

(No Model.)

I. C. PEIRCE.

MECHANISM FOR OPERATING SLIDING DOORS.

No. 380,690.

Patented Apr. 10, 1888.

Fig. 1.

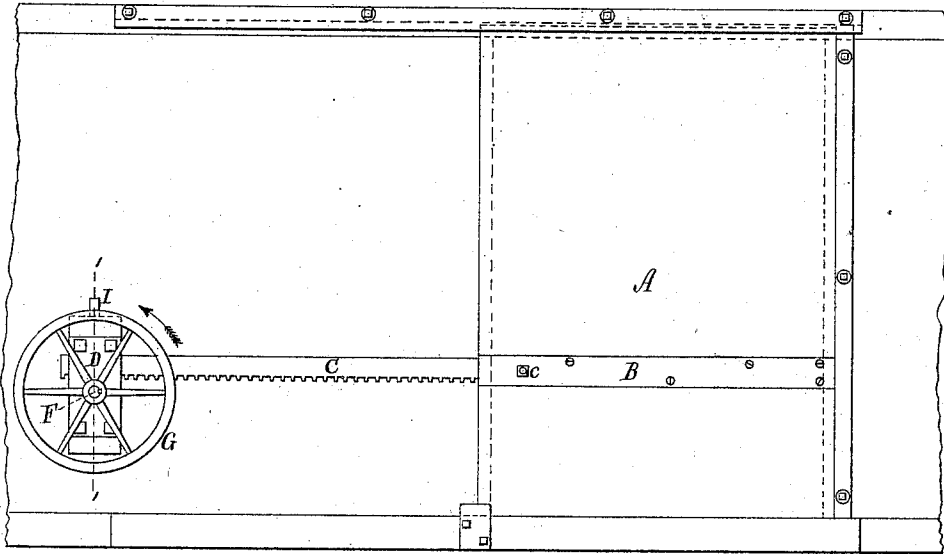


Fig. 2.

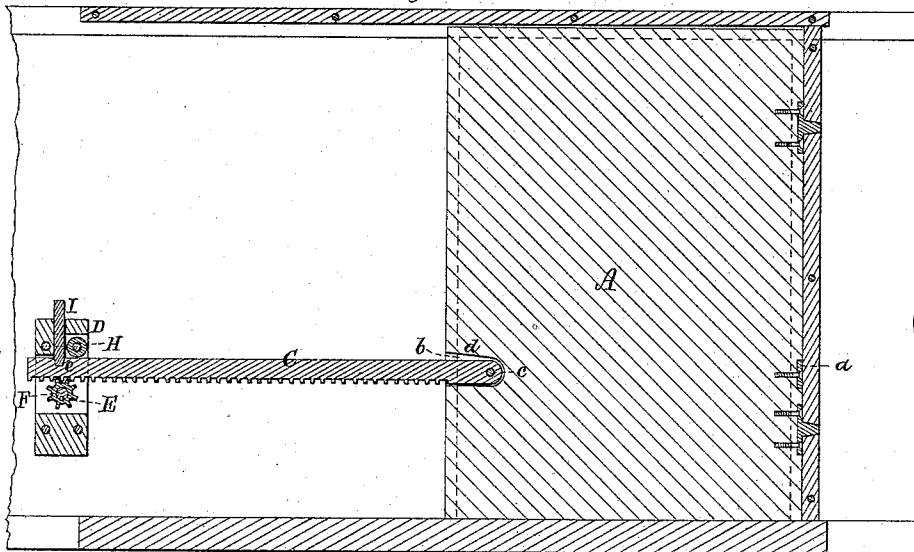


Fig. 4.

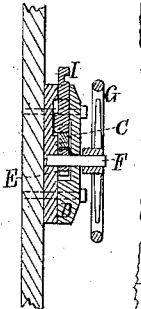
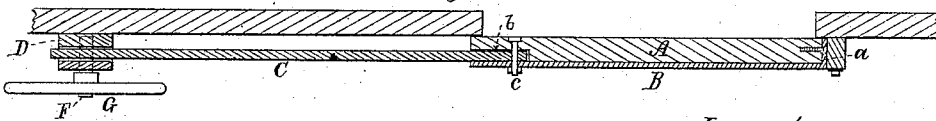


Fig. 3.



