

(Model.)

A. B. BARNARD.

LOCK FOR FREIGHT CAR DOORS.

No. 334,840.

Patented Jan. 26, 1886.

Fig 1.

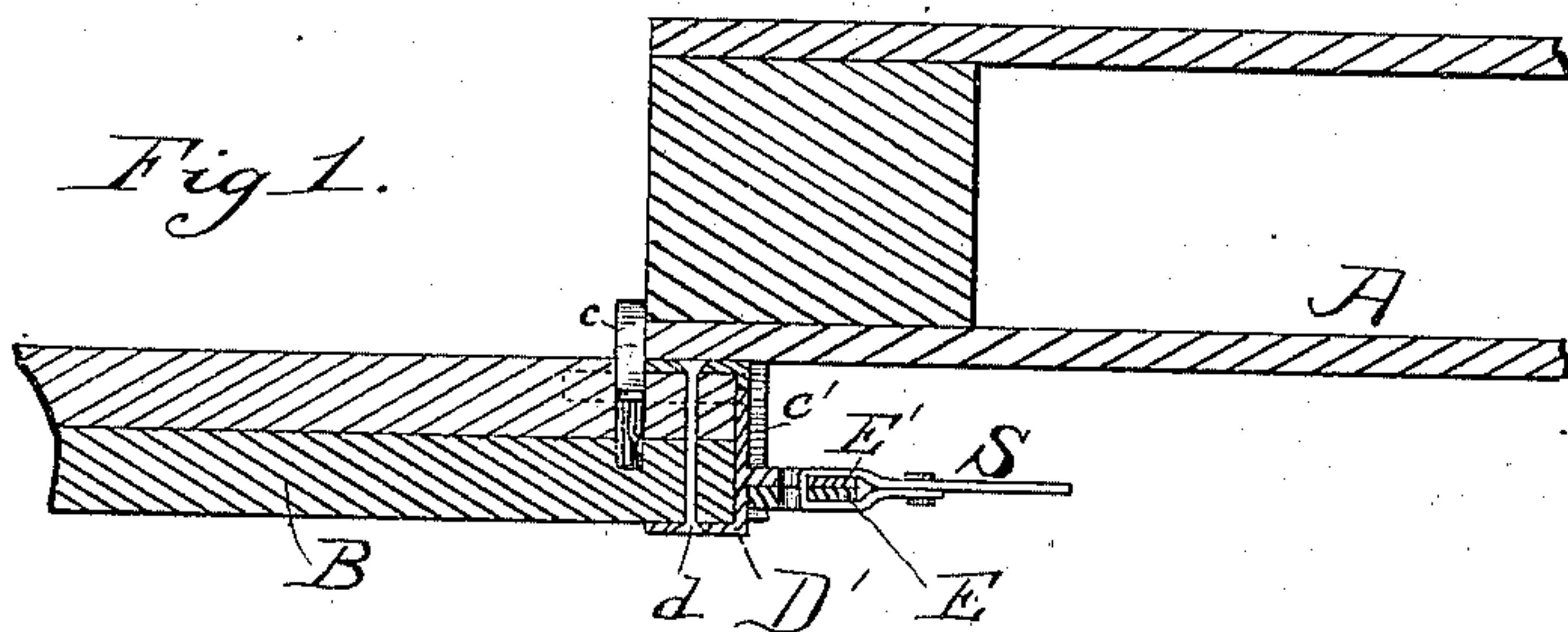


Fig 2.

