

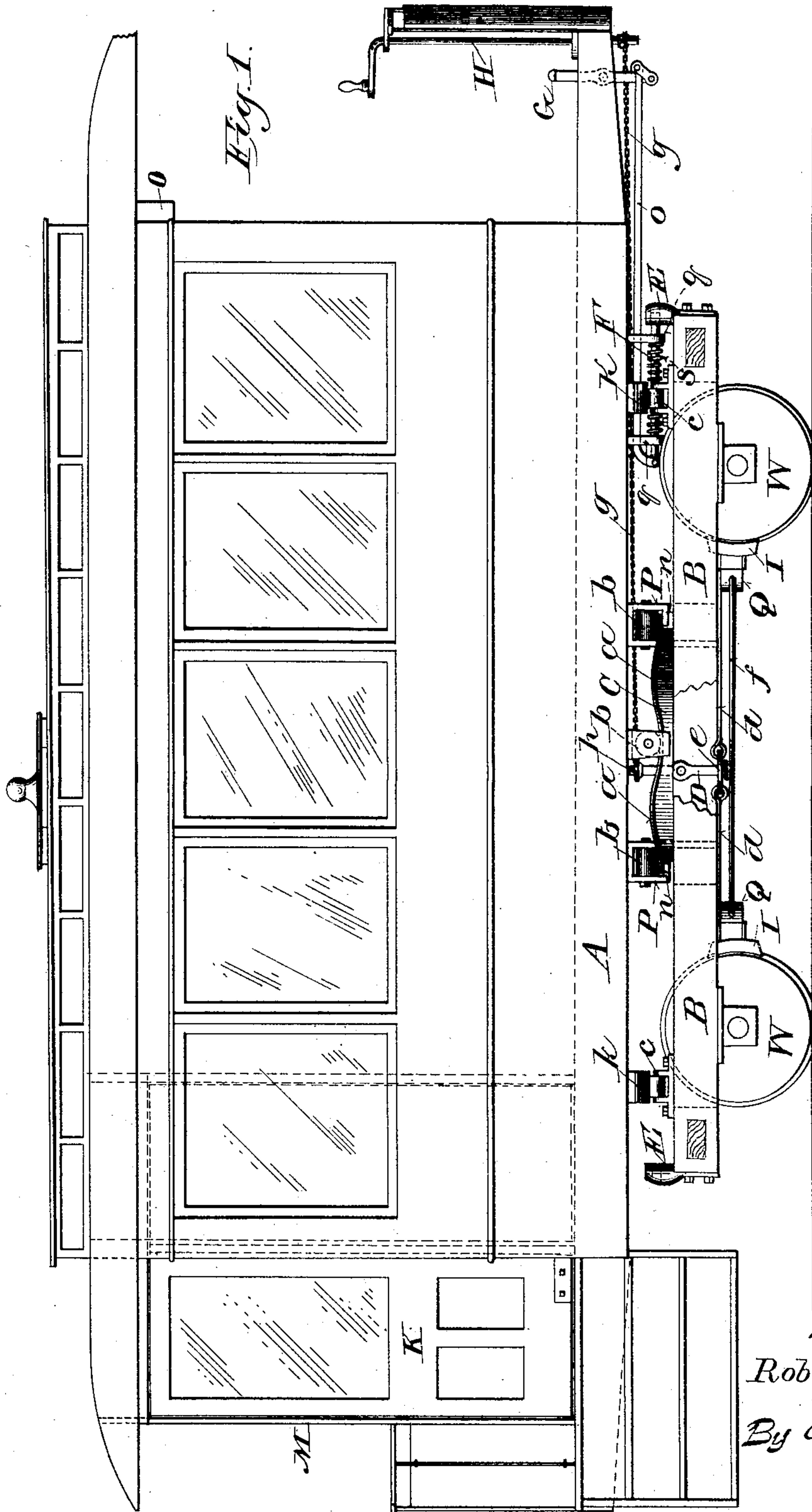
(No Model.)

3 Sheets—Sheet 1.

R. W. FLACK.
PASSENGER REGISTER.

No. 331,784.

