

(Model.)

J. B. COOK.
SLIDING DOOR LOCK.

No. 302,384.

Patented July 22, 1884.

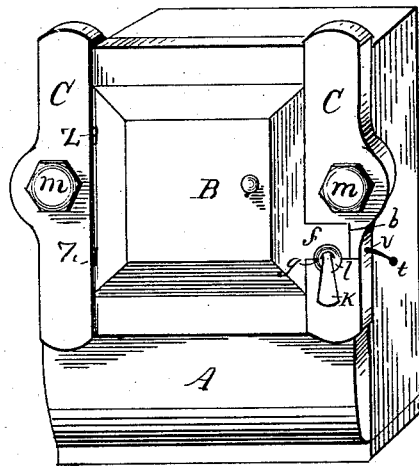


Fig. 1.

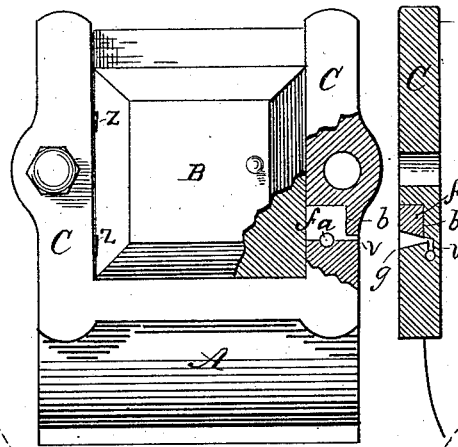


Fig. 2.

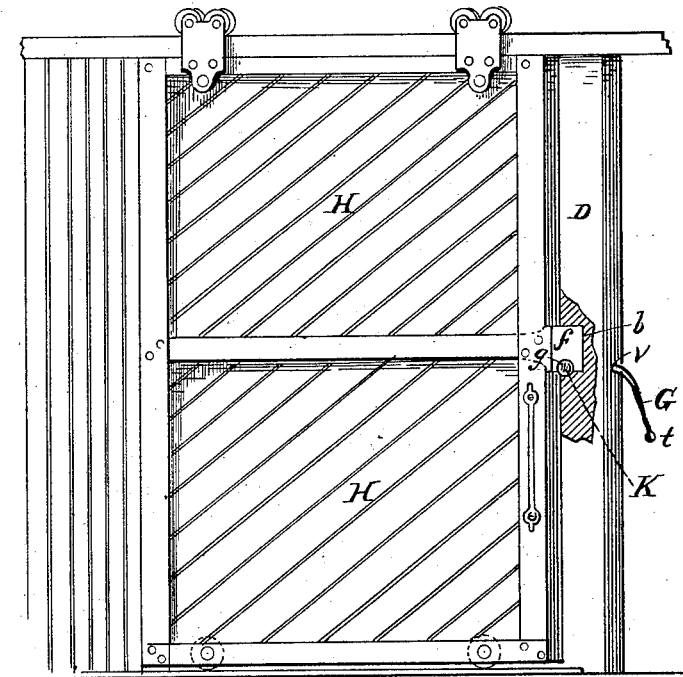


Fig. 3.

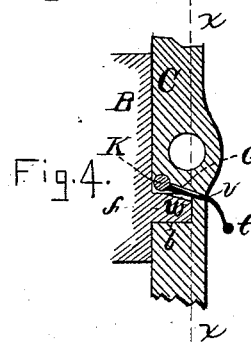


Fig. 4.

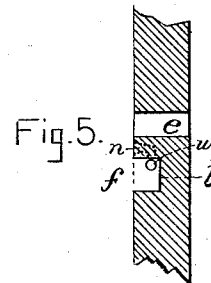


Fig. 5.

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UNITED STATES PATENT OFFICE.

JAMES B. COOK, OF YARMOUTH, MASSACHUSETTS, ASSIGNOR TO FREDERICK C. SWIFT, OF SAME PLACE, AND ALBERT F. EDSON, OF BARNSTABLE, MASSACHUSETTS, TRUSTEES.

SLIDING-DOOR LOCK.

SPECIFICATION forming part of Letters Patent No. 302,384, dated July 22, 1884.

Application filed October 5, 1883. (Model.)

To all whom it may concern:

Be it known that I, JAMES B. COOK, of Yarmouth, in the county of Barnstable, State of Massachusetts, have invented a certain new and useful Improvement in Fasteners, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an isometrical perspective view representing a modification of the improvement applied to the door of a car-axle box; Fig. 2, a sectional front elevation of the same; Fig. 3, a front elevation of a sliding door provided with my improved fastener; Fig. 4, a vertical longitudinal section showing my improved fastener applied to the door of a car-axle box, and Fig. 5 a vertical transverse section taken on line *xx* in Fig. 4.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates more especially to that class of fasteners which are designed for fastening the axle-box or oil-box doors of railway-cars, and also the sliding or swinging doors of stables, barns, egg-boxes, crates, &c.; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a simpler, cheaper, and more effective device of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation, its extreme simplicity rendering an elaborate description unnecessary.

In the drawings, A represents a car-axle box; B, the door, and C the frame, the frame being secured to the box by the bolts *m*, and the door hinged to the frame, as shown at *zz*.