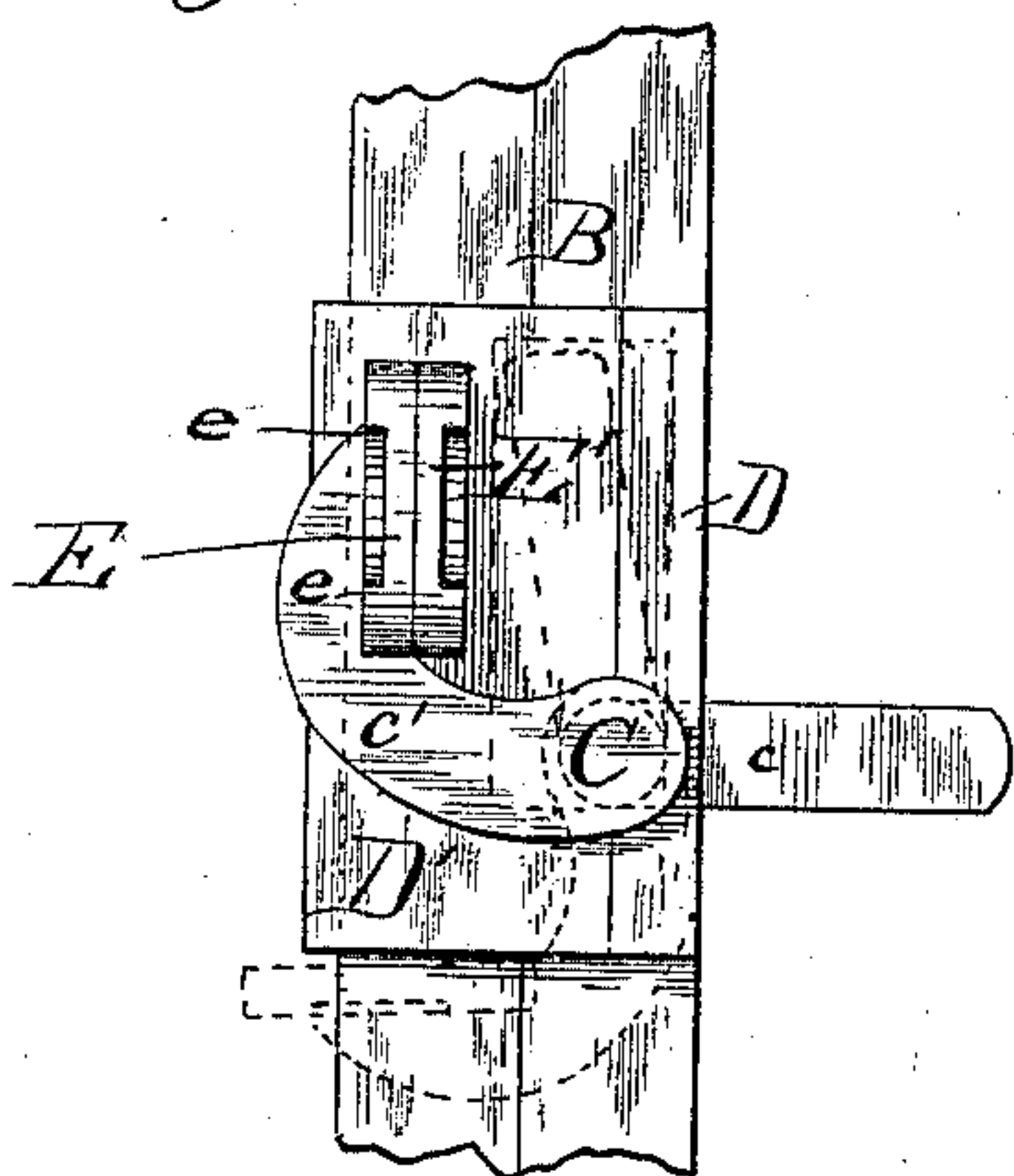


Fig 3.

