F. BRUNON.

Passenger Register.

No. 31,778. Patented March 26, 1861.

Fig. 1.

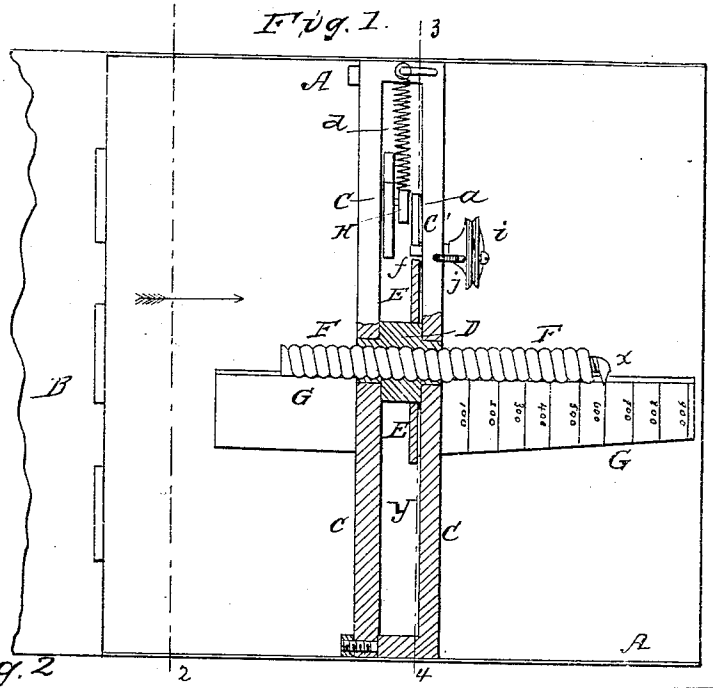


Fig. 2

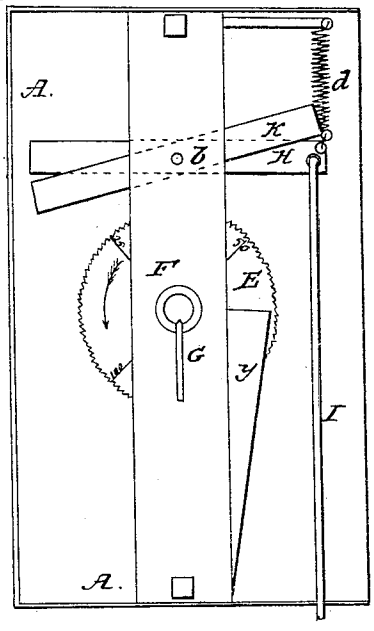


Fig. 3

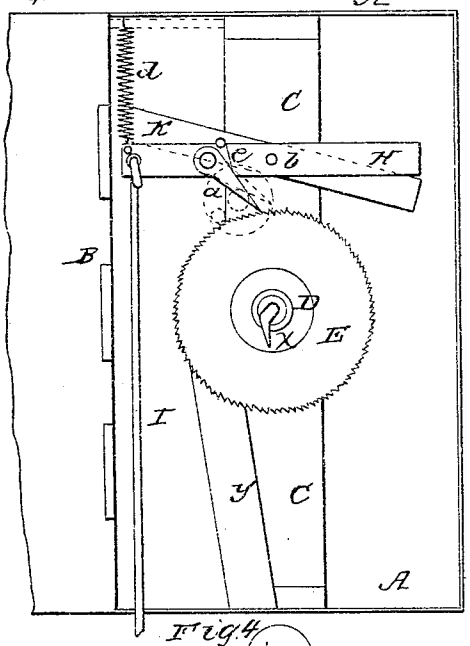


Fig. 4



Witnesses
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UNITED STATES PATENT OFFICE.

FELIX BRUNON, OF PHILADELPHIA, PENNSYLVANIA.

REGISTER FOR OMNIBUSES, &c.

Specification of Letters Patent No. 31,778, dated March 26, 1861.

To all whom it may concern:

Be it known that I, FELIX BRUNON, of Philadelphia, Pennsylvania, have invented a new and Improved Passenger-Indicator; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to that class of indicators which are so connected to a yielding step, platform, or door of a vehicle, that the number of passengers who enter the same, is involuntarily registered on the instrument by the passengers themselves, and my invention consists of one or more levers each having a spring dog or its equivalent in combination with a graduated ratchet wheel or wheels, a screwed spindle, and a stationary graduated bar, the whole being arranged and operating substantially as described hereafter, and forming a cheap and simple instrument for effecting the above purpose.

My invention further consists of a device for throwing the instrument out of gear when it has to be adjusted.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawing which forms a part of this specification, Figure 1 is a front view, partly in section, of my improved passenger indicator, Fig. 2 a transverse section on the line 1, 2, Fig. 1, Fig. 3 a transverse section on the line 3, 4, Fig. 1, and Fig. 4 a detached view of part of the instrument.

A is a box of metal, or other suitable material, furnished with a hinged door B which may be supplied with any suitable locking apparatus and within the box are permanently secured the two vertical bars C and C′ in which turns a hub D for receiving the ratchet wheel E.

F is a spindle throughout the entire length of which is cut the thread of a screw adapted to an internal screw thread cut in the hub D. The screw spindle has a longitudinal slot into which fits the upper edge of a graduated horizontal bar G, the latter passing through and being permanently secured to the vertical bars C and C′ so that the screwed spindle is incapable of turning, but can move freely horizontally on turning the hub D.

