H. J. COWELL.

LOCK FOR DOORS, CUPBOARDS, AND THE LIKE.

APPLICATION FILED SEPT. 7, 1904.

904,683. Patented Nov. 24, 1908.

Fig. 1.

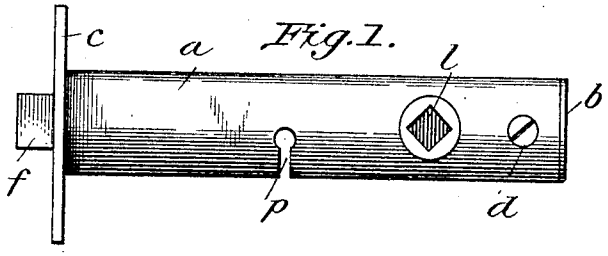


Fig. 2.

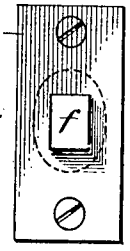


Fig. 3.

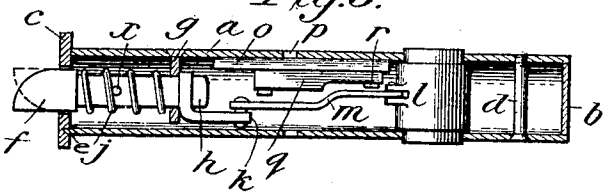


Fig. 4.

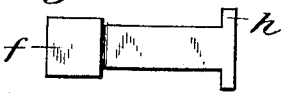


Fig. 11.

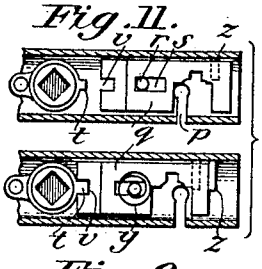


Fig. 5.

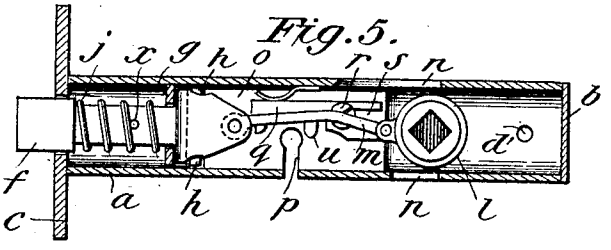


Fig. 9.

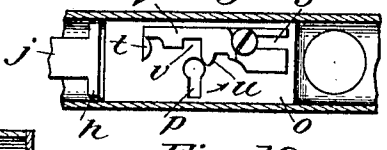


Fig. 6.

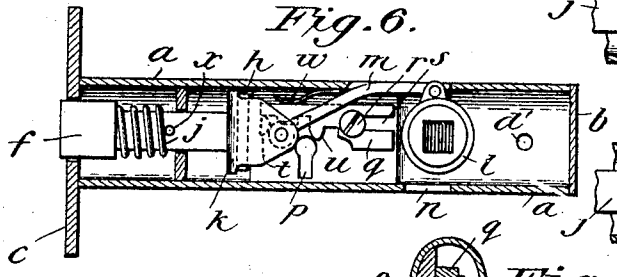


Fig. 10.

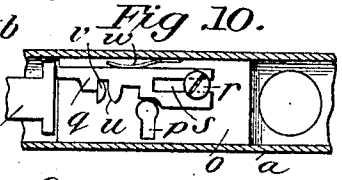


Fig. 8.

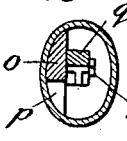


Fig. 12.

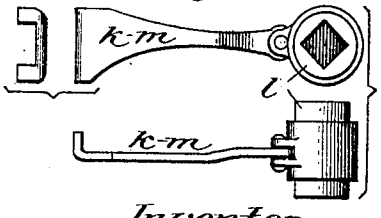
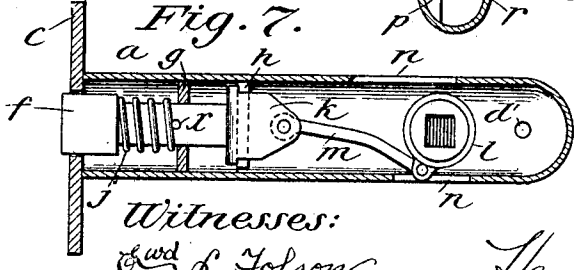


Fig. 7.



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Attys.

UNITED STATES PATENT OFFICE.

HENRY JAMES COWELL, OF ADELAIDE, SOUTH AUSTRALIA, AUSTRALIA.

LOCK FOR DOORS, CUPBOARDS, AND THE LIKE.

No. 904,683. Specification of Letters Patent. Patented Nov. 24, 1908.

Application filed September 7, 1904. Serial No. 223,592.

To all whom it may concern:

Be it known that I, HENRY JAMES COWELL, architect, a subject of the King of Great Britain and Ireland, residing at 75 King William street, Adelaide, in the State of South Australia, Commonwealth of Australia, have invented a certain new and useful Improved Lock for Doors, Cupboards, and the Like, of which the following is a specification.

My invention relates to an improved lock for doors, cupboards and analogous purposes, the special object of the same being to provide an appliance which shall be comparatively simple and inexpensive in construction and at the same time be capable of being more easily fitted in position than is the case with the majority of locks at present in use.

In carrying my invention into effect the casing is made more or less tubular in form so that it can be fitted into a cylindrical shaped hole drilled into the door or cupboard by means of an auger or other convenient appliance and the internal mechanism of the lock is so designed that the bolt can readily be reversed so as to apply the fitting to either a right or left handed door, the handle being capable of turning in either direction.