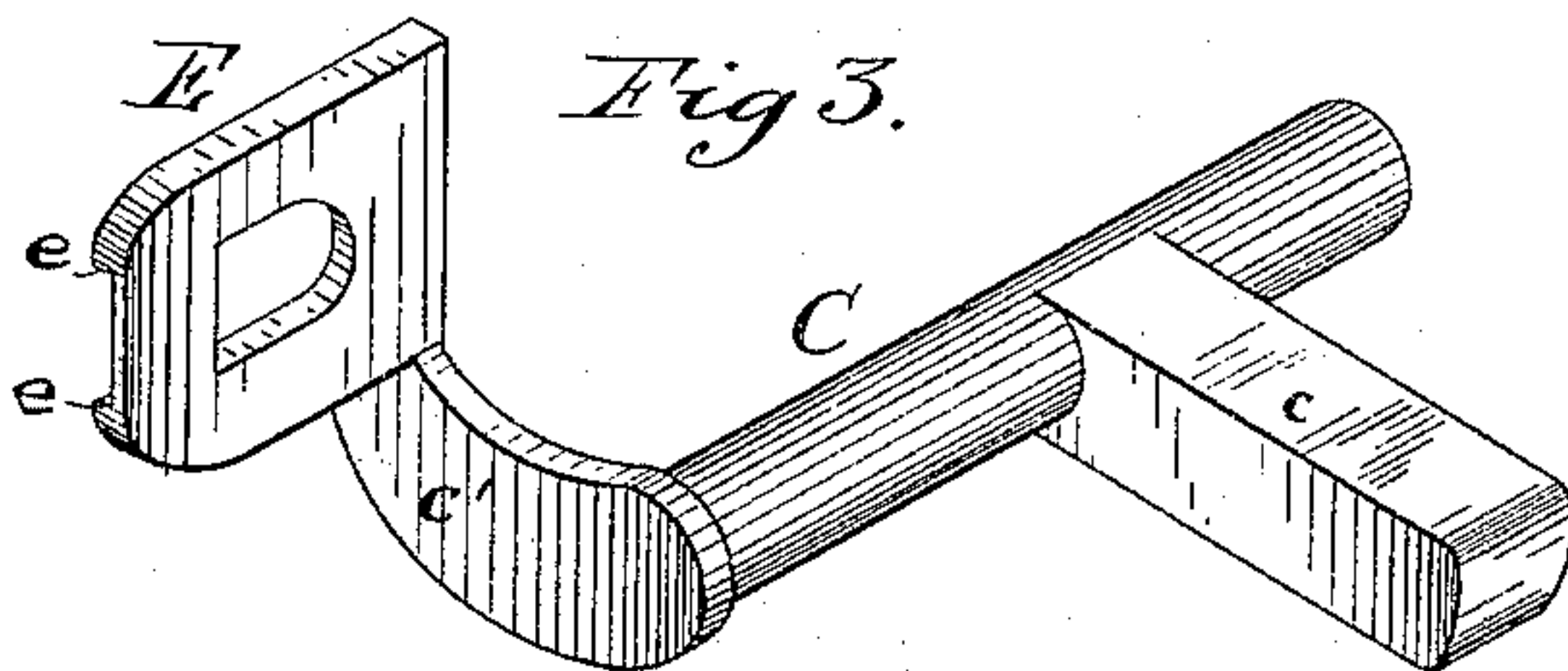


Fig 5.

