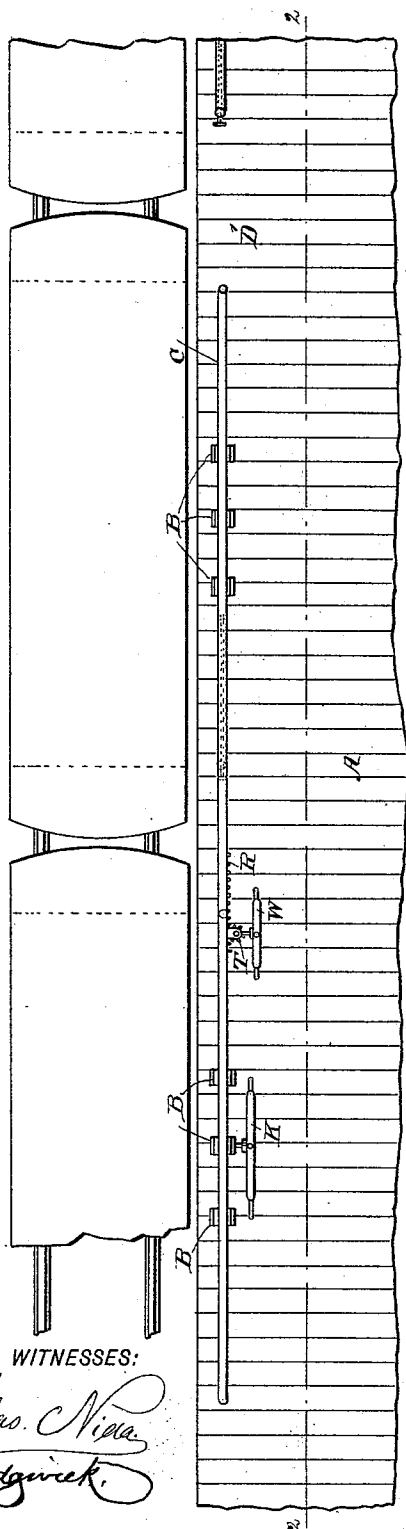


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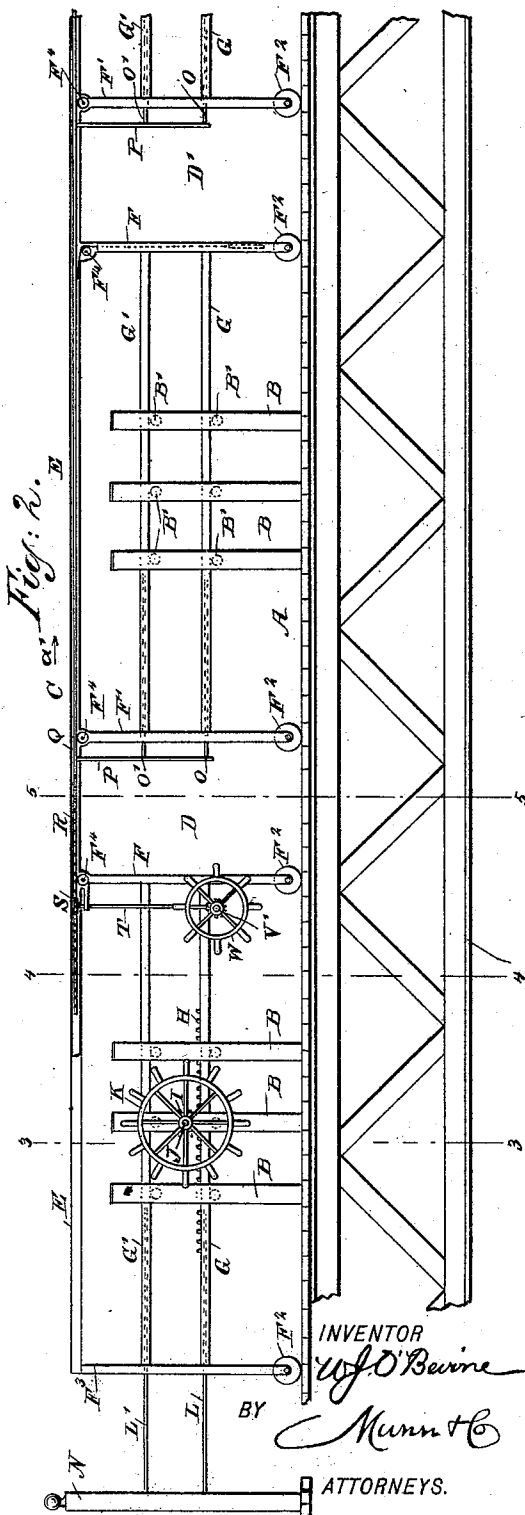
No. 495,361.

