2 Sheets--Sheet 1.

H. WINN.

Fastening Lock-Shells to Bolt-Cases.

No. 165,644. Patented July 13, 1875.

Fig. 1.

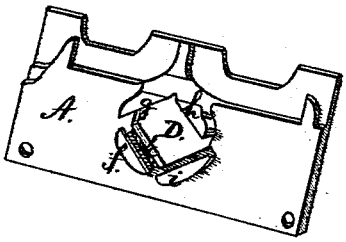


Fig. 2.

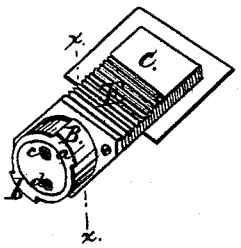


Fig. 3.

Fig. 4.

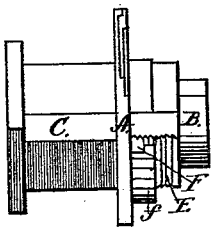


Fig. 5.

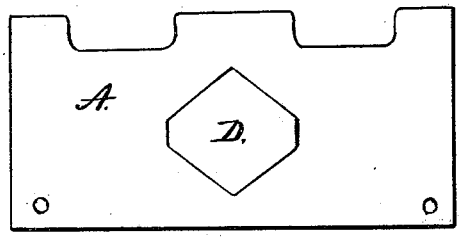


Fig. 6.

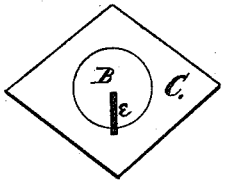
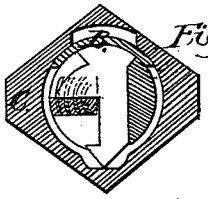


Fig. 7.



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2 Sheets--Sheet 2.

H. WINN.

Fastening Lock-Shells to Bolt-Cases.

No. 165,644. Patented July 13, 1875.

Fig. 8.

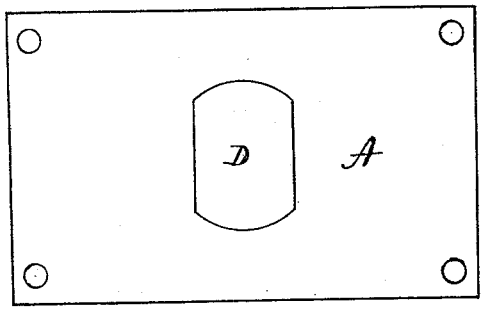
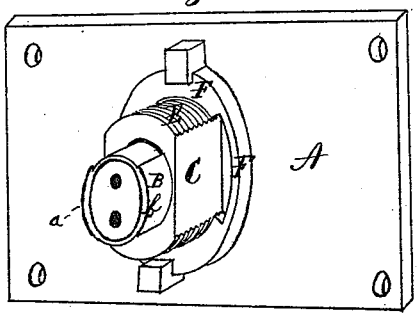


Fig. 9.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY WINN, OF SHELBURNE FALLS, MASSACHUSETTS.

IMPROVEMENT IN FASTENING LOCK-SHELLS TO BOLT-CASES.

Specification forming part of Letters Patent No. **165,644**, dated July 13, 1875; application filed March 17, 1875.

To all whom it may concern:

Be it known that I, HENRY WINN, of Shelburne Falls, in the county of Franklin and State of Massachusetts, have made certain new and useful Improvements in the Fastenings of Lock-Shells to Bolt-Cases, whereof the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an interior view of a detached portion of a bolt-case, showing the part to which the lock-shell is attached. Fig. 2 shows an outer shell of a lock, containing the tumblers, fence, rotating shell, and parts necessary to dog said rotating shell when the tumblers are not correctly set. Fig. 3 shows a key used to key said outer shell in place. Fig. 4 shows said outer shell fastened by said key to said detached portion of the bolt-case. Fig. 5 is a front view of said portion of a bolt-case. Fig. 6 is a front view of said outer shell, containing the rotating shell. Fig. 7 is a vertical section of the outer shell and the parts contained therein, taken through the line *x x* of Fig. 2. Fig. 8 shows a cover or portion of a bolt-case with another form of opening to admit a lock-shell suitable to be fastened in by a circular key. Fig. 9 shows a lock-shell containing a lock, and fastened into said cover or bolt-case by a circular key.

This invention relates to that class of locks in which the tumblers and fence are inclosed in a shell which is detachable from the case containing the bolt, called herein the bolt-case, and adjustable to said case in different positions relative to the thickness of doors, and to the throw of the bolt to the left or right without changing the key-hole's position.