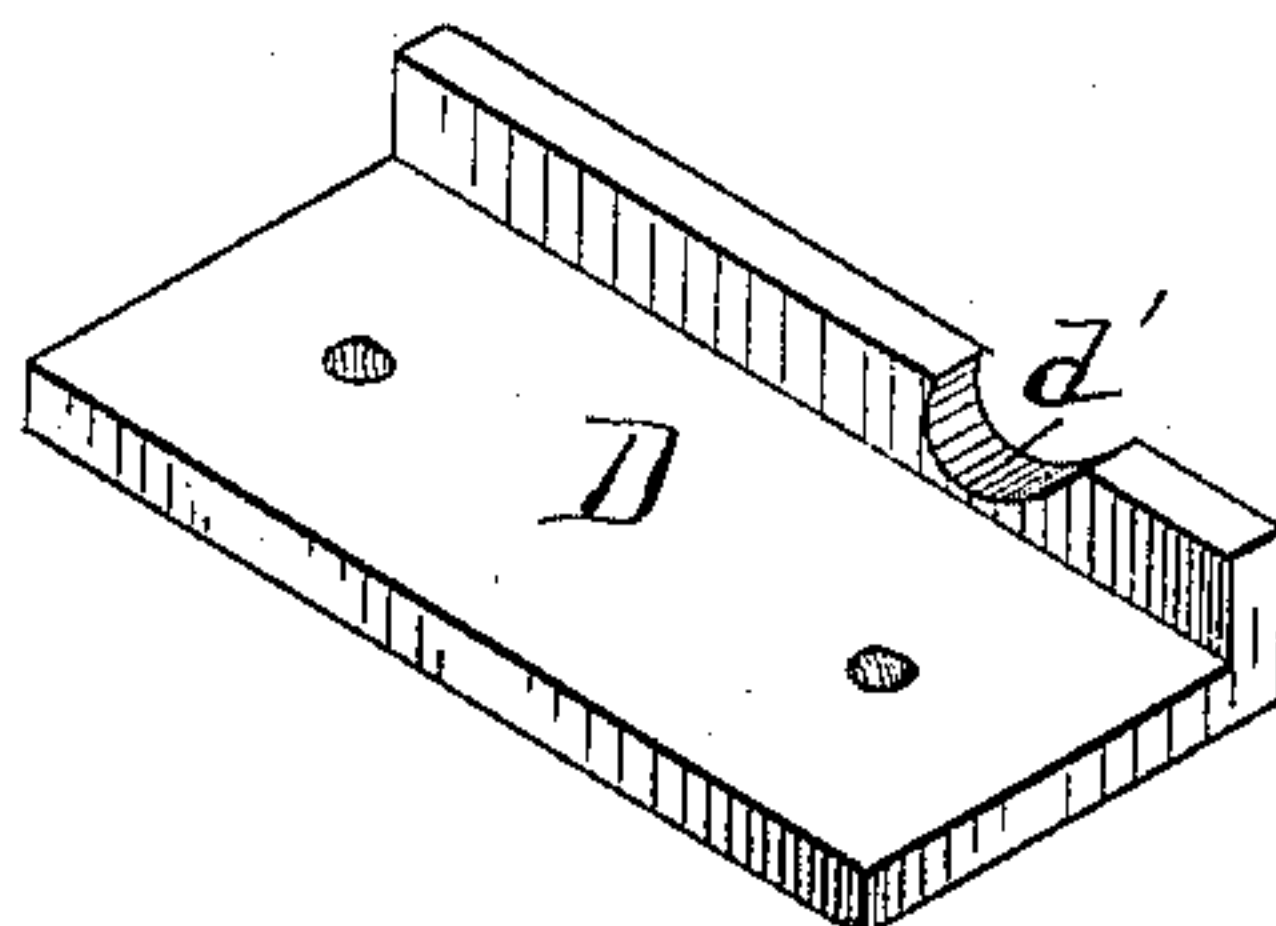


Fig 4.