Projecting from the side of the door opposite the hinges *z* there is a catch or stud, *f*, adapted to enter a lateral mortise, *b*, in the frame C when the door is closed, and provided on its lower side with a half-round hole or

groove, *a*. A corresponding half-round hole 50 or groove, *i*, is formed in the bottom wall of the mortise *b*, the sectional holes *i a* being united or registering to form a round or complete hole, *g*, when the door is shut, and extending from the front of the catch *f* backward 55 entirely across the same to the opposite side of the mortise *b*. The hole formed by the union of the sectional holes *i a* is continued on the same line to near the center of the side rail of the frame C, where it turns at a right angle 60 and opens outwardly through the edge of said rail, as shown at *v*. The outer end of the hole at the catch *f* is countersunk or tapered, as shown at *l*, the incline being preferably long and gradual, and fitted to work in the same 65 there is a tapering leather thong or string, G, its large end K being fitted into that part of the hole which is formed by the half-round holes *i a* and the continuation thereof, and its small end into the hole *v*, the small end being 70 provided with a knot, *t*, to prevent the entire withdrawal of the string from the hole.

In opening the door, the string G is pulled outwardly by its large end until said end is withdrawn from the countersink or taper *l* 75 and the knot *t* brought against the rail of the frame C, thereby permitting the catch *f* to be swung freely from the mortise *b*.

To fasten the door when closed, or when the catch is in the mortise, it is merely necessary 80 to pull the string through the hole by its small end or by the knot *t* until its large or tapering end K is forced or wedged into the countersink *l*, thereby securing the catch *f* in the mortise *b* in a manner which will be readily 85 obvious without a more explicit description.

By constructing the hole *v* at a right angle to the hole *g* the friction on the string G is greatly increased, thereby preventing it from slipping easily and the door from opening accidentally. It also subserves another purpose in rendering the small end of the string 90 more readily accessible.

The modification of the fastener shown in Fig. 1 is designed for use when there is but a 95 very slight strain on the fastener, or where but very slight resistance is required to overcome any tendency of the door to open. For general

purposes, therefore, I prefer to construct the fastener for swinging doors as shown in Figs. 4 and 5, in which C is the side rail of the door-frame, B the door, and *f* the catch. The catch 5 is provided with an inclined central groove or half-round hole, *w*, in the upper portion of its outer end, and the larger or tapering portion of the hole for the string enters the front of the rail just above the catch as seen at *n* in 10 Fig. 5, turning at a right angle at *e*, from which point it inclines downwardly, and passes out of the side of the rail at *v*, the groove *w* forming a section of the hole in the rail from its outer end, *v*, as far as said groove runs to- 15 ward the angle *e*.

In opening the door, when the fastener is constructed as shown in Figs. 4 and 5, the large end K of the string G is pulled back or out, bringing the knot *t* against the edge of 20 the rail and raising the body of the string out of the groove *w* in the catch *f*, thereby permitting the catch to be moved or swung laterally out of the mortise *b*.

To fasten the door, when the fastener is constructed as shown in Figs. 4 and 5, the catch 25 being in the mortise *b*, the string is pulled in to its fullest extent by the small end or knot *t*, causing its larger or tapering end K to fall into the groove *w* in the catch, thereby effectually preventing the catch from being moved 30 laterally out of the mortise until the string is withdrawn by pulling on its large end K.

When the fastener is applied to sliding sliding doors, it is constructed in the manner 35 shown in Fig. 3, in which H is the door, and D the post, the post being provided with a mortise, *b*, into which the catch *f* enters when the door is closed. A tapering hole, *g*, is bored from the front to the center of the post D, 40 where it turns at a right angle, and opens outwardly through the edge of the post at *v*. The hole is so located that one-half of its largest end is formed in the lower part of the catch *f* and one-half in the lower wall of the mortise 45 designed to receive the catch, or in substantially the same manner as shown in Fig. 1, the large end of the hole being countersunk or tapered, as shown in said last-named figure.

In fastening the door shown in Fig. 3, the string G is drawn in by pulling on its small 50 end or by the knot *t*, causing its large end K to wedge into the countersink, and thereby prevent the catch *f* from being withdrawn from the mortise. To unfasten it, it is merely necessary to pull out the large end of the 55 string until the knot *t* is brought into contact with the edge of the post, thereby bringing the small part of the string into the large end of the hole, and permitting the catch to be withdrawn from the mortise, the groove in the 60 lower wall of the mortise being of sufficient size or depth to receive the small end of the string and keep it out of contact with the catch when the large end is withdrawn from the tapering portion of the hole. 65

It will be obvious that for swinging doors the mortise, in order to receive the catch, must be open on one of its sides, and it may also be open in like manner for sliding doors, if de- 70 sired.

I do not confine myself to the use of the fastener for doors alone, either sliding or swinging, as it may be used for covers and many other purposes where a simple, cheap, and strong fastener of this general character 75 is required.

Having thus explained my invention, what I claim is—

In a fastener substantially such as described, a hole one end of which is tapering, a catch, 80 and a tapering string or thong, a groove or section of said hole being formed in the catch and a groove or section in the part to which the catch is designed to be locked or fastened, said grooves or sectional holes being adapted 85 to register when the catch is moved into position to be locked or fastened, and said string adapted to work in said hole to lock or fasten the catch when its large end is drawn into the tapering portion of the hole, substantially as 90 set forth.

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Witnesses:

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