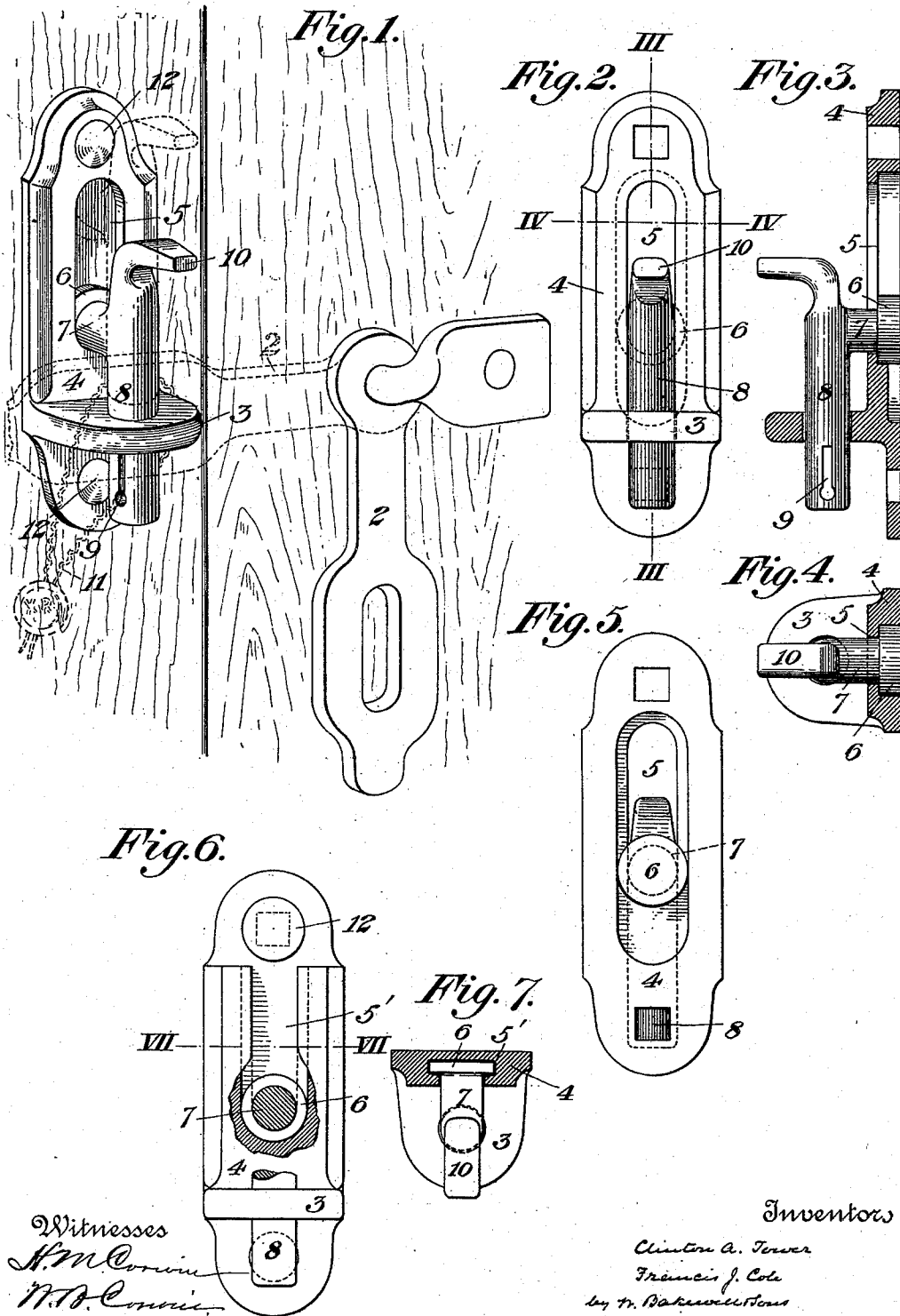


C. A. TOWER & F. J. COLE.
DOOR LOCK.

Patented June 25, 1895.



UNITED STATES PATENT OFFICE.

CLINTON A. TOWER, OF CLEVELAND, OHIO, AND FRANCIS J. COLE, OF BALTIMORE, MARYLAND, ASSIGNORS TO THE NATIONAL MALLEABLE CASTINGS COMPANY, OF CLEVELAND, OHIO.