H is a lever hung loosely to a pin *b* which passes through the bars C and C′, one end of the lever being connected to the lower end of a spiral spring *d* the upper end of which is attached to the interior of the box and to the same end of the lever is attached a rod I which passes through the bottom of the box and is connected to a yielding step or platform or to a door which has to be moved by every passenger who enters the vehicle in which the indicator is situated. To the lever H is also hung a dog or pawl *a* pressed against by a spring *e* and engaging into the teeth of the ratchet wheel E.

A pin *f* passes through the vertical bar C′ and can be turned freely therein by means of a suitable handle *i* through which passes a screwed pin *j*, arranged to bear against the bar C′ and thus limit the movement of the said pin *f*. The projecting end of the latter has a portion cut away as seen in Fig. 4 thereby forming a cam or eccentric which bears against the underside of the dog *a* so that when the pin *f* has been turned in one direction the point of the dog will engage into the teeth of the ratchet wheel, but when turned in a contrary direction the dog will be raised clear of the said ratchet wheel. One face of this wheel has four radial lines, at equal distances apart from each other, as seen in Fig. 2, one of these lines being marked with the figures 25, the second with the figures 50, the third with the figures 75, and the fourth with the figures 100, there being one hundred teeth on the periphery of the wheel. Independently of the above mentioned figures the face of the wheel may be marked with others, at intermediate points, or every tooth may be marked as shown by the red figures, in Fig. 2 of the drawing.

The bar G is graduated by the series of lines shown in Fig. 1, the first line being marked with the figures 100, the second with the figures 200, and so on throughout the series.

Prior to the vehicle starting out in the morning on its daily trip, the door B of the casing A is opened and the handle *i* of the pin *f* is turned until the point of the dog *a* is out of gear with the teeth of the ratchet wheel; the latter is then turned around until the screwed spindle is moved so far that its

pointer *x* bears against the outside of the vertical bar C which is situated, in the present instance, as far from the mark numbered 100 on the graduated bar G, as the latter mark is from the mark 200, on the same graduated bar; the wheel occupying such a position in respect to a spring *y*, which bears against the face of the wheel, and serves as the pointer, that the mark numbered 100 shall coincide with the upper end of the spring. The door of the instrument is then closed and locked the key being retained by the superintendent or other authorized officer so that the interior works may be beyond the control of the driver, conductor, or other person who has to receive the fares of the passengers. It should be understood that the pitch of the screw thread of the spindle F is such that, at every complete revolution of the ratchet wheel E, the pointer *x* will move a distance equal to that between two of the marks on the graduated bar G. As before remarked the rod I is supposed to be connected to a yielding step or platform or door which each passenger will involuntarily move on entering the vehicle, so that the movement of the step is communicated to the lever H thereby causing the dog *a* to move the ratchet wheel E to the extent of one tooth or one hundredth of a revolution, in the direction of the arrow. At the termination of the day's trip the door of the instrument is opened and the graduated bar G, as well as the graduated face of the ratchet wheel, are examined by the proper officer, and by this examination the exact number of passengers who have entered the vehicle during the day, and consequently the amount of fares received, can be ascertained. Supposing for instance that the pointer *x* at the end of the screwed spindle F coincided exactly with the mark numbered 600 on the graduated bar G, it will be a certain indication that the number of passengers who had entered the vehicle during the day will be six hundred, but if the pointer *x* occupies a position between the mark numbered 600 and that numbered 700 it becomes necessary to examine the graduated surface of the ratchet wheel, which we may suppose to have been turned to the position shown in Fig. 2, the mark numbered 50 having passed the end of the spring *y*, which coincides with the twelfth tooth from this mark 50, or the sixty second tooth from the mark numbered 100, showing that the wheel has turned one sixty-second of a complete revolution, and that six hundred and sixty-two passengers have entered the vehicle during the day.

It will of course be understood that if the door for entering the vehicle is not separate from that by which the passengers leave, every passenger will make two movements of the lever H and consequently half of the numbers ascertained, by an examination of the graduated bar and wheel, will indicate the number of passengers who have passed in and out of the vehicle.

In some instances it may be necessary to operate the instrument from more than one point as when there are two doorways through which the vehicle may be entered. In this case a supplementary lever marked K may be hung to the pin *b* the lever having a spring dog for operating on a second ratchet wheel, or a wheel of greater width, secured to the hub D.

Although I have described my improved indicator as applied to vehicles only it will be evident that it can be used in other localities, as in theaters, for indicating the number of spectators, in lecture rooms &c.

I do not claim broadly an instrument so connected with a yielding step or platform or movable door of a vehicle that each passenger on entering the vehicle shall register the fact of his entrance, as such devices have been heretofore used, but

I claim as my invention and desire to secure by Letters Patent—

1. One or more levers H each having a spring dog *a* or its equivalent, in combination with a graduated ratchet wheel or wheels E, the screwed spindle F, and graduated bar G, the whole being arranged and operating substantially as and for the purpose herein set forth.

2. The pin *f* with its cut away or eccentric end in combination with the lever H, its spring dog *a*, and the ratchet wheel E the whole being arranged substantially as set forth for the purpose specified.

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

FELIX BRUNON.

Witnesses:
HENRY HOWSON,
JOHN WHITE.