(No Model.)

P. & C. HORNAL.

CAR DOOR FASTENER.

No. 425,323. Patented Apr. 8, 1890.

Fig. I.

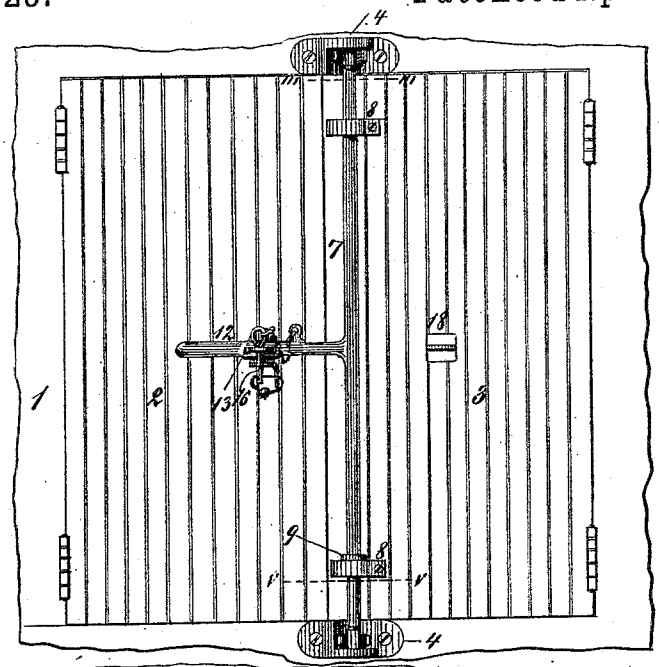


Fig. II.

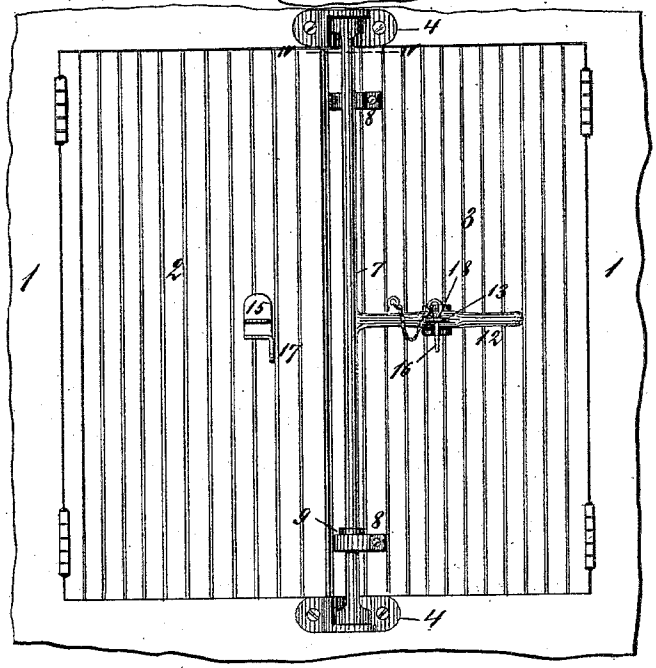


Fig. III.

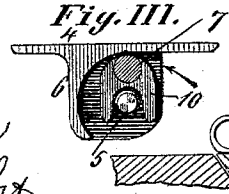


Fig. V.

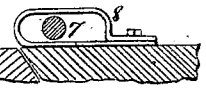
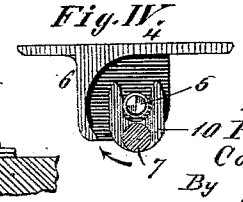


Fig. IV.



Attest:
E. Arthur.
W. E. Knight

Inventor:
Peter Hornal.
Colin Hornal.
By Knight Bros
Attys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

PETER HORNAL AND COLIN HORNAL, OF ST. LOUIS, MISSOURI.

CAR-DOOR FASTENER.

SPECIFICATION forming part of Letters Patent No. 425,323, dated April 8, 1890.

Application filed September 10, 1889. Serial No. 323,502. (No model.)

To all whom it may concern:

Be it known that we, PETER HORNAL and COLIN HORNAL, both of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Car-Door Fasteners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to a certain improvement whereby the door is securely held in its closed position, and whereby the first part of its movement in being opened is facilitated; and our invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is an elevation showing the door in closed position. Fig. II is an elevation showing the fastening released and the door partly open. Fig. III is a section taken on line III III, Fig. I. Fig. IV is a section taken on line IV IV, Fig. II; and Fig. V is a section taken on line V V, Fig. I.

Referring to the drawings, 1 represents the door-frame, and 2 3 the doors hinged to the frame. Secured to the frame, preferably at top and bottom, are brackets 4, each provided with a pin 5 and a guard-flange 6.

7 represents a shaft secured to one of the doors by means of straps 8, having elongated openings to allow the shaft to move laterally as it is rotated. The shaft may be held from vertical movement in the straps by means of one or more collars 9. On each end of the shaft is a fork 10. These forks are adapted to engage the pins 5 of the brackets 4, against which they are held as the shaft is turned by means of the flanges 6.

12 represents a lever or handle by which the shaft is operated, and it is preferably provided with a slot 13, adapted to fit over one arm of a bracket 15, secured to the door not carrying the rock-shaft. This bracket has two arms, which are perforated to receive a pin 16, by which the handle of the shaft is held when the doors are closed. The bracket has also a perforated horn 17, through which a seal may be passed, the seal also passing through the perforated end of the pin. When the doors are open, the slot in the handle fits a perforated bracket 18, secured to the door carrying the shaft and through which the pin 16 may be passed to hold the shaft. The straps 8 are preferably made in two parts each, as shown, to facilitate the attachment of the shaft to the door.

The operation is as follows: The door not carrying the shaft is first closed, and then the door carrying the shaft is swung shut until the forks engage the pins 5, the handle 12 still being in engagement with the bracket 18 and the forks being presented inwardly, as shown in Fig. II. The handle 12 is now grasped and the shaft turned to bring the handle into engagement with the bracket 15 or against the door not carrying the shaft. As the shaft is thus turned the forks revolve around the pins 5 until they are presented in an outward direction, as shown in Fig. I. The doors are now firmly closed, and will be held so until the shaft is rocked again, and in doing so the door carrying the shaft is forced open by a positive motion, because of the forks revolving around the pins 5. As the shaft is thus turned the forks are held into engagement with the pins 5 by means of the flanges 6. A fastening of this kind closes the doors with an absolute positive pressure and opens the door carrying the shaft with a positive movement, and it will be understood that after this door is opened the one not carrying the shaft can be easily grasped and opened. It is a well-known fact that car-doors are very frequently mutilated and often destroyed by the use of instruments applied to start the opening of one of the doors. By the use of our invention this difficulty is entirely obviated.

While we have described our invention as applied to car-doors, it is obvious that it might be applied to other purposes—as, for instance, to the doors of ice-boxes, refrigerators, and the like.

We claim as our invention—

1. In combination with a door having a rock-shaft provided with a fork and means for turning it, a bracket having a pin adapted to be engaged by the fork on the shaft, and a flange for holding the fork into engagement with the pin as the shaft is turned, substantially as and for the purpose set forth.

2. The combination of a door, a rock-shaft having a fork and provided with means for turning it, separable plates provided with elongated openings for facilitating the attachment of the rock-shaft to the door, and a bracket having a pin against which the fork of the shaft bears and around which it may revolve, substantially as and for the purpose set forth.

PETER HORNAL.
COLIN HORNAL.

In presence of—
E. S. KNIGHT,
THOMAS KNIGHT.