

DE WITT C. FULTON & W. B. SMITH.

TURNSTILE FOR CARS.

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936,112.

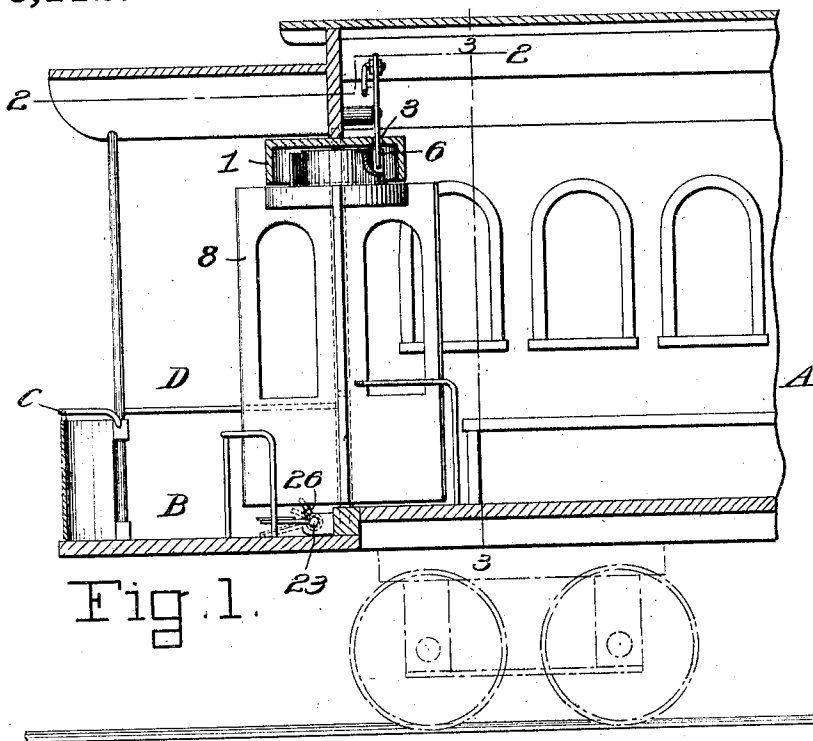


Fig. 1.

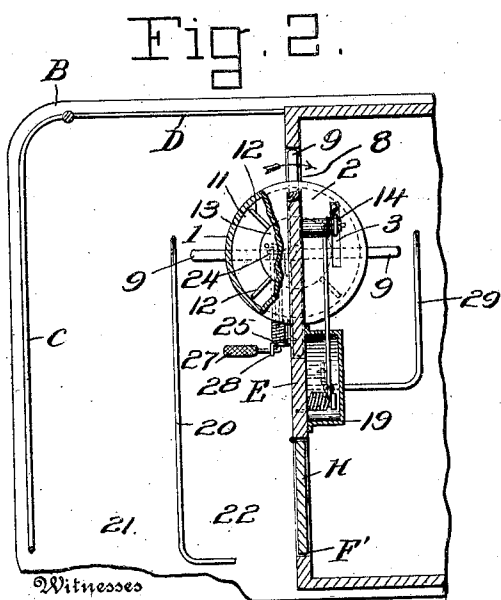


Fig. 2.

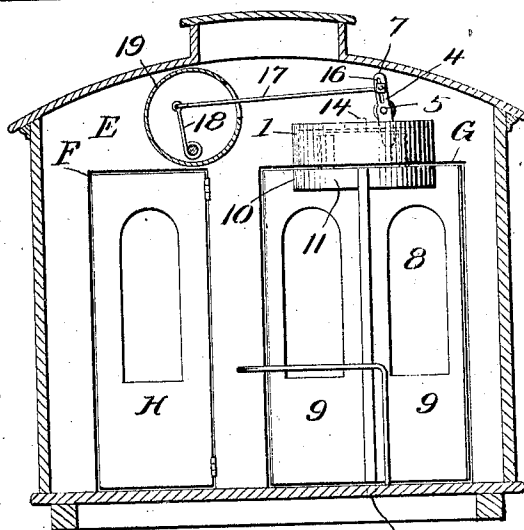


Fig. 3.

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UNITED STATES PATENT OFFICE.

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TURNSTILE FOR CARS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, DE WITT C. FULTON and WILLIAM B. SMITH, citizens of the United States, residing, respectively, at New Market and Caldwell, in the county of Middlesex and State of New Jersey, have invented new and useful Improvements in Turnstiles for Cars, of which the following is a specification.

This invention relates to turnstile registers for street railway cars, and has for an object to provide a turnstile comprising a plurality of revoluble radially extending elements forming independent passenger spaces between said elements, so that in movement of a passenger within the car a register will be automatically operated, thus obviating fraud by passengers or those in charge of the car.

A further object of this invention is to provide a car with a turnstile of the character set forth above, and to provide means for holding the turnstile normally against rotation.

Other objects and advantages will be apparent as the nature of the invention is better set forth, and it will be understood that changes within the scope of the claims may be resorted to without departing from the spirit of the invention.