In order that my invention may be the better understood I will now proceed to describe the same by aid of the accompanying illustrations in which Figure 1 is an external elevation of the lock. Fig. 2 is an end view of same. Fig. 3 is a sectional plan. Fig. 4 is a side view of bolt. Fig. 5 is a side view of lock with portion of casing removed and bolt projecting. Fig. 6 is a similar view of lock but with bolt withdrawn. Fig. 7 is a similar view of lock with handle in reversed position, the locking mechanism being omitted and a modification in shape being illustrated. Fig. 8 is a cross section of tube or barrel of lock. Fig. 9 is a detail of mechanism showing the appliance in unlocked position. Fig. 10 is a detail of mechanism showing the appliance in locked position. Fig. 11 is a detail of alternative or equivalent locking mechanism in unlocked and locked positions. Fig. 12 is a modification of connection between handle barrel and bolt in side elevation, end view and plan.

Similar letters of reference are used to denote similar or corresponding parts wherever they occur throughout the drawings.

In this drawing *a* is the outer casing of the lock which is provided at the ends with the back plate *b* and the face plate *c*, the latter having holes drilled therein for the reception of fastening screws. The casing is more or less cylindrical in section as shown and consists of a front and back portion the two parts being held together by the screw *d* passing through the hole *d'* and are further secured by a small lug or projection *e* on the front plate which fits into a corresponding recess in the face plate *c*, Fig. 3.

The metal bolt is shown at *f* and is arranged to pass through the face plate and works within a suitable guide or recess in the fixed bridge *g* finally terminating in the tee-shaped extension *h*.

A metal compression spring *j* is coiled round the recess portion of the bolt and taking a bearing against the fixed bridge *g* presses against a shoulder formed by the recessed portion of the bolt *f*.

k is a grip plate which fits behind the extension *h* of the bolt and is pivotally joined to the rollback *l* by means of the bent connecting rod *m*, a lug being provided on the barrel through which a pin or rivet is passed for the retention of the connecting rod.

In Fig. 12 I have illustrated a modification or simplified form of this mechanism wherein the bent connecting rod is dispensed with and in lieu thereof a grip plate having a lever integral therewith is used as indicated by the letters *k*—*m* as will be readily understood on reference to the drawings.

The casing may be cut away both at top and bottom as indicated at *n* in order to enable the rod to work without impediment when the handle is turned to the right or left, and on reference to Fig. 3 it will readily be understood that the bolt is reversible for right or left handed fittings as indicated by the dotted lines.

An important feature in my invention consists of the locking gear which is characterized by its extreme simplicity. A plate *o* is fastened to the side of the barrel, or formed integral therewith, to afford a suitable bearing for the sliding parts, a key hole being provided at *p* for the reception of an ordinary key. *q* is the lock-slide or tumbler which is held in position by the screw *r*, which engages the slotted portion *s*, a rest pin being fixed at *t* for supporting and holding the lock.

In Fig. 9 the appliance is shown in an un-

locked position, but when the key is turned in the direction of the arrow it impinges upon the projection *u* and lifts the lock-slide or tumbler upwards and forwards so as to enable the rest pin *t* to engage in the recess *v* where it is held by aid of the spring *w* as illustrated in Fig. 10. It will readily be seen that in this position the lock-slide or tumbler butts against the tee-shaped extension *h* of the metal bolt thus preventing it from being drawn backwards by means of the handle.

A mechanical equivalent of the above described locking gear is illustrated in two positions in Fig. 11, but the recess *v* on the sliding plate being in a somewhat different position to that described in the preceding figures instead of engaging with a rest pin on the body of the lock engages with a corresponding projection *t* upon the back of the handle barrel thereby preventing the same from being revolved. In this modification the helical spring *y* on the side of the slide performs a similar function to the spring *w* previously mentioned by keeping the slide in proper position. A small beveled bar or projection *z* is formed or fixed on the body of the lock and engages in a slight recess on the back of the slide when unlocked in which position it is maintained by the influence of the helical spring so as to prevent any accidental movement of the slide.

In Fig. 7 it will be seen that the back plate is dispensed with the end of the barrel being rounded off as illustrated.

The application and use of my lock may be briefly described as follows:—By means of an auger or other suitable tool a hole is drilled for the reception of the barrel of the lock and the appliance is then held in position by the screws which pass through the flush plate, further holes being cut for the passage of the handle and the key. The turning of the handle either forwards or backwards causes the lever to draw the bolt backwards by the intermediate action of the grip plate *k*, or by the more direct mechanism shown in Fig. 12, but as soon as the handle is released the spring *j* exerting its influence in the opposite direction restores the bolt to its normal position.

It is to be understood that I do not confine myself absolutely to the size or shape of the details shown in the accompanying drawings but that the same may be modified within reasonable limits.

The internal mechanism is particularly applicable to ordinary household fittings and doors and may be applied generally to mortice locks and rim locks. By removing the grip plate and the roll back both of which are readily detachable the bolt can easily be lifted out of the bridge and face plate and returned again in a reversed position so as to render the lock adjustable to whichever direction the opening of the door is to be applied.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

1. A lock comprising a casing, a bolt having a tee shaped rear end, a plate having a forked end bent at right angles engaging said tee shaped end, a handle barrel having a lug thereon and a bent lever connected at one end to said lug and at its other end to the plate.

2. A lock comprising a casing having a bridge *g* therein, a bolt having an enlarged head and a tee shaped end, a spring having one end bearing against the said head and the other against the bridge, a plate having a forked end bent at right angles engaging said tee shaped end, a handle barrel, a bent lever connecting said barrel with the plate, a sliding plate, a key for moving the same to prevent movement of the before mentioned parts and means for holding the sliding plate in its forward and rearward positions.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY JAMES COWELL.

Witnesses:

JOHN HERBERT COOKE,

JAMES FINGEY.