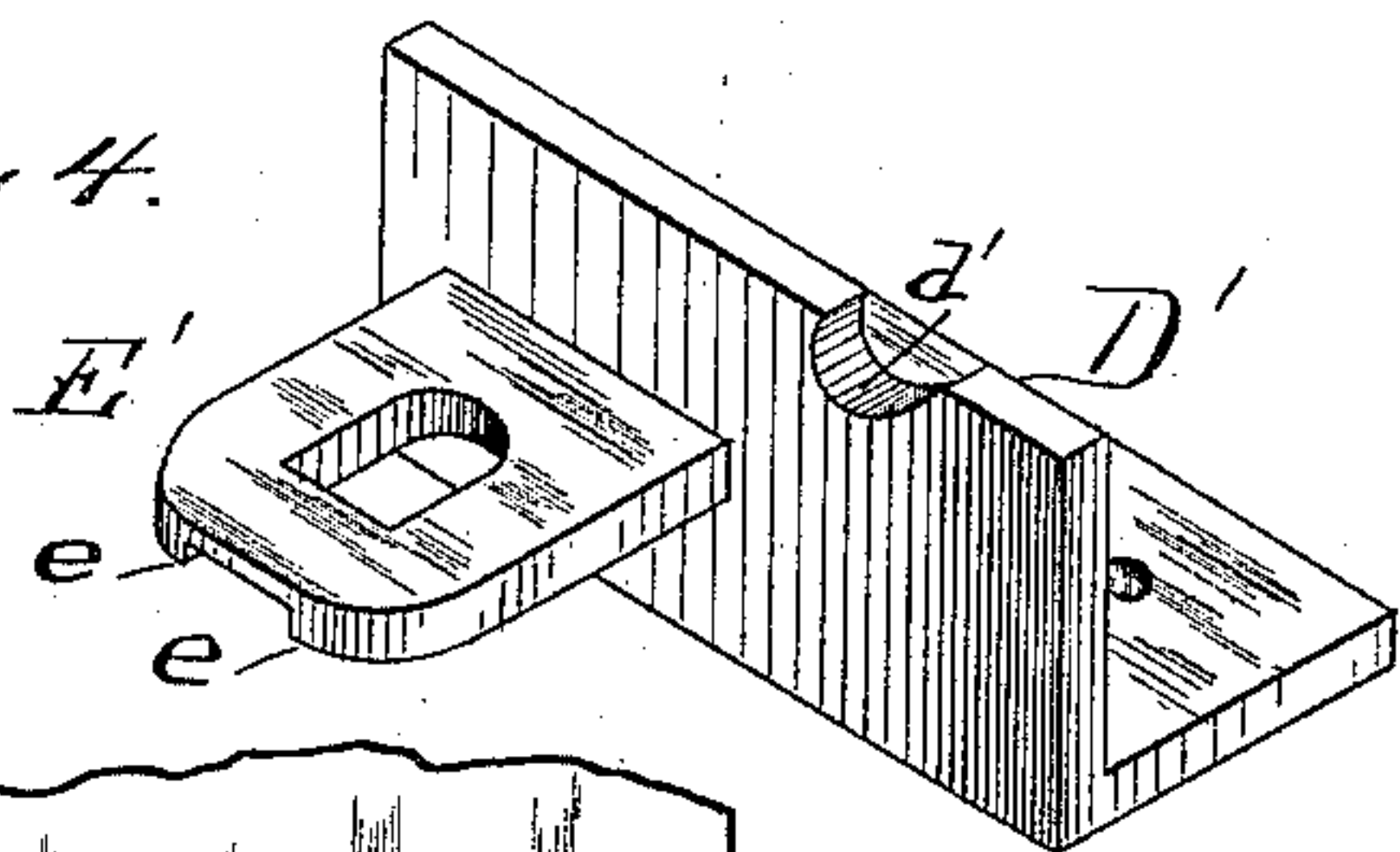
