

UNITED STATES PATENT OFFICE.

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GUARD FOR OPEN CARS.

SPECIFICATION forming part of Letters Patent No. 613,672, dated November 8, 1898.

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To all whom it may concern:

Be it known that I, CHARLES H. FOGG, a citizen of the United States, residing at Hyde Park, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Guards for Open Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention relates to open street-cars having side entrances, reversible seat-backs, and guards for opening and closing said entrance connected with the reversible seat-backs to be operated thereby and adapted to simultaneously close an entrance upon one side of the car while opening it upon the other side; and it comprises means whereby the guards are so connected and are locked in their horizontal and in their perpendicular positions; and it also comprises means whereby the backs of the seats may be lifted to some extent without causing the guards to be started.

In the drawings, Figure 1 is a perspective view of a car equipped with my invention, partly broken away for convenience of illustration. Fig. 2 is a sectional view of a seat, showing the gate closed. Fig. 3 is a similar view with the gate open. Fig. 4 is a vertical section on line 4 4 of Fig. 2.

A are the reversible backs of the seats of an open car. They are provided with arms a , which are attached in the usual way at a' to the standards or posts B, which support the roof of the car. A member C of the guard turning and locking device is attached to each arm to surround the pivotal point, and they are preferably cast integral with the arms. Pivoted to the standards B at d , below the members C, are coöperating guard turning and locking members D, and each of these members D has a curved arm D' integral with it, to which the guard E is attached in any desired way.

The members C D are represented as contained in a casing F, shaped like an hour-glass, attached to the standard B. The upper member C of the guard locking and turning device has a single isolated short arm c , a portion of the member on each side of the arm being cut away, as shown in the figures.

The member D has a single recess between the two walls d' d^2 , the outer edges of which are rounded. The member D also has on each side of the said walls d' d^2 curved recesses, which are lettered, respectively, d^3 d^4 and which are adapted to receive alternately outwardly-curved parts c' c^2 of the member C on either side of the arm c , these parts being regularly curved upon their edges to the curve of the recesses d^3 d^4 . This construction provides means whereby the guards are locked in their perpendicular position and in their horizontal position—that is, when in either of these positions they cannot be moved by hand, but only by fully reversing the seat-back. This construction also provides means whereby the seat-back may be lifted from the seat in either of its two positions to some extent without causing movement to be imparted to the guard either in its horizontal or perpendicular position. It also provides a very strong construction quite different from that of gearing using a number of teeth, as it permits an engaging arm c of larger size and greater strength than a gear-tooth to be employed, and it also enables the arm-receiving section of the other member to be of corresponding strength, and this is of very considerable importance where the engagement of one with the other is in the nature of a blow or produces a shock. This blow or shock with my device, however, takes place only upon the engagement of the arm of one member with the wall of the arm-receiving recess of the other member; but there is no shock or blow at the end of the movement of the guard in each direction.

In Fig. 2 the two members are represented as locking the guard in its horizontal position and in Fig. 3 as locking the guard in its perpendicular position.

A rest e for the front guard, to provide greater stiffness in case it should be grasped by a passenger when in its horizontal position, may be used. For the other guards there may be provided rests when in their horizontal position, formed by projections f on the casing F.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination in an open car having side

entrances of a reversible seat-back, a member C having the single arm *c* and an outwardly-curved locking-section on each side of the same attached to the seat-back to be
5 turned with it, and the revoluble member D attached to the car-post or other support having a guard-rail attached to it and extending from it, which pivoted member is provided with a recess having the walls d' , d'' to coöperate with the arm of the member C and also
10 provided with inwardly-curved locking-recesses upon each side of the said recess to alternately coöperate with the locking-sections of the member C, and whereby the

guard-rail is locked in its horizontal and in 15 its vertical positions, and whereby the guard-rail is disengaged from the car-seat before the car-seat reaches the end of its movement in either direction, and whereby the guard-rail and its operating devices are relieved from 20 shock as the guard-rail approaches or reaches the end of its movement and breakage of the rail and operating parts thereby averted.

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Witnesses:

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