Patented Dec. 8, 1885.



Witnesses
Chas. K. Goss
George Holl.

Inventor:
Rob^t. W. Flack,
By *[Signature]*
Attorney.

(No Model.)

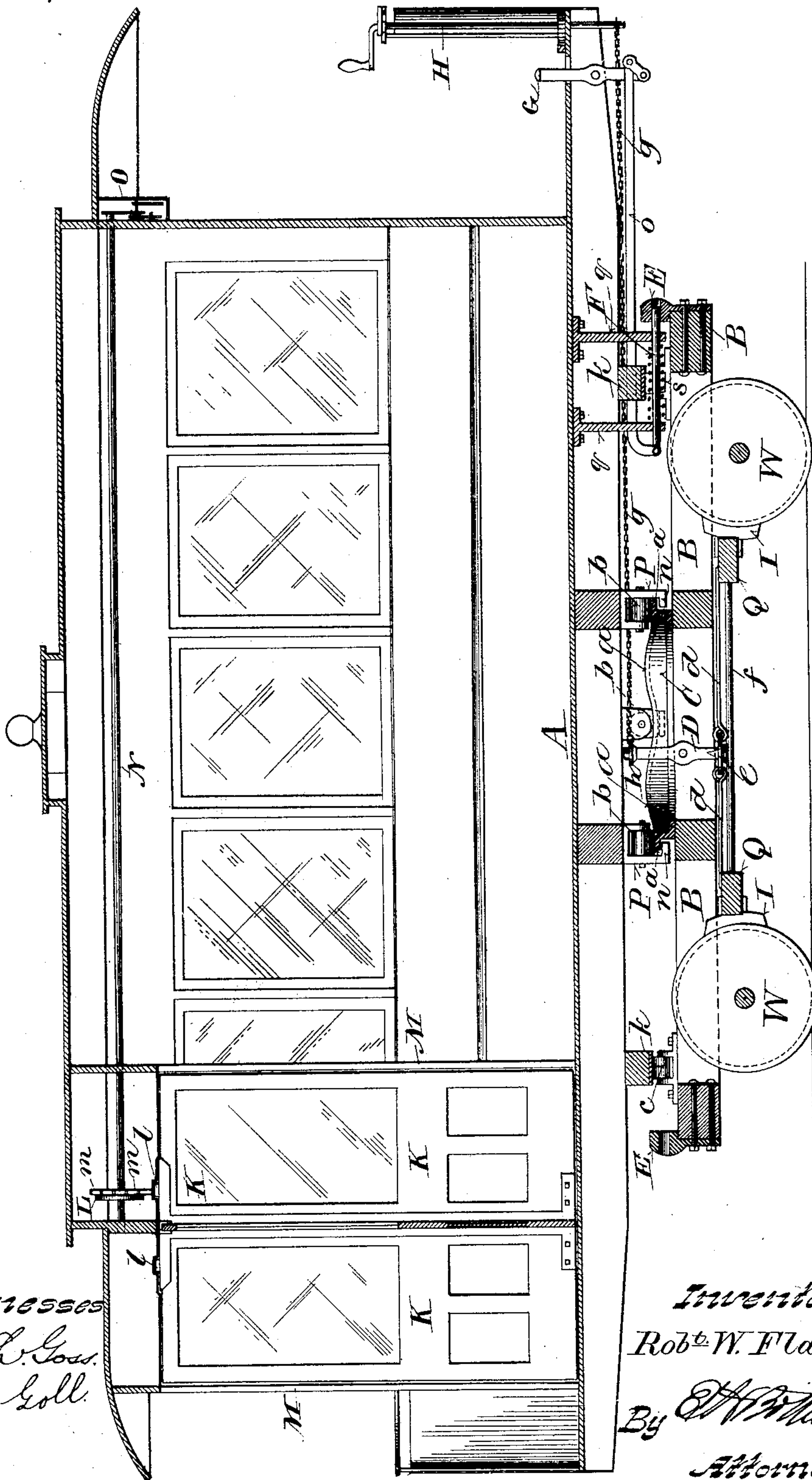
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Fig. 2.