Patented Apr. 11, 1893.



WITNESSES:

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INVENTOR

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BY

Munn & Co

ATTORNEYS.

(No Model.)

W. J. O'BEIRNE.
RAILROAD GATE.

2 Sheets—Sheet 2.

No. 495,361.

Patented Apr. 11, 1893.

Fig. 5.

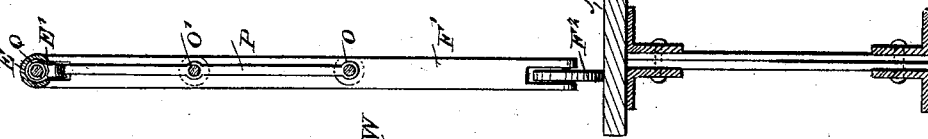


Fig. 4.

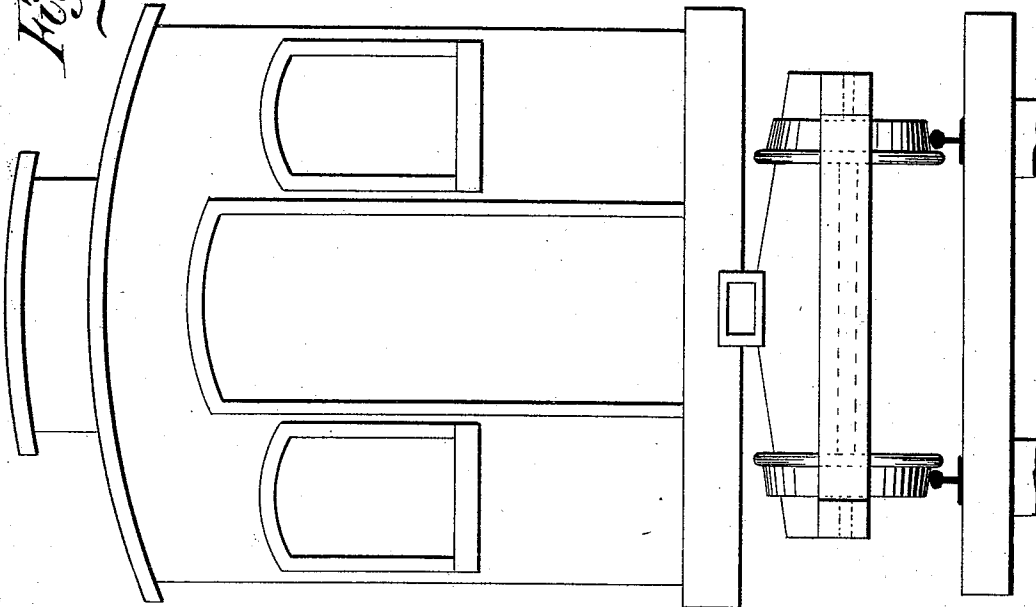
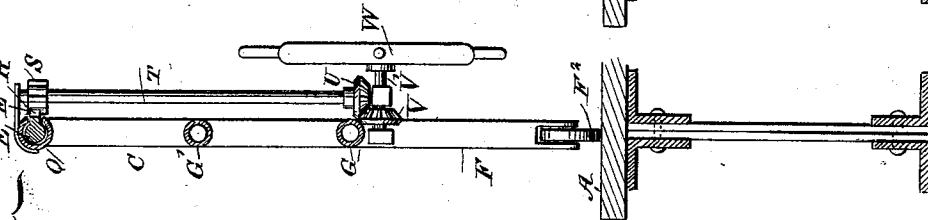


Fig. 3.

