

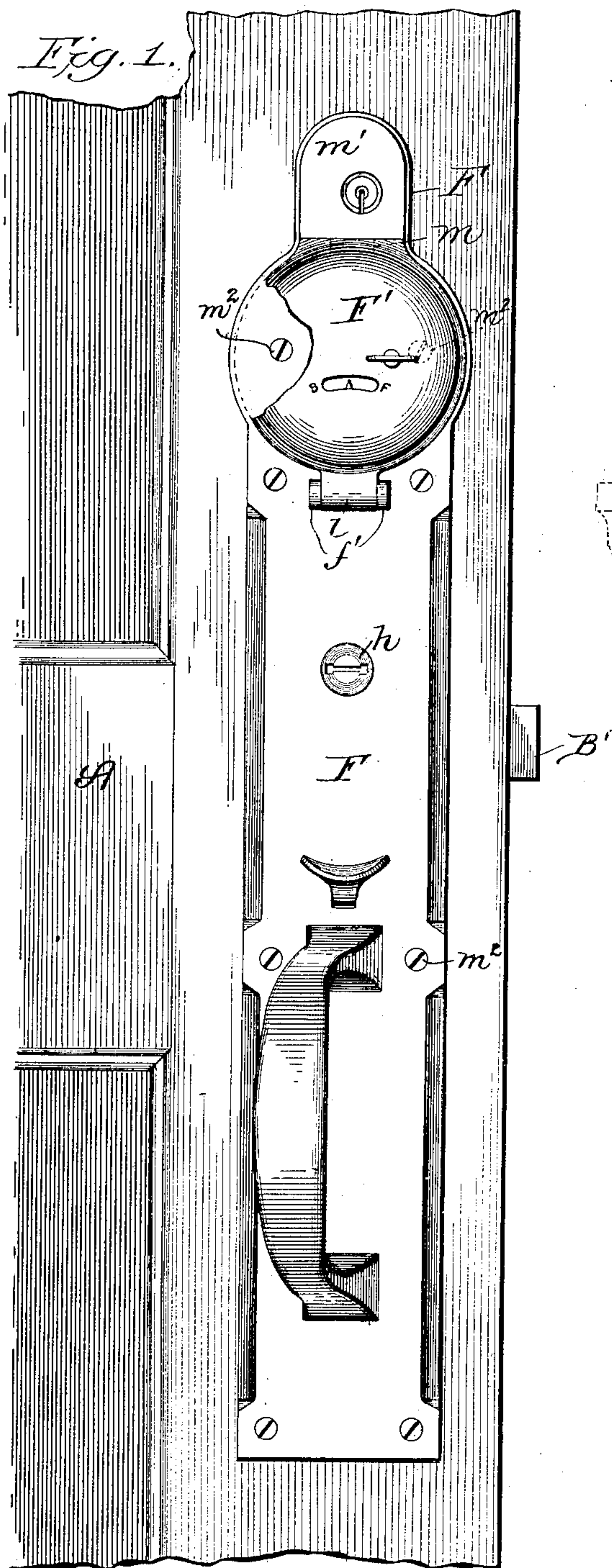
A. B. HAYDEN.

TIME RECORDING LOCK.

APPLICATION FILED MAY 9, 1902.