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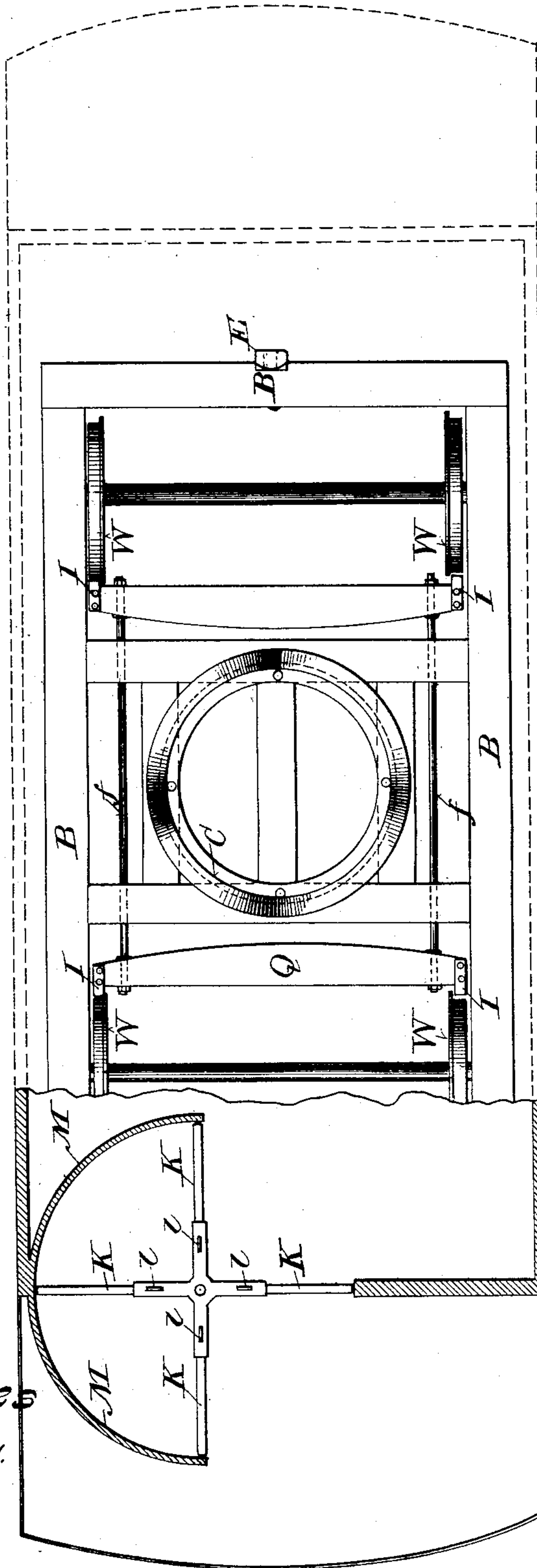
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Fig. 3.