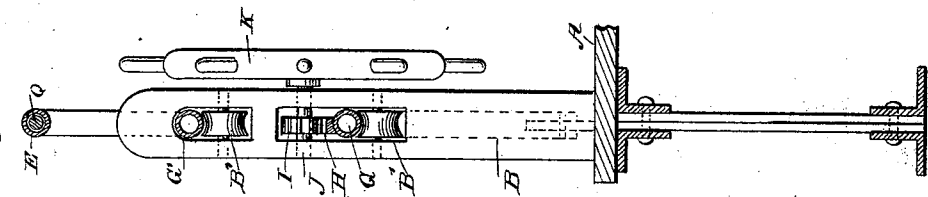


Fig. 6.

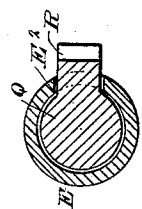
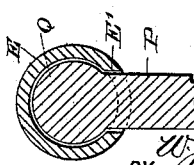


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM J. O'BEIRNE, OF BROOKLYN, NEW YORK.

RAILROAD-GATE.

SPECIFICATION forming part of Letters Patent No. 495,361, dated April 11, 1893.

Application filed February 21, 1893. Serial No. 463,174. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. O'BEIRNE, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Railroad-Gate, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved railroad gate, especially designed for elevated railroads, and serving to close the platform to the track and train until the latter is at a stand-still.

The invention consists of a gate provided with openings placed at such distances apart as to register with the car platforms, and auxiliary gates for closing the said gate openings.

The invention also consists of certain parts and details and combinations of the same, as will be hereinafter fully described and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement partly broken away. Fig. 2 is a sectional side elevation of the same, on the line 2—2 of Fig. 1. Fig. 3 is an enlarged transverse section of the improvement, on the line 3—3 of Fig. 2. Fig. 4 is a like view of the same, on the line 4—4 of Fig. 2. Fig. 5 is a similar view of the same, on the line 5—5 of Fig. 2; and Figs. 6 and 7 are enlarged sectional end elevations of parts of the gate.

On the railroad platform A, are erected sets of posts B, on which is mounted to slide longitudinally the gate C, provided with openings D, D', &c., placed at such distances apart as to correspond with the several adjoining platforms of the cars of a train. The gate C is placed near the outer edge of the platform A, and is provided with a top rail E, preferably made hollow and supporting sets of uprights F, F', which form the gate openings D, D', &c.

The lower ends of the uprights F, F', are provided with friction rollers or casters F², resting on the platform A and serving for conveniently and easily moving the gate forward and backward in its bearings on the posts B. The uprights F and F' between two adjoining gate openings D, D', are connected

with each other by hollow rods or tubes G, G', passing through the respective sets of posts B. Friction rollers B', are mounted in the said posts under the rods G and G' to aid the forward and backward sliding motion of the connecting tubes or rods G and G', of the gate C.

On one of the connecting rods G or G' is arranged a rack H, into which meshes a pinion I, secured on a shaft J, mounted to turn in suitable bearings in one of the posts B. On the front end of the shaft J is secured a hand wheel K, for conveniently turning said shaft and its pinion I, so as to impart a forward and backward traveling motion to the rack H and consequently to the entire gate C. When a train draws up to the station, the operator turns the hand wheel K until the gate C is moved into such a position that its gate openings D, D', register with the several adjoining platforms of the cars. Usually the trains stop at about the same place every time they draw up to the station, so that very little forward and backward motion of the gate C will be required.

The end pieces F³, of the gate C are a suitable distance from the end posts N, of the platform A, and on the said end posts N are secured longitudinally-extending rods L and L', telescoping in the connecting rods G and G', so that when the gate C is moved forward and backward as above described, the ends of the platform remain closed. The gate openings D, D', &c., are adapted to be closed by auxiliary gates provided with longitudinally-extending rods O, and O', telescoping in the adjoining connecting rods G and G'. The outer ends of the rods O and O' are rigidly connected to a vertically-extending rod P, projecting at its upper end through a slot E', formed in the under side of the top rail E, and said upper end is secured to a rod Q, held in the said hollow top rail E and fitted to slide on suitable friction rollers F⁴, journaled in the upper ends of the uprights F, F'. Near one end of the said rod Q is formed a sidewise extending rack R, projecting through a corresponding slot E² formed in the front of the said top rail E. Said rack R meshes into a pinion S, secured on the upper end of a shaft T, mounted to turn in suitable bearings secured on the gate C. The lower end of the

shaft T carries a bevel gear wheel U, meshing into a bevel gear wheel V, fastened to a shaft V', extending transversely and mounted to turn in suitable bearings formed on the gate

5 C. The front end of the shaft V' supports a small hand wheel W, which is located in the immediate neighborhood of the hand wheel K so that both hand wheels can be conveniently operated by the gateman in charge of the platform.