A is a detached portion of the bolt-case or cover, (the term bolt-case including the cover, as it is a portion of said case,) which case is supposed to contain a bolt, a wing arranged to operate said bolt, and rotating on a hub in said case, and fastened from all motion except revolution, said wing also having two feather key-seats, into which the splines *a* and *b* on the rotating shell B enter, whereby the rotating shell B, turning said wing, operates the bolt, either spline entering and fitting either key-seat, so that said wing fits said shell B in two positions, the one position being half a revolution of said wing from the other, whereby its position is not changed if the outer shell C is fixed in its place either side up through its opening D in part A. Said splines also move back and forth in said feather key-seats, allowing said shell C to be adjusted to the varying thickness of doors. Two stationary pins in the case are supposed to enter the holes *c* and *d*, to prevent the stationary parts in shell C from turning, which move back and forward therein as shell C is adjusted to thickness of different doors. But the inventor does not confine himself to any particular mode of connecting the rotating shell with the bolt, as many may be used.

The shell C has a series of two or more grooves, E, cut on one or more of its sides, as shown. It has its opposite sides homologous, fitting the opening D in part A, and moving through the same freely before it is fastened. Part A has four projections, *f*, *g*, *h*, and *i*, which serve as a bearing for shell C, and in one of said projections *f* a key-seat, *k*, is cut, to hold the key F (which has one or more projections, as shown, fitting either of the grooves E) in position to hold said projections in either of said grooves when shell C is placed in opening D. Said grooves may be on key F, and said projections on shell C, it being only necessary that the projections of the one enter and fit the grooves of the other when shell C is to be fastened. The opening D fits shell C in two positions, in one of which part A is turned half round from the other, and in both of which the sides of said opening hold said shell C firmly from turning, whereby the lock may be made right or left hand by turning the bolt-case half round relative to shell C, leaving the position of the key-hole *e* unchanged. If this is done another key-seat should be cut in projection *h*, similar in shape and position to the key-seat *k*; or another series of grooves similar to grooves E should be cut on shell C, opposite the one having grooves E.

To attach the shell C and its inclosed parts to the bolt-case, it is entered into opening D, as shown in Fig. 4. The front end of shell C is located at any desired distance from the part A, and the key F is entered, as shown in Fig. 4, its projections entering the grooves of shell C, and fastening it firmly in position, while the sides of opening D prevent it from turning.

If the surface of shell C having the grooves is circular, the key may be curved to correspond, and may conveniently be a ring, the interior of the ring and the exterior of the shell being cut away till the shell will pass through the ring, when it may be turned till its projections enter the grooves on the shell. The mode of using the invention with a circular key, as aforesaid, is illustrated by Figs. 8 and 9.

This device allows the shell C to be passed to its place more readily than when it is screwed in, and an important advantage of this invention is the holding of said shell from turning, in either of the positions required for a right or left hand lock, by the sides of opening D, combined with the secure fastening of the key and grooves, thereby dispensing with the set-screw—an inconvenient and insecure mode of fastening. It is not essential to the device that the sides of opening D should hold shell C from turning before the key is in place. The key may constitute a side of said opening and prevent the shell from turning. If the shape of shell D were circular, excepting that a segment were removed and the grooves made on the flattened face, a key constructed, when seated, to fit into the grooves on the flattened face would hold the shell from turning, even though opening D were circular, allowing the shell to turn in it before the entry of the key. No particular method of fastening the key to the bolt-case is necessary, as many modes may be used.

What I claim, and for which I pray Letters Patent, is—

1. A key combined with a shell containing tumblers and a fence, when the one has one or more grooves fitting two or more projections on the other, or one or more projections fitting two or more grooves of the other, whereby said shell is fastened, as described, to a bolt-case, to which said key is attached in different positions relative to the thickness of doors, when said shell passes freely into an opening in said bolt-case before the key is in place to fasten said shell, and is held from rotation by one or more of the sides of said opening when said key is in place to fasten said shell.

2. A key attached to a bolt-case combined with a shell containing tumblers and a fence, when the one has one or more projections fitting one or more grooves of the other, whereby said shell may be fastened, as described, in an opening in said bolt-case, when said shell is constructed to enter said opening in two positions, in the one of which it is turned a half-revolution from its place in the other, and when said shell is held from rotating by one or more of the sides of said opening in either of said positions.

HENRY WINN.

In presence of—
P. J. EVANS,
H. M. PUFFER.