DOOR-LOCK.

SPECIFICATION forming part of Letters Patent No. 541,797, dated June 25, 1895.

Application filed February 4, 1895. Serial No. 537,173. (No model.)

To all whom it may concern:

Be it known that we, CLINTON A. TOWER, of Cleveland, in the county of Cuyahoga and State of Ohio, and FRANCIS J. COLE, of Baltimore, State of Maryland, have invented a new and useful Improvement in Door-Locks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 shows in perspective view our improved lock applied to a car door. Fig. 2 is a front elevation of the lock. Fig. 3 is a vertical longitudinal section on the line III—III of Fig. 2. Fig. 4 is a vertical cross section on the line IV—IV of Fig. 2. Fig. 5 is a rear plan view of the lock. Fig. 6 is a plan view of a modified construction of the lock, partly in section; and Fig. 7 is a vertical cross section on the line VII—VII of Fig. 6.

Our improved car-door lock comprises as usual a hasp, a staple and a bolt or locking-pin, but the novel features of the invention reside in the construction and relative arrangement of the bolt and the base-plate on which it is mounted.

The object of the invention is to provide an efficient lock of simple construction, the parts of which can be readily assembled and applied to the car.

In the drawings, 2 represents the hasp, which may be of usual form and is fixed to the car-door, and 3 is the staple over which the hasp is fitted when the parts are locked. This staple is made integral with and projects from the face of a base-plate 4, which is bolted to the car near the margin of the door opening adjacent to the position of the hasp.

5 is a longitudinal slot formed in the base-plate, and on the under side of the base-plate, at the sides of the slot, is a groove adapted to accommodate the head 6 of a shank 7, which projects laterally from the bolt 8, and which, when the parts are assembled, passes through the slot. At one end of the bolt 8 is a slot or hole 9 for the reception of the seal wire or seal strip, and at the other end may be a hand-

piece 10 which the operator seizes with the hand when he wishes to move the bolt back or forth.

In applying the staple and bolt to use, the bolt, which is of less diameter than the width of the slot 5, is passed through the slot from the under side of the base-plate and the base-plate is then secured to the car by bolts 12. The shank 7 then fits in the slot 5. The head of the shank, which fits within the groove on the under side, prevents the bolt from being disengaged and also fits against the side of the car to which the base-plate is attached. The bolt can then be moved back and forth along the slot to project its slotted end into or to retract it from the eye in the staple, and if the head 6 be round it can also be turned on the axis of the shank. To lock the car, the hasp is placed over the staple, the bolt is shot through the staple's eye, and the seal-wire or strip 11 is threaded through the slot or hole 9 at the end of the bolt.

The advantage of forming the bolt 8 with a lateral shank fitting in a slot or groove in a base-plate is that it makes it unnecessary to employ a special bolt or pin over which the bolt slides, and it thus reduces the number of parts, and simplifies the construction.

Instead of having the slot 5 extending entirely through the base-plate, the surface of the plate may be formed with a surface groove 5' of dovetail shape, in which the head 6 is fitted and in which it can slide, as shown in Figs. 6 and 7, and when the base-plate is applied to the car, the bolt 12 at the end of the groove 5' serves as a stop to prevent detachment of the bolt from the base-plate.

Other modifications of our invention will suggest themselves to the skilled mechanic, since

What we claim is—

1. In a door-lock, the combination of a base-plate having a longitudinal way in which the bolt can slide, a bolt having a lateral shank formed with a head which fits in said way, and retains the bolt, and a staple into which

the bolt is movable; substantially as described.

2. In a door-lock, the combination of a base-plate having a longitudinal way in which the
5 bolt can slide, and a bolt having a lateral shank formed with a head which fits in said way and retains the bolt, said shank being rotatory within said way, whereby the bolt
10 may be turned on the axis of the shank; substantially as described.

In testimony whereof we have hereunto set our hands.

CLINTON A. TOWER.

FRANCIS J. COLE.

Witnesses as to Clinton A. Tower:

O. K. BROOKS,

EMIL W. JAITE.

Witnesses as to Francis J. Cole:

SAML. W. BRADFORD,

THOS. KELL BRADFORD.