J. W. SCHOONMAKER.
Sliding-Door Lock.

No. 200,768. Patented Feb. 26, 1878.

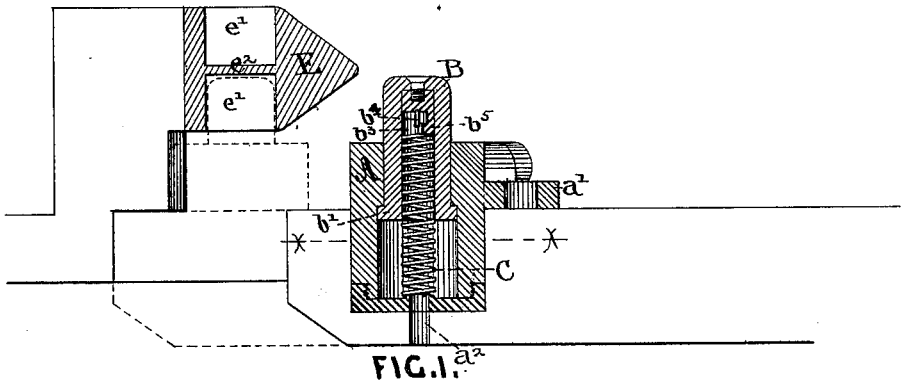

FIG. 1.

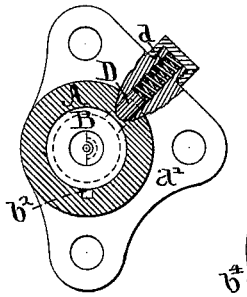

FIG. 2.

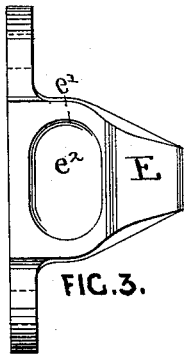

FIG. 3.

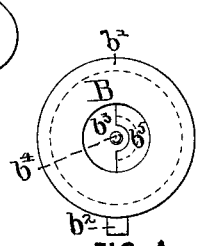

FIG. 4.

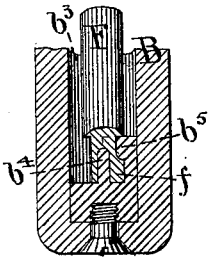

FIG. 5.

Witnesses.

E. P. Bennett

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Inventor.

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by
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UNITED STATES PATENT OFFICE.

JAMES W. SCHOONMAKER, OF ALBANY, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO THOMAS J. GARVEY, OF SAME PLACE.

IMPROVEMENT IN SLIDING-DOOR LOCKS.

Specification forming part of Letters Patent No. **200,768**, dated February 26, 1878; application filed September 28, 1877.

To all whom it may concern:

Be it known that I, JAMES W. SCHOONMAKER, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements in Locks for Sliding Doors, of which the following is a full and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a horizontal section through the lock and striker; Fig. 2, a vertical section at the line *x x;* Fig. 3, a side elevation of the striker; and Figs. 4 and 5, enlarged details of the spring-bolt.

My invention is designed for the purpose of supplying a cheap, secure, and enduring lock for securing the doors of freight-cars, and for other similar purposes.

It consists of the mechanism constructed and operating as herein shown and described.

As illustrated in the drawings, A is the casing of the lock, consisting of a cylindrical shell, provided with a detachable cap, which covers the chamber of the casing in which the flanged portion of the bolt slides, and which I preferably attach to the casing by suitable screw-threads formed on the casing and cap; but they may be attached together in any suitable manner. It (the casing) is also provided with a flange, a^1, for securing it to the door.

B is the bolt, which, for economy in construction, I preferably make of a cylindrical form. It is fitted to slide in a suitable hole formed in the part of the casing projecting from the door. It is provided with a flange, b^1, or other suitable device, whereby it is prevented from projecting too far beyond the casing.

A stud, b^2, fixed to the flange b^1, and sliding in a corresponding groove in the casing, prevents the bolt from turning in the casing when made in a cylindrical form, and maintains these parts in their proper relative positions.

At the axial line of the bolt a hole, b^3, is formed, which extends nearly to the bottom end of the bolt. At its lower end a pin, b^4, is fixed, which enters the hole in the key, and serves as a center for it to turn upon. It is also provided with a segmental shelf, b^5, or other suitable projection, under which the bit of the key engages for operating the bolt, as hereinafter described.

As shown in the drawings, this segmental shelf is formed on a separate piece, lying in the bottom of the hole b^3, and secured to the bolt by means of a tap-screw.

A coiled spring, C, is inserted in the hole in the bolt, from which it projects a sufficient distance to bear against the cap of the casing. By means of this spring the point of the bolt is forced out from the casing.

In order to provide for the wearing of the bolt in the casing, the plunger D is forced, by the spring *d*, to bear against the side of the bolt, so as to keep it in close contact with the side of the hole in which it slides.

The striker E is provided with a bevel-face at each side, so as to render it reversible. It also has a recess, e^1, formed in each side for receiving the bolt B, as shown by the dotted lines in Fig. 1. These recesses are slotted vertically, for relieving the striker from the strain occasioned by the jumping motion of the door.

By a partition, e^2, in the striker, access to the end of the bolt is cut off, and prevents the lock from being opened from within the car.

The key F (a portion of which is shown in Fig. 5) consists of a cylindrical stem, having a bit, *f*, at its end, made to engage under the segmental shelf or projection b^5, so as to form a connection with the bolt B, in such manner that the bolt can be withdrawn from its hold in the striker, so as to release the door from its fastening.

The unlocking is effected by inserting the key in the key-hole a^2, and through the coiled spring C, until it reaches the bottom of the hole b^3. A half-revolution of the key brings it into position, where the bit *f* engages under the projection b^5. Then, by a direct pull upon the key, the bolt is drawn back into the casing A, so as to allow the door to slide back freely.

The locking is effected by sliding the door

into a closed position, when the bolt comes in contact with the beveled face of the striker. The bolt is forced back into its casing until it comes into coincidence with the recess in the striker, when it is forced outward by its spring and secures the door.

I claim as my invention—

1. The lock for sliding doors herein described, consisting of the casing A, bolt B, provided with the projection b^5 formed therein, and spring C, in combination with the key F, forming a connection with and operating the bolt B, in the manner herein specified.

2. The reversible striker E, having beveled faces and recesses arranged at its opposite sides, as herein specified.

JAMES W. SCHOONMAKER.

Witnesses:

THOS. J. GARVEY,

WILLIAM H. LOW.