In the drawing, forming a portion of this specification and in which like characters of reference indicate similar parts in the several views:—Figure 1 is a central longitudinal section taken through a street railway car showing the application of the present turnstile thereto. Fig. 2 is a horizontal section taken on the line 2—2 of Fig. 1. Fig. 3 is a vertical transverse section taken on the line 3—3 of Fig. 1 and looking in the direction of the arrow.

Referring now more particularly to the drawing, there is shown a car A of the passenger type provided with a rear platform B having a rear guard rail C and a side guard rail D. A rear wall E is provided which is disposed in proper spaced relation to the rail C and which has formed therein an exit doorway F, and an inlet doorway G. The doorway F is preferably closed by a hinged door H as clearly shown in Figs. 2 and 3 of the drawing.

The partition E, directly above the doorway G is provided with a horizontally disposed hollow cylindrical element 1 having a

closed top 2 and an open bottom, as clearly seen in Fig. 1 of the drawing. The said top 2 has formed therein a slot 3 which is somewhat elongated and which preferably extends in parallel relation to the partition E. A rocking element 4 is pivoted to the partition E as shown at 5 and is located upon the interior of the car. The said rocking element is provided with a depending portion 6, and an upwardly extending portion 7. It will be seen that the said depending portion thus extends with in the hollow cylindrical element 1 for a purpose to be hereinafter more fully described.

A turnstile is shown at 8 and comprises a plurality of radial elements or panels 9. The said panels are recessed at their upper ends as indicated at 10 to receive a flat cylindrical disk 11 disposed directly beneath the open bottom of the hollow element 1. The said disk 11 is provided with a plurality of upstanding wings 12 disposed between the elements or panels 9 forming the turnstile, and as clearly shown the said wings extend into the hollow element 1 and are disposed in such manner that the depending portion of the element 4 lies directly in their path of movement. The turnstile disk 11 carries a centrally located hub 13 from which extends a vertical stud 14 journaled in the partition E. At the lower end the turnstile is provided with a depending stud 15 mounted in the floor of the car. The element 4 has formed in the portion 7 thereof an elongated slot 16 which adjustably receives a pull rod or similar element 17 to which is secured a spring 18 for normally holding the arm in an operative position. The said element 4 is adapted for swinging movement in the direction of the arrow indicated in Fig. 3 and its movement in the opposite direction is limited or prevented by reason of the fact that the depending portion of the said element engages one end wall of the slot 3 formed in the top 2 of the element 1. The spring 18 is preferably located within a register casing 19 which may be provided with any suitable registering mechanism to be operated by the pull rod or element 17 at each complete quarter revolution of the turnstile.

Upon the platform B of the car is located a transverse rail 20 disposed in spaced relation to the partition E and between the said partition and the rail 20 respectively may

stand the conductor or operator of the car. The rail also serves to form an inlet passage 21 for passengers, and a discharge passage 22, the latter communicating with the doorway F. To effectively prevent rotation of the turnstile without the knowledge of the conductor, I provide upon the bottom of the car a horizontally disposed rocking shaft 23 which is preferably mounted in brackets 24 and 25, as shown, and at one end the said shaft is provided with an arm 26 adapted to extend upwardly in the path of movement of the elements or panels 9 forming the turnstile, and at the other end the said shaft is provided with a foot-controlled lever 27 engaged normally with a stop 28 upon the bracket 25 so that the said lever remains ordinarily in a horizontal position. To effectively and normally hold the lever and the arm just described in such position I provide a helical spring which is preferably wrapped around the shaft 23 and has one end secured to the arm 26, and its other end connected in a suitable manner to the bracket 25.

A railing of suitable form is shown at 29 upon the interior of the car and its purpose is to prevent persons or passengers from making their escape from the car by way of the turnstile.

In operation, it may be briefly described that in large cities principally conductors may stand between the rail 20 and the partition E, and each passenger entering the car is directed between two of the panels or elements 9 of the turnstile, after which, the lever 27 is operated by the conductor to allow the said turnstile to be revolved by the passenger. It is of course understood that a single passenger enters the car at a

time and that the turnstile moves only a quarter of a revolution at each entrance of a passenger. Immediately upon the entrance of a passenger, the foot lever is released in order that the arm 26 will assume its normal position to prevent further rotation of the turnstile which might otherwise possibly actuate the recording or registering mechanism. As stated, each individual or passenger automatically registers his own fare and may pay it to the conductor when entering the car.

We claim:—

A car having an entrance passage, a turnstile for said passage adapted to convey individual passengers to the interior of the car, a plurality of radial wings carried by the turnstile, a rock arm having a portion disposed in the path of movement of the wings so that the arm is actuated by said wings when the turnstile is revolved, register operating means connected with the rock arm, a rock shaft carried by the car provided at one end with an arm extending upwardly normally in the path of movement of the turnstile, a lever connected with the rock shaft, a stop for normally engaging the lever to hold the same normally in a horizontal position so that the arm normally assumes an operative position, said car having an exit passage located adjacent to the entrance passage, and a swinging door normally closing the said passage.

In testimony whereof we affix our signatures in presence of two witnesses.

DE WITT C. FULTON.
WILLIAM B. SMITH.

Witnesses:

GEORGE W. CORIELL,
WM. L. CORIELL.