10 When the operator turns the hand wheel W, a rotary motion is imparted by the gear wheels U and V to the vertical shaft T so that the latter, by its gear wheel S, imparts a forward and backward sliding motion to the rack R and the rod Q held to slide in the top rail E. The forward and backward motion of the rod Q causes a similar motion of the downwardly-extending rods P rigidly connected with the rods O and O' telescoping in the tubes G and G'. The rods O and O' are thus drawn in and out of the said tubes G and G' from one post to another so that the gate opening D, D', &c., is opened or closed according to the forward or backward motion of the rod Q. The gate openings D, D', &c., remain closed by the rods O and O' until the train has come to a stand-still, and the operator has moved the gate C until the gate openings D, D', register with the adjoining platforms of the several cars. The operator then turns the hand wheel W so as to impart a sliding motion to the rod Q in the direction of the arrow a', so that the rods O and O' are moved into the tubes G and G', thereby opening the gate openings D, D', &c. Egress from and ingress to the cars is now had so that the passengers can pass through the gate openings D, D', from and to the several cars, while the platform still remains closed opposite the car windows and also at its ends.

As the gate is mounted to travel on friction wheels or casters, it requires but little power from the operator to turn the hand wheel K in order to move the gate openings to the proper place. It will be seen that the several gate openings D, D', &c., are simultaneously opened and closed when the operator turns the hand-wheel W.

50 Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. An improved railroad gate, comprising a gate held on the station platform, and provided with openings placed such distances apart as to register with the adjoining platforms of the several cars, and auxiliary gates for opening and closing said gate openings simultaneously, substantially as shown and described.

2. In a railroad gate, the combination, with a gate arranged on the platform, and provided with openings placed such distances apart as

to register with the adjoining platforms of the several cars, of auxiliary gates held to slide on the said main gate and adapted to open and close said gate openings, said auxiliary gates being connected with each other and moving simultaneously, substantially as shown and described.

3. In a railroad gate, the combination, with a main gate mounted to slide longitudinally on the platform, and provided with openings placed such distances apart as to register with the adjoining platforms of the several cars, of auxiliary gates connected with each other and held to slide on the said main gate, and adapted to open and close said gate openings, and means, substantially as described, for moving said auxiliary gates simultaneously to open and close said gate openings, as set forth.

4. In a railroad gate, the combination, with a main gate provided with gate openings placed such distances apart as to register with the adjoining platforms of the several cars, of horizontal rods held to slide on the said main gate across the said gate openings, a vertical rod connecting the sets of rods in the gate openings with each other, a longitudinally-extending rod mounted to slide on the top rail of the said main gate and rigidly connected with the said vertically-extending rods, and means, substantially as described, for imparting a forward and backward sliding motion to the said longitudinally-extending rod in order to move the horizontal rods across the gate openings, substantially as shown and described.

5. In a railroad gate, the combination, with a main gate provided with gate openings placed such distances apart as to register with the adjoining platforms of the several cars, of rods held to slide on the said main gate across the said gate openings, a vertical rod connecting the set of rods in the gate openings with each other, a longitudinally-extending rod mounted to slide on the top rail of the said main gate, and rigidly connected with the said vertically-extending rods, a rack secured on the said longitudinally-extending rod, a gear wheel meshing into the said rack, a shaft carrying the said gear wheel, a bevel gear wheel held on the said shaft, a second bevel gear wheel in mesh with the first named gear wheel, a second shaft carrying the said second bevel gear wheel and mounted to turn in bearings on the said main gate, and a hand wheel held on the said second shaft for turning the same to move the said longitudinally-extending rod forward and backward to open and close the gate openings, substantially as shown and described.

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Witnesses:

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C. SEDGWICK.