H. COCHEMS.

Key-Hole Guard for Locks.

No. 168,375. Patented Oct. 5, 1875.

Fig: 1.

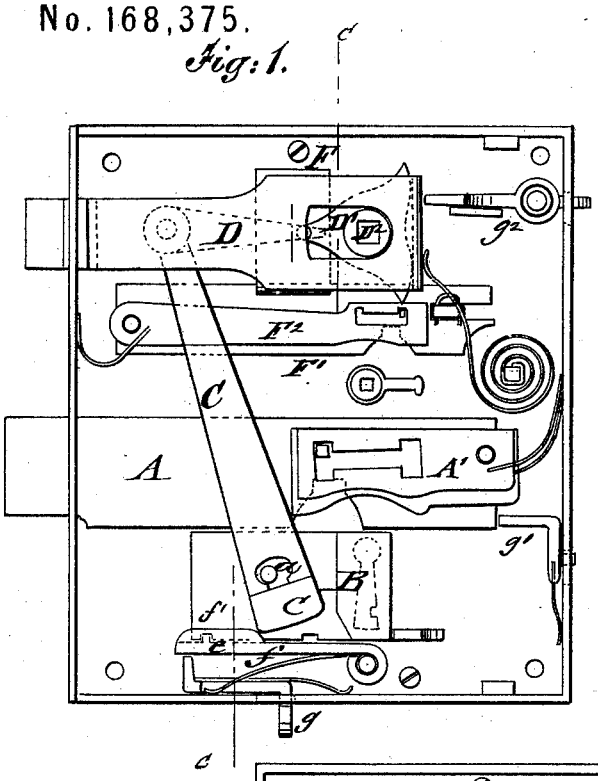


Fig: 3.

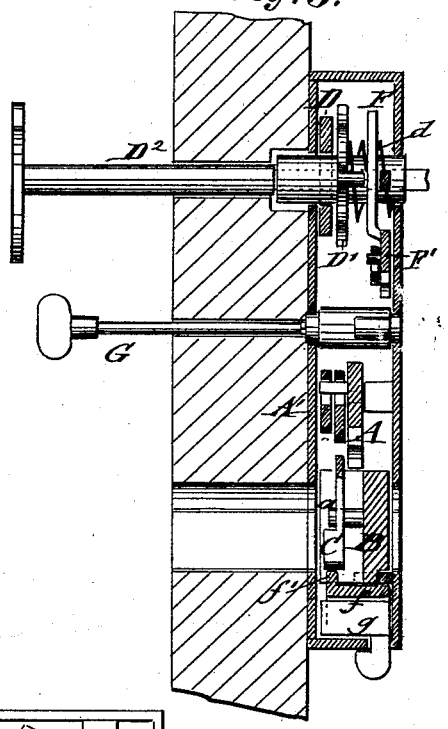


Fig: 2.

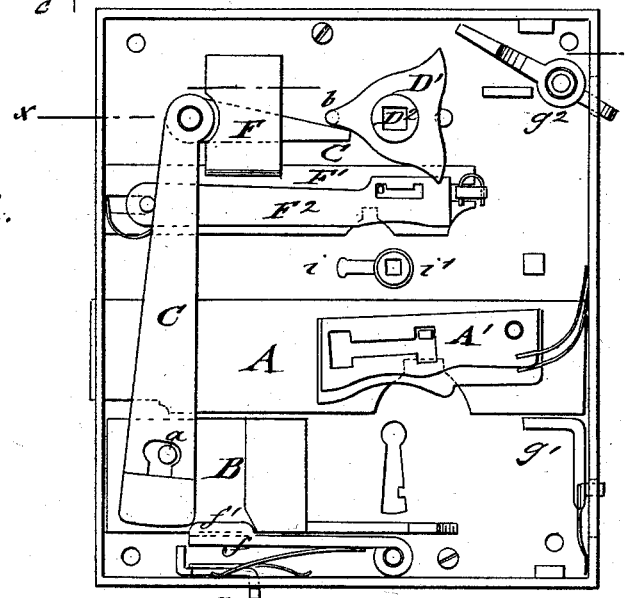
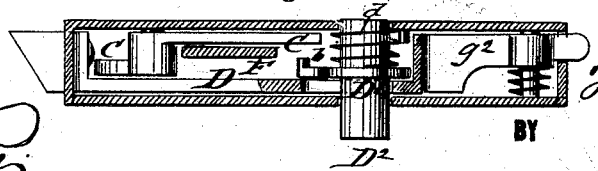


Fig: 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY COCHEMS, OF EASTON, PENNSYLVANIA.

IMPROVEMENT IN KEY-HOLE GUARDS FOR LOCKS.

Specification forming part of Letters Patent No. **168,375**, dated October 5, 1875; application filed July 31, 1875.