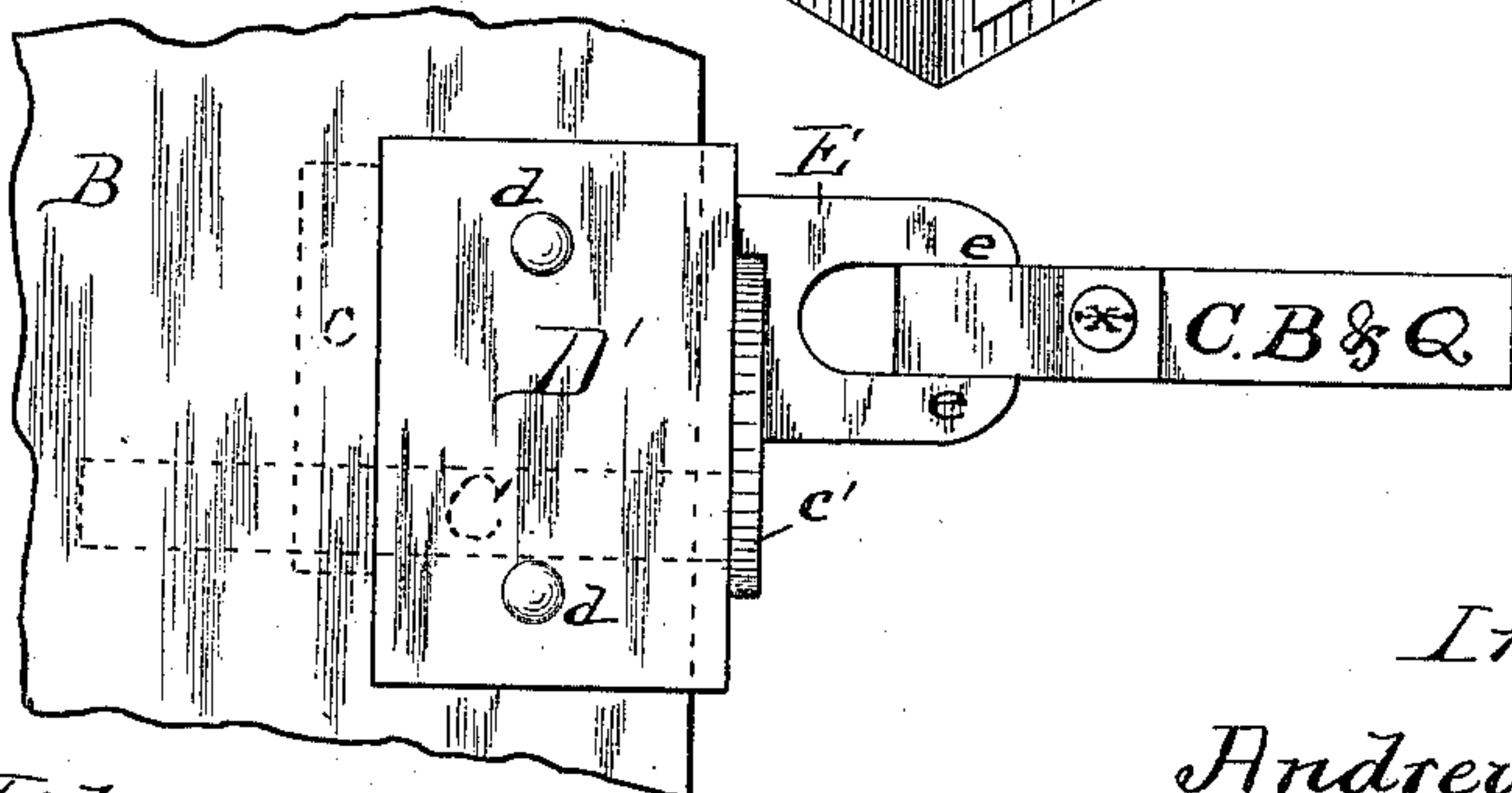


