

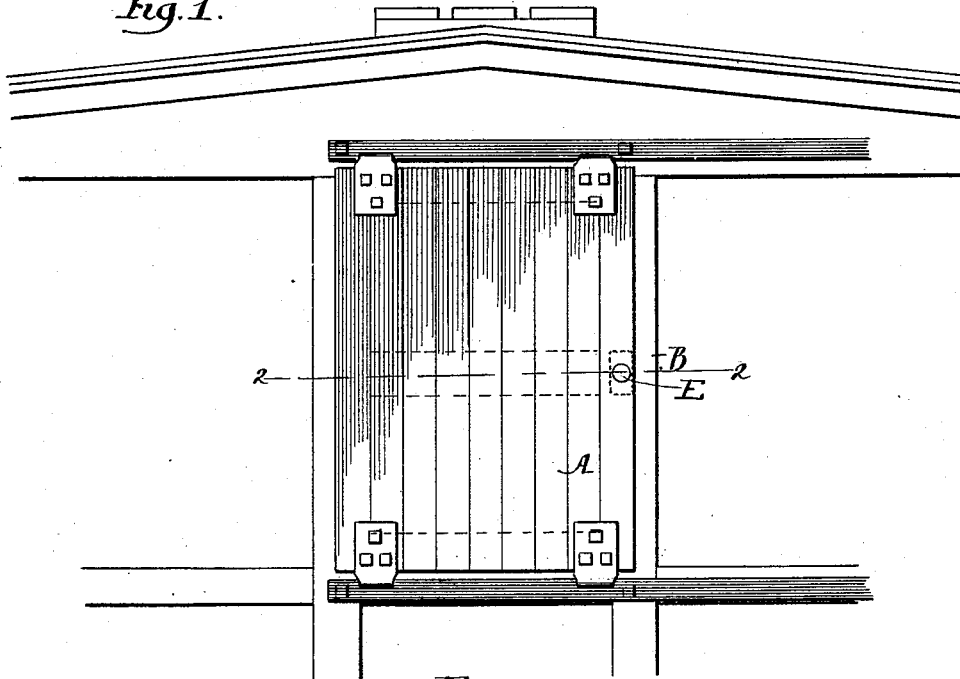
(No Model.)

E. F. DORAN.  
SLIDING DOOR LOCK.

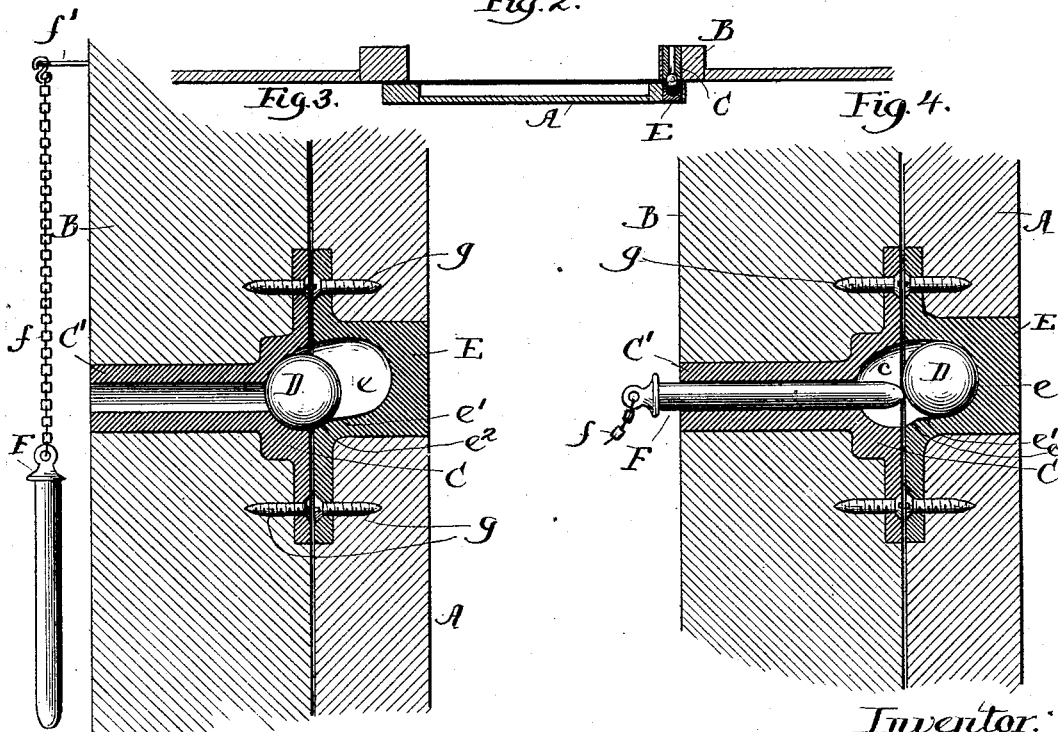
No. 489,291.