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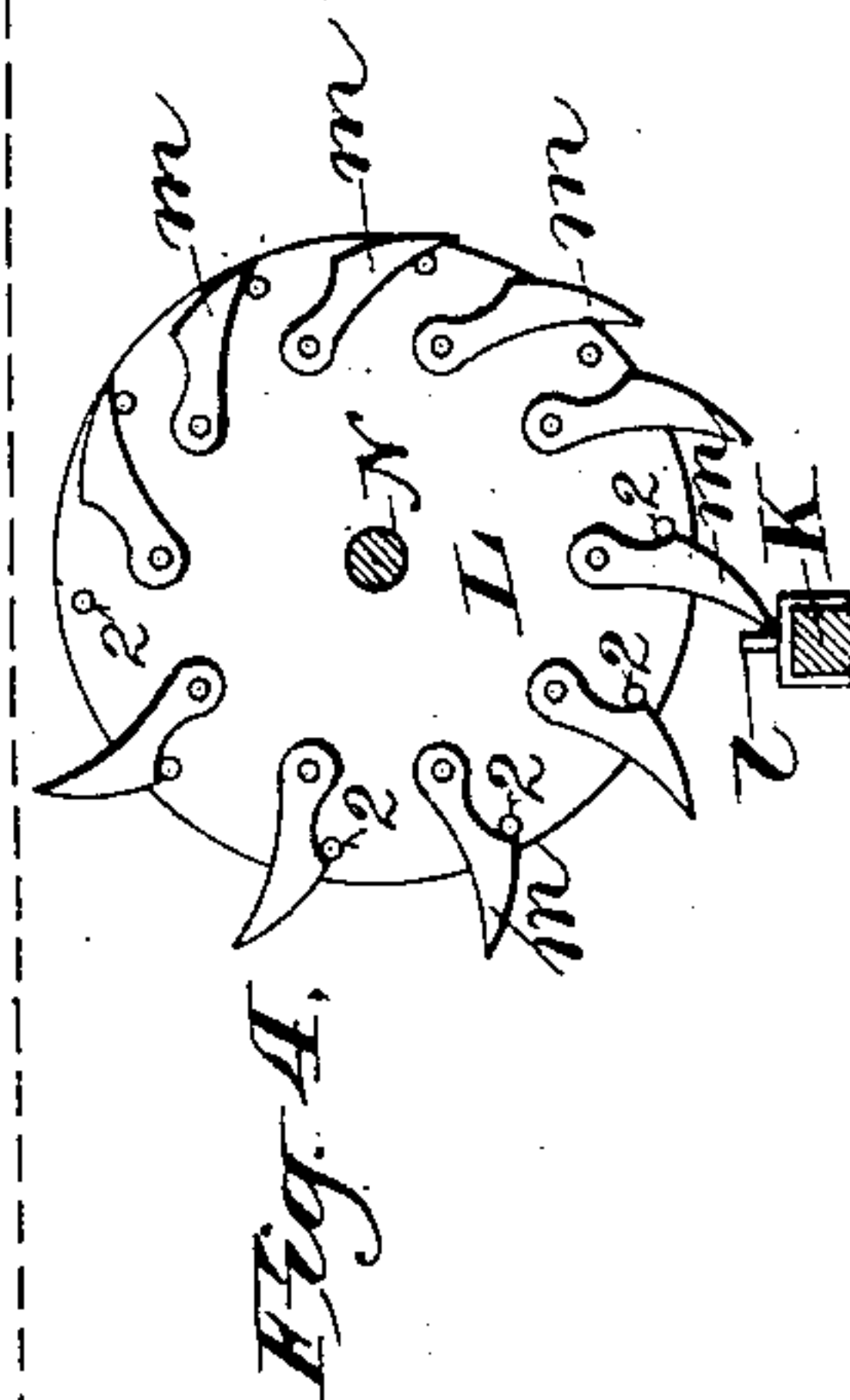


Fig. 4.

UNITED STATES PATENT OFFICE.

ROBERT WILLIAM FLACK, OF TORONTO, ONTARIO, CANADA.

PASSENGER-REGISTER.

SPECIFICATION forming part of Letters Patent No. 331,784, dated December 8, 1885.

Application filed September 12, 1884. Serial No. 142,933. (No model.)

To all whom it may concern:

Be it known that I, ROBERT WILLIAM FLACK, a citizen of Canada, of the city of Toronto, in the county of York and Province of Ontario, Canada, have invented certain new and useful Improvements in Passenger-Registers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates particularly to registers for street-cars.

It consists, essentially, of a revolving door cruciform in cross-section, and mechanism connected therewith for registering each quarter-turn made by said door when passengers enter the car. Its objects are, first, to do away with a door at the front end of the car, thereby increasing its seating capacity; second, to cause passengers invariably to enter and alight from the car upon the outer side of the track, thereby avoiding the danger from cars passing in the opposite direction on the other track; and, third, an automatic register to record the exact number of passengers who enter the car, and thereby prevent fraud of conductors, drivers, and passengers.

In the accompanying drawings the same letters refer to the same parts in each figure.

Figure 1 is a side elevation of a street-car embodying my improvements. Fig. 2 is a longitudinal vertical medial section of the same. Fig. 3 is a plan view of the truck and of the revolving turnstile-door, the body and front platform of the car being shown by dotted lines; and Fig. 4 is a detail view of the ratchet-wheel with which the revolving door engages in the operation of the register.