Fig 6.



Witnesses
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UNITED STATES PATENT OFFICE.

ANDREW B. BARNARD, OF KANSAS CITY, MISSOURI.

LOCK FOR FREIGHT-CAR DOORS.

SPECIFICATION forming part of Letters Patent No. 334,840, dated January 26, 1886.

Application filed July 14, 1885. Serial No. 171,580. (Model.)

To all whom it may concern:

Be it known that I, ANDREW B. BARNARD, a citizen of the United States, residing in Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Improvement in Locks for Freight-Car Doors, of which the following is a specification.

In that class of locks for freight-car doors shown in the patent to me of March 25, 1884, No. 295,514, the handle end of the bolt and the seal-carrying eye project outwardly from the front of the door, where they are at all times exposed to injury by contact with standing objects which may happen to be too near the track, or by teams moving loads to and from cars; and it is no infrequent occurrence with locks of that and other similar constructions that they are broken or rendered useless. To relieve the lock of this objection I have devised my present invention, wherein all the parts of the lock are or may be located back of the outer plane of the door, or substantially so.

My invention consists in the combination, with a freight-car door, of a lock inserted in the rear edge thereof, and provided with an operating-arm located outside such rear edge, both the lock and its operating arm lying substantially inside the outer face of the door, substantially as specified.

The invention further consists in a bolt adapted to be oscillated and to be inserted edgewise in the car-door, having a locking projection so arranged as to sustain the bolt by gravity either in the locked or unlocked position, as desired.

The invention further consists in the novel details of construction hereinafter fully explained.

In the accompanying drawings, which form a part of this specification, Figure 1 is a section of a car door and side, the door being locked by my improved lock. Fig. 2 is a partial edge elevation of the door. Fig. 3 is a perspective of the bolt. Figs. 4 and 5 are like views of the inner and outer caps forming the casing of the bolt, and Fig. 6 is a partial elevation of a door provided with my lock and seal.

In said drawings, A represents the car side, and B the door.

C represents the oscillating bolt carrying a locking projection, *c*, and an outer arm, *c'*, whereby it may be rotated. This bolt is let

into the door from the rear edge thereof, the recess in the door being formed in the inner rear corner, and the bolt is confined in such recess by the plate D, and this plate D is secured by rivets *d* passing through it to the other side of the door, and also through the cap or L-shaped plate D', secured to the exterior of the door.

The locking projection is lowered into and raised out of engagement with the car-side by the oscillation of the bolt, and it is made heavy enough, so that when in the lowered or locked position it will outbalance the operating-arm, thereby enabling it to act as a weight in holding the bolt against oscillation. That portion of the recess in the door into which the projection swings when it is withdrawn from locking engagement is formed to permit the projection to swing past the plane of its center of oscillation, (see broken lines, Fig. 2,) so that when thus withdrawn its gravity will resist oscillation toward the locking position. The operating-arm, which extends in the opposite direction from that of projection *c*, assists in this resistance, as will be obvious from the construction shown. By these features of construction I guard against unlocking of the door when the operating-arm is not secured by a seal, and against accidental locking when the door is closed and the locking is not desired.

At the extremity of the operating-arm is a seal carrying eye, E, which, when the bolt is turned to the locking position, lies alongside of a similar stationary eye, E', upon the cap D'. Both these eyes are provided with shoulders *e*, whereby the seal S will be supported in a horizontal position, as shown in Figs. 1 and 6.

The operating parts of my improved lock, it will be noticed, lie wholly or almost wholly within the outer plane of the door, whereby they are sheltered from blows and collisions and not likely to become injured.

The cap D' may be let into the door, so as to lie flush therewith, and the arm *c'* may be so constructed as not to project, when either opened or closed, beyond the face of the door. The recesses *d'* in the parts D and D' give room for the bolt.

I claim—

1. The combination, with a car-door, of a lock inserted through its rear edge and provid-

ed with an operating-arm located outside such rear edge, both the lock and arm lying inside the outer face of the door, substantially as and for the purpose specified.

- 5 2. The combination, with a freight-car door, of a bolt inserted therein from the rear edge and provided with a locking projection adapted to engage with the car side, and an exterior arm by which the bolt may be oscillated, both
10 projection and arm standing at right angles to the bolt, substantially as specified.

3. The bolt adapted to be oscillated and to be inserted edgewise in a car-door, and provided with a locking projection and an operating-arm, both standing at right angles to the
15 bolt, the former being adapted to act by its weight to resist unlocking, substantially as specified.

4. The combination, with the car-door, of an

oscillating bolt inserted in the door and provided with a locking projection and operating-arm, the door being recessed to permit the projection to swing past the center, substantially as and for the purpose specified.

5. The lock for freight-car doors, consisting of the oscillating bolt C, having the locking projection *c* and arm *c'*, in combination with the plate D and cap D', substantially as specified.

6. The combination, with the oscillating bolt and its operating-arm secured thereto, of a locking projection weighted to outbalance said arm, substantially as and for the purposes specified.

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Witnesses:

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