Patented Jan. 3, 1893.

*Fig. 1.*



*Fig. 2.*



Witnesses:  
Fred Heilach  
J. B. Carpenter

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# UNITED STATES PATENT OFFICE.

EDWARD F. DORAN, OF PULLMAN, ILLINOIS.

## SLIDING-DOOR LOCK.

SPECIFICATION forming part of Letters Patent No. 489,291, dated January 3, 1893.

Application filed May 31, 1892. Serial No. 434,928. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD F. DORAN, residing at Pullman, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Catches or Locks for Sliding Doors, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My present invention has for its object to provide a cheap, simple, durable and effective lock or catch for sliding doors, and this object of the invention I have accomplished by the novel construction of catch or lock, hereinafter described, illustrated in the accompanying drawings and particularly pointed out in the claim at the end of this specification. My invention is more especially designed for use upon the sliding doors of freight cars, although it will be understood that the invention is applicable for use in a variety of other situations.

Figure 1 is a view of a portion of one end of a freight car, the sliding door of which is provided with my improved catch or lock. Fig. 2 is a view in horizontal section on line 2-2 of Fig. 1. Fig. 3 is an enlarged detail view in central vertical section through the catch or lock. Fig. 4 is a view similar to Fig. 3, but showing the releasing pin in position to disengage the sections of the catch or lock.

A designates the sliding door and B denotes one of the newel posts. In the newel post B is placed a socket plate or casting C having a seat or socket *c* adapted to receive the spherical body D which when within the seat or socket *c* will prevent the movement of the sliding door. Within the door A and at a point opposite the socket C is placed a socket or casting plate E having a companion seat or socket *e*. The socket *c* is shallow and hence when the body D is therein it will project a sufficient distance therefrom to prevent the sliding movement of the door, but the seat or socket *e* is of sufficient depth to permit the body D to be forced therein, so that when the body D is within such seat or socket *e*, the door can be freely moved. The seat or socket *e* has its bottom formed with an in-

cline as at *e'* in order to cause the body D to gravitate outward and downward toward the socket *c*, so that when the sockets *c* and *e* are co-incident, the body D will pass into the shallow socket *c*, and into position to lock the door, as seen in Figs. 2 and 3. Preferably the socket *e* is also formed with an abrupt incline *e'* at its edge (see Figs. 3 and 4) so that when the body D is within the shallow socket *c*, the abrupt incline *e'* of the socket *e* will tend to retain the body D within the shallow socket until positively forced therefrom. In order to permit the body D to be forced from the shallow socket *c* into the socket *e*, I perforate the seat or socket *c* to allow a releasing pin F to be inserted therein for such purpose. This releasing pin F may be conveniently hung by a chain *f* to a hook *f'* attached to the newel post. Preferably, the plate C is formed with an extension C' and the perforation or channel that leads to the seat or socket *e* will pass through this extension C'. The plates or sections C and E are preferably attached to the door and newel post respectively by suitable screws *g*, as shown.

From the foregoing description, it will be seen that when the body D is in the shallow socket *c* as illustrated in Figs. 2 and 3 of the drawings, the sliding movement of the door will be prevented, but when it is desired to open the door it is only necessary to force the body D from the socket *c* into the socket *e* by means of the releasing pin F, and when the body D is in such position, the door can be freely moved. Any other convenient means, as for, example, a spring plunger, may be employed for forcing the body D out of the seat or socket *c*, but I regard the pin F as the simplest and cheapest device for such purpose.

It will be understood of course that when the lock or catch is arranged as illustrated in the accompanying drawings, it will be necessary for access to be had into the interior of the car before the sliding doors are released. If, however it is desired to use the lock or catch mechanism simply for latching the doors, the position of the parts can be reversed. That is to say, the socket plate C can be placed upon the door with the perforated extension C' leading outward so that a pin

can be inserted through it in order to effect the release of the door.

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

A catch or lock for sliding doors comprising a spherical body and two socket plates or castings C and E, one of which is provided with a shallow seat or socket, and the other of which

is provided with a seat or socket of sufficient depth to receive the body when forced from the shallow seat or socket the plate or casting C being perforated to admit a releasing pin, substantially as described.

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Witnesses:

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