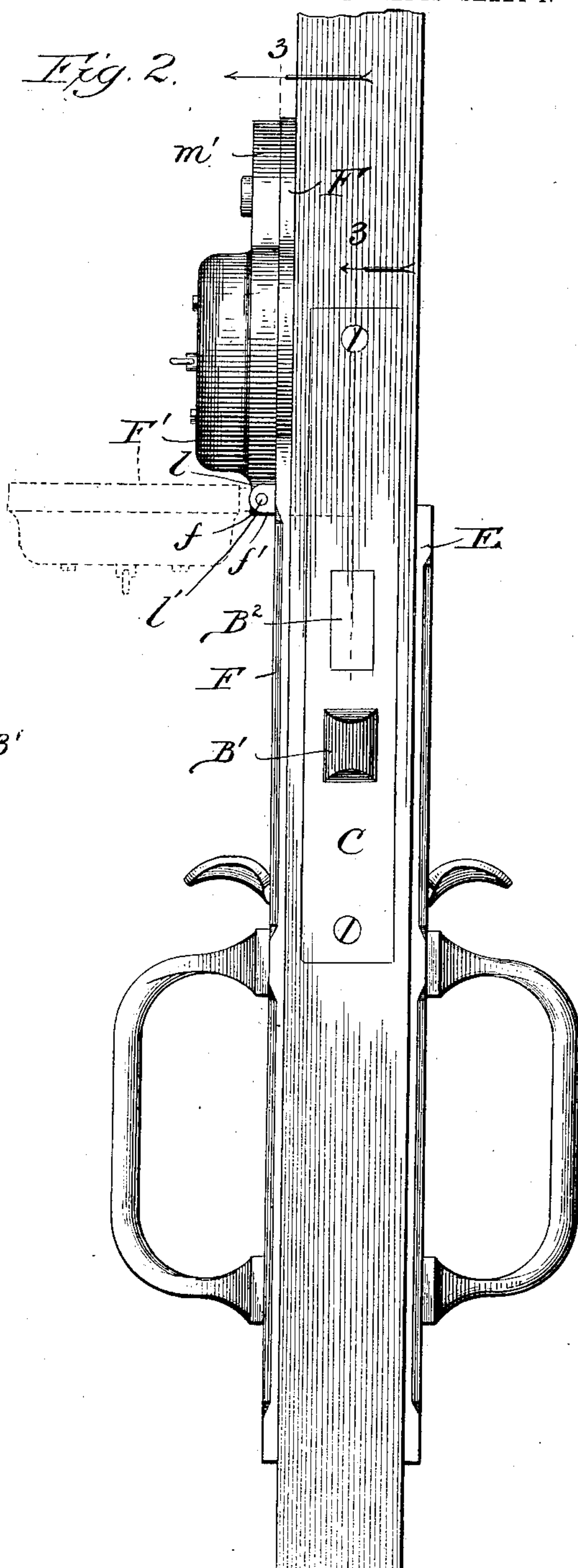
NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:

Geo. C. Dawson.
John Enders Jr.



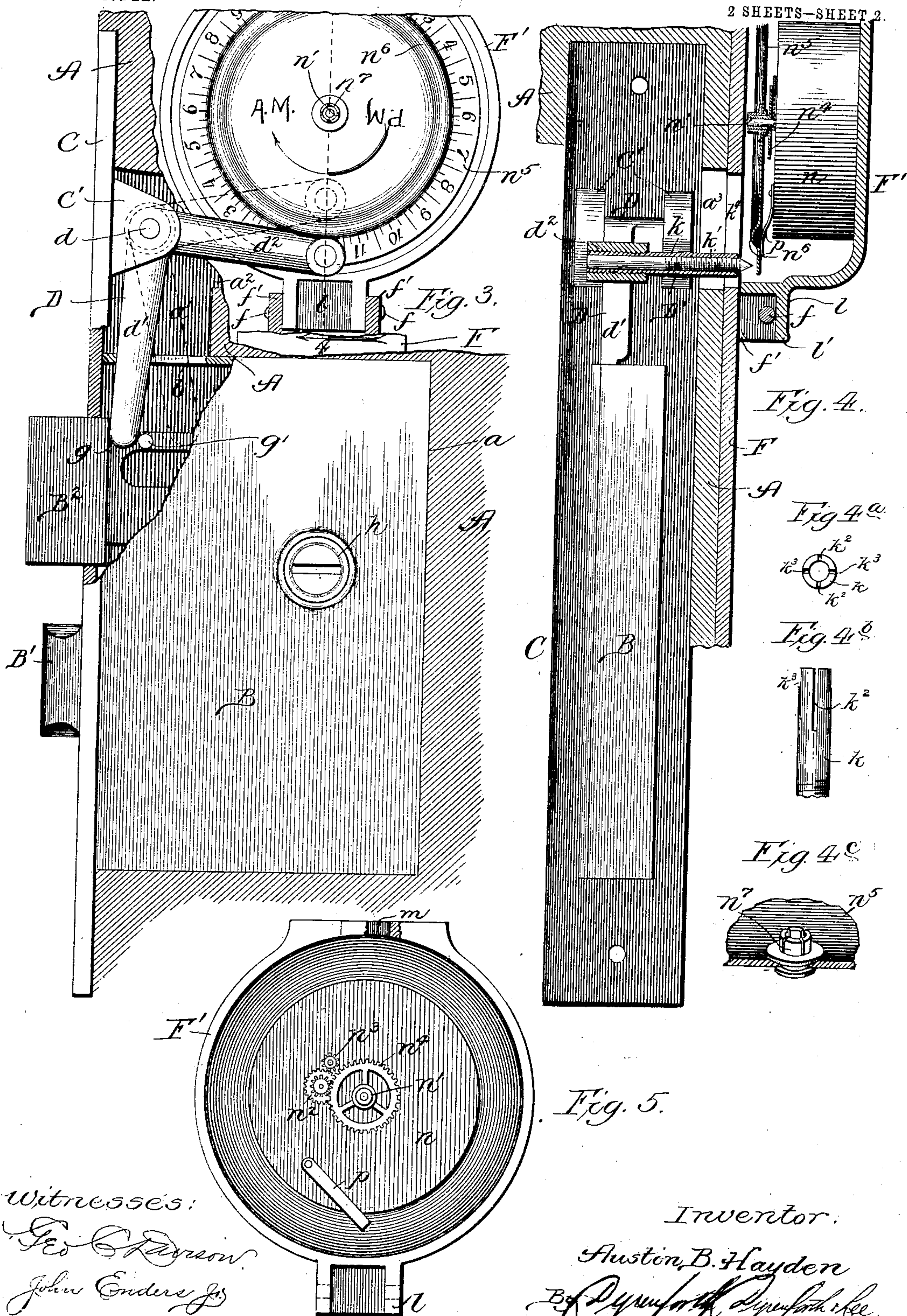
Inventor:

