when approaching a particular street intersection or stopping place the motorman will operate the foot lever 32 and thereby cause the web 6 to be moved to display the name of the next stopping place. The passengers in the car will thus be kept informed about the various stopping places as they are approached, so that there will be no difficulty or annoyance in getting off at the right street. As soon as the foot lever 32 is released by the motorman the operating lever 29 will be returned to its original position by the operation of a spring 33 which is connected thereto. Upon the downward movement of the rack bar 13 caused by actuation of the foot lever 32, one of the shafts upon which the web 6 is mounted will be positively rotated to move the web, while upon the upward movement of the rack bar which is caused by the spring 33 the pinion 9 will rotate independently of the shaft. When the car is moving in one direction the rack bar 13 is placed in engagement with the pinion 9 of the upper shaft, while when the car is moving in the opposite direction the rack bar is placed in engagement with the pinion 9 of the lower shaft, the position of the rack bar being reversed at each end of the route by manipulating the reversing lever 20.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A street indicator including upper and lower shafts, a web connecting the shafts and adapted to be wound and unwound thereon, ratchet wheels rigid with the shafts, pinions loose upon the shafts, pawls carried by the pinions and engaging the ratchet wheels, an upright rack bar provided at its middle portion with a longitudinal slot and having independent sets of rack teeth at its opposite ends, a fixed pivot pin loosely received within the slot of the rack bar, a shifting link extending transversely with respect to the rack bar and loosely connected to one end thereof, means coöperating with the shifting link to swing the rack bar and bring either set of teeth thereof into engagement with the respective pinion, a transversely extending operating lever loosely connected to the opposite end of the rack bar, and means coöperating with the operating lever to reciprocate the rack bar.

2. A street indicator including upper and lower shafts, a web connecting the shafts and adapted to be wound and unwound thereon, pinions loose upon the respective shafts, opposed pawl and ratchet connections between the pinions and the respective shafts, an upright rack bar mounted to have both a swinging and a reciprocating movement and provided at its opposite ends with independent sets of rack teeth, a shifting link loosely connected to the rack bar for swinging the same to bring either set of rack teeth thereof into engagement with the corresponding pinion, the rack teeth at the opposite end of the bar being simultaneously disengaged from the other pinion, and means for reciprocating the rack bar while it is held in engagement with one of the pinions and out of engagement with the other pinion by the shifting link.

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

BENJAMIN HARRISON TRAPP.

Witnesses:
BERNICE WAZYNKEWICZ,
CHAS. G. KARLQUIST.