

P. F. KING.
Time-Lock.

No. 216,795.

Patented June 24, 1879.

FIG. 1.

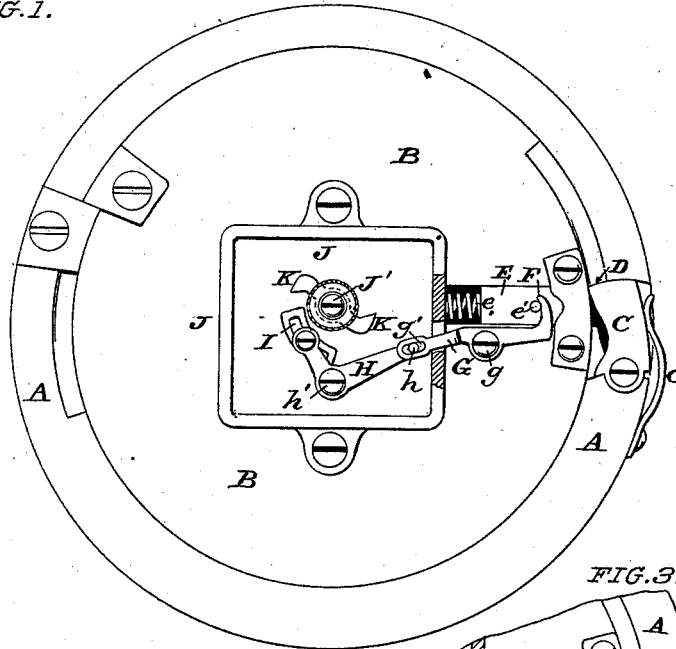


FIG. 2.

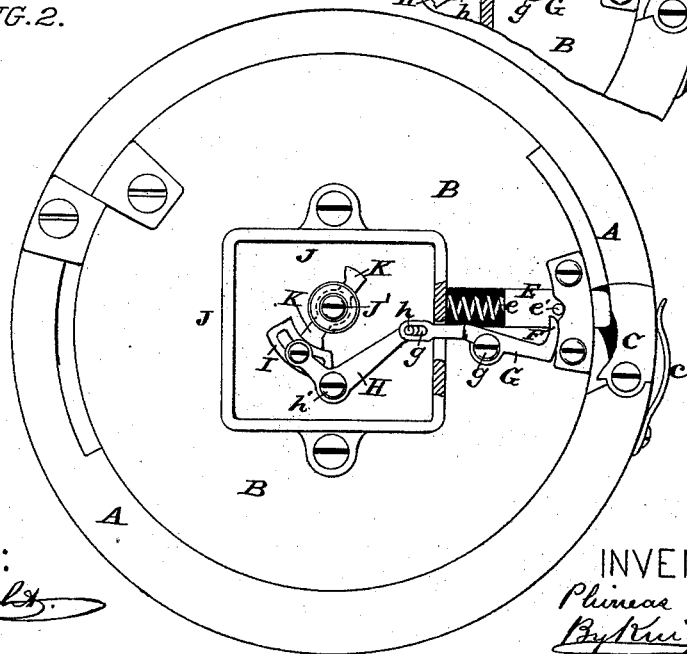
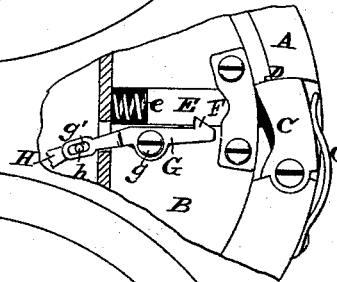


FIG. 3.



ATTEST:

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UNITED STATES PATENT OFFICE.

PHINEAS F. KING, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN TIME-LOCKS.

Specification forming part of Letters Patent No. **216,795**, dated June 24, 1879; application filed February 10, 1879.

To all whom it may concern:

Be it known that I, PHINEAS F. KING, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Locking Devices for Safe-Doors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The object of this invention is to form an improved locking device controlled by a time-lock placed on the inner face of a round screw-door, and having no connection with the outer side of the door. This locking device may be used by itself, or in association with any combination or key lock, for use during business-hours.

The improvement consists in the peculiar arrangement and combination with each other, and with their necessary adjuncts, of a horizontal ram and spring, pivoted latch, and pivoted dog and spring, as hereinafter fully described and claimed.

In the drawings, Figure 1 is an inside elevation of a safe-door closed and locked. Fig. 2 is a similar view of a door closed and unlocked. Fig. 3 is a detail, showing a modification.

A is a circular ring or jamb composing part of the front wall of the safe or vault, and forming the doorway into which the circular door B is screwed. This style of door is described in Letters Patent No. 7,802, reissued July 17, 1877, to which reference is made for detailed explanation.

C is a dog, which is pivoted at the jamb, as shown, and which is forced inward to the door by a spring, *c*, so that its corner enters a recess, D, in the edge of the door when it is closed, and prevents it (the door) from being unscrewed, so that when the parts are in this position the door is effectually locked. (See Figs. 1 and 3.)

E is a ram, which, in Figs. 1 and 3, is shown as held back by a trip latch or catch, F, and which in Fig. 2 is shown as released from the catch. In the latter case it will be seen that it is projected outward by the spring *e*, and forces back the dog C from its engagement

with the door, so that the door is unlocked and may be unscrewed.

The catch F may be made to engage a pin, *e'*, as in Figs. 1 and 2, or may be made to engage in a notch, as in Fig. 3.

The catch F is upon a lever, G, hung at *g*, and having the end opposite to the catch slotted at *g'*, to receive the stud *h* upon one end of the lifting-lever H. The lifting-lever is hung upon a pin, *h'*. In its preferred form the lifting-lever H carries an adjustable segment, I, similar to that described (under letter G,) in Letters Patent No. 201,535, where its construction and connection are described.

J is the time-lock or clock-movement, and J' is a shaft turned by the clock-movement, and carrying hands or wipers K, which, at intervals of twenty-four hours, operate upon the segment I and lift up the other end of the lifting-lever H. This movement lifts up the slotted end of the catch-lever G, and draws down the catch F from its engagement with the ram E, (permitting the spring *e* to force out the ram E and unlock the door, as before explained.)

It will be understood that the segment I is arranged upon the lever so that the catch will be disengaged from the ram at the proper time, and then the door cannot be again locked by the dog C until the ram is forced back and again engaged upon the catch F. This it is proposed to do by hand, and when the door is open; and after this has been done the first time the door is closed and screwed into place the dog falls into the notch D, and the door is locked until the time-movement again disengages the catch F from the ram E.

It is not a matter of necessity that the segment I should be made adjustable, for any suitable projection of the lever H for the hands K to act upon would answer the purpose, and the hands may be made adjustable on the time-shaft J', to cause the unlocking at the proper hour.

I claim as my invention—

1. The combination of a horizontal ram, E, placed upon a round screw-door, and provided with spring *e*, with the dog C, having spring

e, and pivoted upon the jamb A, as and for the purpose herein described.

2. The pivoted dog C, horizontal ram E, and pivoted latch F G, in combination with a time-lock on a round screw-door of a safe, as and for the purpose set forth.

3. A time-lock attached to the inside of a round screw-door of a safe, independent of combination or key lock, or spindle or shaft

through door or safe-body, in combination with the horizontal ram E, pivoted dog C, and pivoted latch F G, as herein specified, and for the purpose set forth.

PHINEAS F. KING.

Witnesses:

SAML. KNIGHT,
GEO. H. KNIGHT.