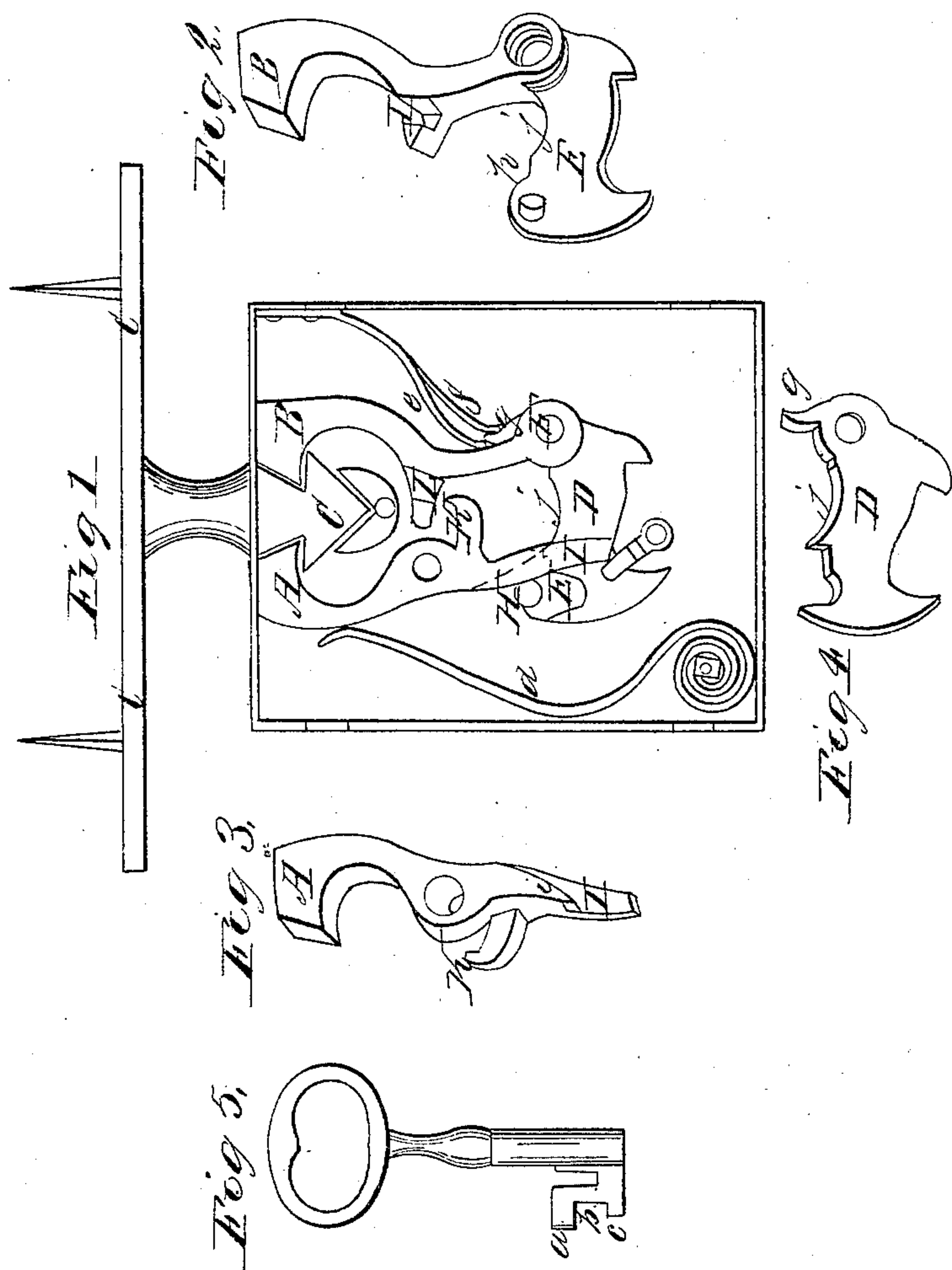


C. Liebrich,

Trunk Lock.

N^o 1,355.

Patented Oct. 5, 1839.