For convenience of illustration, I show my improved registering device applied to a street-car whose body A is reversible upon its truck B and rests upon casters *b b*, attached thereto, and adapted to turn upon the cam C, supported upon the truck B.

By constructing the body A of the car to turn upon its truck B, as hereinbefore described, the front door may be permanently closed or dispensed with, and the space across

the front end of the car utilized for seats. This construction of a reversible car also permits of the single entrance and registering device hereinafter described.

K K K represent a four-winged door, hung at top and bottom upon pivots at the center or intersection of said wings. One of said wings closes the passage or entrance to the car, while the other three are inclosed by the semi-cylindrical partition M, extending from top to bottom of the car, and so arranged as to deter passengers from entering through it. A shaft, N, passing through the top of the car from end to end thereof in a line intersecting the axis of the door produced upward, is provided at the front end of the car with a register, O, like that employed in gas-meters, (or any other convenient form of registering mechanism may be used,) and at the rear end, just over and near the center of the door K, with a ratchet-wheel, L, having gravitating pivoted teeth *m m*, as shown in Fig. 4. The wings K K are provided at the top with lugs *l l l* equidistant from the center, and so located as to engage with the teeth *m m* of ratchet-wheel L. The register O, ratchet-wheel L, and shaft N may be inclosed to prevent their being tampered with.

My improved register operates as follows: The reading of the register having been taken and recorded, the car is started upon a trip. Whenever it becomes necessary, either at the end of the track or at any intermediate point, to turn the car about, the driver sets the brakes, (which always bear against the rear pair of wheels, W,) presses the lever G forward with his foot, thereby withdrawing the bolt F from the stop-block E and releasing the body A, which is then turned about upon its truck B in the same way that a car is turned upon the ordinary turn-tables. When the proper position is reached, the bolt F springs into the adjacent block E and locks the body to its truck. The cam C being raised upon its upper face, as shown in the drawings, lifts the body A, so that it will clear the truck B in turning thereon. When in the position shown in Figs. 1 and 2, the body A rests upon the four posts, *k k*, and rollers *c c* at the corners of the trucks, as well as upon the casters *b b* and cam C near the center. The rear plat-

form being closed at the end nearest the semi-cylindrical partition M passengers are compelled to enter and alight from the car on the outer side of the track, thereby rendering the
 5 danger from cars passing in an opposite direction on the other track much less.

For each person entering the car the door must make one-fourth of a revolution in the direction indicated by the arrow in Fig. 3. The
 10 lug *l* on the wing underneath the ratchet-wheel L engages with one of the gravitating teeth *m*, turns the shaft N, and causes the clock-work O to register "one." A person
 15 passing out of the car causes the door to make the corresponding part of a revolution in the opposite direction; but the lugs *l l*, when the door is turned in this direction, swing the teeth *m m* back upon their pivots without turning the wheel L. When, however, the
 20 door is turned as described by a person entering the car, the lug *l*, engaging with a tooth, *m*, presses it against one of the pins 2 2, and through it turns the wheel L, as shown in Fig. 4.

25 I do not here claim the reversible car shown and described in connection with my improved passenger-register, but reserve that for another application for Letters Patent.

Having thus described my invention, what I claim as new, and desire to secure by Letters
 Patent, is— 30

1. The combination, in a passenger-register, of the revolving door K K, cruciform in cross-section, the semi-cylindrical partition M, enclosing the space on one side of said door, shaft
 35 N, provided with ratchet-wheel L, arranged to be engaged by the wings of said door and to be turned thereby in one direction only, and the register or indicator O, substantially as and for the purposes set forth. 40

2. The combination, in a passenger-register, of the turnstile-door K K, provided with lugs *l l*, the shaft N, ratchet-wheel L, provided with gravitating pivoted teeth *m m*, and the register
 O, substantially as and for the purposes set
 forth. 45

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ROBERT WILLIAM FLACK.

Witnesses:

ALF. RICHARDSON,
 E. CROWHURST.