Witnesses
Chas. W. Lott
P. B. Torrey

Inventor.
Ira C. Peirce.
by *Singleton & Piper.* attys.

UNITED STATES PATENT OFFICE.

IRA CHASE PEIRCE, OF HYDE PARK, MASSACHUSETTS.

MECHANISM FOR OPERATING SLIDING DOORS.

SPECIFICATION forming part of Letters Patent No. 380,690, dated April 10, 1888.

Application filed June 16, 1887. Serial No. 241,534. (No model.)

To all whom it may concern:

Be it known that I, IRA CHASE PEIRCE, of Hyde Park, in the county of Norfolk and Commonwealth of Massachusetts, have invented a new and useful Apparatus or Mechanism for Operating a Sliding Door; and I do hereby declare the same to be described in the following specification, and represented in the accompanying drawings.

My invention is specially designed for operating the door of a railway baggage-car.

In the drawings, Figure 1 is a side elevation of a portion of a railway baggage-car with my invention applied thereto. Fig. 2 is a longitudinal and vertical section of the door and its operative mechanism. Fig. 3 is a horizontal section of the same. Fig. 4 is a vertical section on line 1 1 of Fig. 1.

In carrying out my invention I first remove the door A of the car—which is sustained in relation to the doorway in the ordinary manner—by letting into its front face a flat bar, B, of iron of suitable width and thickness, the front face of the bar being flush with the front face of the door, and the end of the bar at the inner edge of the door I bend at right angles and extend across said edge, as shown at *a*, the other end of the bar terminating at the rear edge of said door, as shown in Fig. 3. In the rear edge of the door I form a chamber, *b*, to receive one end of a rack, C, which is pivoted to the door and to the bar, as shown at *c*. The upper side of the chamber *b* is inclined, as shown at *d*, so as to increase the depth of the said chamber at its mouth, the object of such being to prevent the rack from becoming bound or cramped should the car, on account of being heavily loaded, settle in its middle.

The rack extends through a box, D, secured to the side of the car, said box having within it a pinion, E, the teeth of which enter the spaces between the teeth of the rack. The pinion is keyed to a shaft, F, which is sustained in bearings in the box D, and is provided on its

outer end with a hand-wheel, G, which is secured to the shaft. A small friction-roll, H, pivoted in the box, bears at its periphery against the upper edge of the rack and enables it to move with less friction than if it bore against the box, and also keeps said rack in contact with its pinion. The rack is provided with a notch, *e*, into which a bolt, I, drops of its own weight when the door is closed, and locks the same, as shown in Fig. 2. By raising the bolt I out of the notch *e* and revolving the wheel G in the direction of the arrow shown in Fig. 1 the door will be opened.

The above-described mechanism is a very efficient means for operating a sliding door—one which supplies a long-felt want. The bar B may be let into the rear face of the door, or may be applied to the outside of the door, as occasion may require.

Having described my invention, what I claim is—

1. The sliding door supported in the usual manner, and provided with the bar B and chamber *d*, and having the rack C pivoted in such chamber, in combination with pinion E, shaft F, hand-wheel G, friction-roll H, and box D, said box D containing the pinion, shaft, and roll, and being located at the free end of the rack C, all being arranged and to operate substantially as described.

2. The combination of the sliding door provided with the bar B and chamber *d*, and having the rack C, provided with a notch, *e*, pivoted to said door in the chamber *d*, with the pinion E, its shaft F, and hand-wheel G, the friction-roll H, box D, and bolt I, said box D containing the pinion, shaft, roll, and bolt, and being located at the free end of the rack C, all being arranged and to operate essentially as set forth.

IRA CHASE PEIRCE.

Witnesses:

S. N. PIPER,
R. B. TORREY.