UNITED STATES PATENT OFFICE.

CONRAD LIEBRICH, OF PHILADELPHIA, PENNSYLVANIA.

MANNER OF CONSTRUCTING LOCKS WITH DOUBLE CATCH-BOLTS.

Specification of Letters Patent No. 1,355, dated October 5, 1839.

To all whom it may concern:

Be it known that I, CONRAD LIEBRICH, of the city of Philadelphia, in the State of Pennsylvania, have invented certain improvements in double catch-bolt locks by so constructing the catches and tumblers as to afford great security against efforts to pick it, which improvements are applicable to desk-locks, trunk-locks, padlocks, and in general to all those locks which have double catch-bolts to lay hold on two sides of a hasp or staple, as in the kind I am now about to describe.

Figure 1, in the accompanying drawing, is a representation of one of my locks, with the key-hole plate removed. A, and B, are the two catch bolts embracing the hasp, or staple. C, Fig. 1, shows the catch bolt B, separate from the lock, and Fig. 3, the bolt A, on the side the reverse of that shown in Fig. 1. Fig. 4, is a tumbler seen at D, in Fig. 1, and covering the plate, or tumbler part, E, of Fig. 2, which is in one piece with the catch bolt B. The tumbler D, and the bolt B, both work on the same joint pin F, there being a slot in the joint part of B, to receive the joint part of D. A pin H, on the plate E, acts as a stop to the tail part I, of the bolt A, against which tail-piece the key is first to operate. Fig. 5, is the key adapted to such a lock, and passing on to the pin J.

In this lock, there are three points upon which the three portions, *a*, *b*, *c*, of the bit of the key acts; these, however, may be increased by the addition of one or more tumblers, but the three points are sufficient to show the principle of action, and for security also. This security results, as in other tumbler locks, from the correct adjustment of the respective parts of the bit of the key, to the tumblers, and bolts upon which it is to operate, and my improvement consists in the particular arrangement of the check parts of my lock, by which it is prevented from being opened by any key not perfectly adapted to it in each of its parts. It will be seen that the main spring *d*, bears against the bolt A, that the spring *e*, bears against the bolt B, and the spring *f*, against the tail piece *g*, of the tumbler D, so as to keep them up to their bearings, when not

acted upon by the key. Upon the bolt A, there is a projecting finger K, and in the part L, of the bolt B, a recess into which the point of said finger may enter, when a wrong key is used.

The following is the action of the respective parts. The points *h*, and *h*, of the tumbler and piece E, lie immediately under the point *i*, of the bolt A, when the lock is closed; and before these can begin to rise, the point *i*, must be thrown a little forward by the action of the side of the part *a*, of the bit of the key, against the tail piece I, of the bolt A; this brings the finger K, close to the notch L, and should it center it, the lock cannot be opened. The part *b*, of the key, raises the tumbler D, and the part *c*, raises the plate E; but to do this their lengths must be precisely adapted to the said tumbler and plate, as, should either be too long it will force the tumbler or the plate against the angular edge *i*, of the bolt A, which extends over the edges of D, and E, and the key will be arrested, the said angle passing in close contact with the upper edges *j*, *j*, of the tumbler and plate. The tail piece *g*, of the tumbler lies in contact with the back side of the bolt B, and they must be moved in unison by the bit of the key; should the portion *b*, of the bit be too short, the bolt B, would be forced against *g*, by the action of *c*, upon the plate E, which would force the upper edge of the tumbler against *i*, and arrest the progress of the key; should the part *c*, be too short, the bolt B, will be arrested by the engaging of the finger K, in the notch L.

Having thus, fully described the construction of my lock, and shown the manner in which the same operates, what I claim as my invention, and desire to secure by Letters Patent, is—

The manner of constructing the two catch bolts with the finger K, and the recess L, in combination with the tail piece I, and the edge *i*, on the bolt A, and the tail piece *g*, on the tumbler D, so as to arrest the motion of the key, in the manner described.

CONRAD LIEBRICH.

Witnesses:

THOS. F. JONES,
JOSEPH NOCK.