To all whom it may concern:

Be it known that I, HENRY COCHEMS, of Easton, in the county of Northampton and State of Pennsylvania, have invented a new and Improved Lock for Doors, &c., of which the following is a specification:

In the accompanying drawing, Figures 1 and 2 represent front views of my improved door-lock with face-plate detached, showing the same, respectively, in closed and open position. Fig. 3 represents a vertical transverse section on line *c c*, Fig. 1; and Fig. 4 a horizontal section of the same on the line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of my invention is to construct a door-lock that may be securely locked from the inside or outside, so as not to be opened by the introduction of skeleton keys or instruments, the safety mechanisms being readily applied and withdrawn for closing and opening the lock.

The invention consists, mainly, of a sliding guard-block that is thrown into position to close the key-holes by a fulcrumed elbow-lever, and the sliding and spring-acted knob-spindle and plate. The spindle is prevented from releasing the guard-block by a safety locking-plate set by a small key from the outside. The knob, latch, bolt, and guard-block are separately locked by additional safety-stops to secure them.

In the drawing, A represents the main bolt of the lock, which is thrown open by a suitable key and corresponding spring-tumblers A′ of any approved shape. Below the main bolt A is guided the sliding guard-block B, of which one part is equal in thickness to the interior width of the lock between the inclosing face-plates, to close simultaneously the outside and inside key-holes, while the remaining part of the guard-block is formed of a plate of lesser thickness. An elbow-lever, C, is applied to a pivot-pin, *a*, of the thinner part of the guard-block, said elbow-lever being fulcrumed below the sliding knob-latch D, and its shorter and tapering arm engaged by the pin *b* of the triangular knob-plate D^1. The knob-spindle D^2 is provided between the knob-plate and face-plate with a spiral spring, *d*, to allow the sliding of the spindle by pressing on the knob, and thereby the engaging of pin *b* with the elbow-lever, so as to throw the shorter arm of the same in upward or downward direction, and thereby the guard forward or back, to close or open the key-holes. The key-hole-closing guard-block, being thus independent of the bolt mechanism or key of the lock, is readily and conveniently operated by means of the knob-spindle. The thinner part of the guard-block B is recessed at the lower edge and acted upon by projection *e* of a pivoted spring-pawl, *f*, the side flange *f′* of which is engaged by the lower end of elbow-lever C, so as to release the pawl from the guard-block and admit its forward or return motion. The guard-block is thereby held in position and prevented from being removed from the key-holes by instruments. To secure the pawl *f* still further, and retain the guard-block positively in closed position from the inside, a sliding stop, *z*, is carried beneath the pawl *f*, so that any detaching of the same from the guard-block is made impossible. The main bolt and knob-latch are also provided with additional safety-stops g^1 and g^2, which may be carried against the same for securing any one of them in locked position from the inside of the room. For the purpose of securing the guard-block with an equal degree of security from the outside, on leaving the room, an additional guard-plate, F, extends under the knob-latch D intermediately between the fulcrum of the elbow-lever and the knob-plate. The guard-plate F is attached to a sliding plate, F^1, with spring-tumbler F^2, that are both operated by an arm, *i*, of a turning hub or cylinder, *i′*, with square central perforation, into which the square end of a small key, G, is inserted through a corresponding hole of the door, and thereby the arm *i* turned to one side or the other, according as plate F^1 and guard-plate F are to be thrown into position to clear the lever-operating pin of the knob-plate, or be placed below the same. When clearing the pin the knob-spindle, and thereby the guard-block, may be actuated, but when carried below the pin the knob-spindle is prevented from sliding and engaging the elbow-lever, so that in this manner the guard-block is positively locked from the outside, the small

key-hole being hardly visible from the outside, being covered by the escutcheon of the key-hole. When the door is to be locked from the outside the bolt is first thrown, the key withdrawn, and the guard-block then moved forward by the knob-spindle to close the key-holes. The guard-plate of the knob-spindle is then carried in position and locked by the small key, and thus the lock rigidly and securely closed, resisting, both from the outside and inside, any attempts at opening, by means of simple and reliable mechanisms.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. As an improvement in door-locks the combination of the sliding and spring-acted knob-spindle, having triangular knob-plate and projecting pin, with the fulcrumed elbow-lever, and the sliding guard-block pivoted thereto, to produce the closing and opening of key-holes by guard-block, substantially as and for the purpose set forth.

2. The combination of the elbow-lever and sliding guard-block, with the pivoted and flanged spring-pawl locking into recesses of the guard-block, to be released by the elbow-lever, substantially as described.

3. The combination of the guard-block and pivoted spring-pawl, with stop sliding below the same to lock guard-block rigidly from the inside, as set forth.

4. The combination of the sliding knob-plate with a sliding guard-plate, F F^1, and tumbler F^2, both operated by the armed hub and key, to lock the said guard-plate positively from the outside, substantially in the manner and for the purpose set forth.

HENRY COCHEMS.

Witnesses:

EDW'N KRUCHS,

HERMAN SHNYDER.