Austin B. Hayden,
B. G. Wyndham, Wyndham & Lee,
Att'ys.

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NO MODEL.

2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

AUSTIN B. HAYDEN, OF CHICAGO, ILLINOIS, ASSIGNOR TO HAYDEN MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

TIME-RECORDING LOCK.

SPECIFICATION forming part of Letters Patent No. 734,174, dated July 21, 1903.

Application filed May 9, 1902. Serial No. 106,605. (No model.)

To all whom it may concern:

Be it known that I, AUSTIN B. HAYDEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Time-Recording Locks, of which the following is a specification.

My invention relates particularly to means for recording or registering the times of actuations of locking-bolts; and the primary object of the invention is to provide means whereby the exact times of locking and unlocking a building or compartment can be automatically registered, thereby to furnish evidence of whether the door is locked and unlocked at proper times only. In the present application my invention is applied directly to a door, virtually forming part of the complete lock. In my application, Serial No. 106,606, of even date herewith the invention is shown applied to a door-jamb, being there adapted to use with any ordinary lock which may be in use on the door.

The invention is illustrated in preferred form in the accompanying drawings, in which—

Figure 1 represents a view in side elevation of a fragment of a door equipped with my improved bolt-actuated lock-register; Fig. 2, a view in edge elevation of the same; Fig. 3, a broken sectional view taken as indicated at the lines 3-3 of Fig. 2; Fig. 4, a broken section taken as indicated at line 4 of Fig. 3; Figs. 4^a and 4^b, detail views of a pencil-holder employed; Fig. 4^c, a broken perspective view of a dial, and Fig. 5 an inner face view of the clock employed with the dial removed.

The preferred construction is as follows: A represents a portion of a door having a casing-receiving mortise *a*, Fig. 3, in its edge, a lever-receiving recess *a'*, communicating with the upper outer portion of the mortise *a*, an inwardly-extending recess *a''*, communicating with the upper portion of the recess *a'*, and a laterally-extending pencil-receiving perforation *a'''*, communicating with the inner portion of the recess *a''*; B, a lock-casing equipped with a spring-latch B' and a bolt B² and provided with suitable means for controlling and actuating said latch and bolt, the casing being of the ordinary form, but provided with a slot *b* in its upper wall; C,

an edge door-plate or bolt-plate equipped at the upper portion of its inner surface with a bracket C'; D, a bolt-actuated bell-crank lever pivoted at *d* on the bracket C' and having a downwardly-extending arm *d'* reaching through the slot *b* and an inwardly-extending arm *d''*; D', a marking device carried by the arm *d''*; E, a door plate or escutcheon of common form applied to one (inner) side of the door; F, a combined escutcheon and clock-carrying plate attached to the opposite (inner) side of the door, and F' a clock pivotally attached at *f* to lugs *f'* on the plate F.

The bolt B² is of the usual form, having a head affording a shoulder *g*, between which and a pin *g'* the lower end of the arm *d'* is loosely confined, so that the lever D is positively actuated in two directions when the bolt is reciprocated. The lock is provided with a key-opening *h*, whereat a key can be inserted to operate the bolt. The dotted lines in Fig. 3 indicate the position of the lever D when the bolt is retracted.

As indicated in Figs. 4, 4^a, and 4^b, the marking device D' comprises a sleeve *k*, having external threaded connection at one end with a perforation in the extremity of the arm *d''* and internal threads for receiving a threaded slate-pencil *k'*. The sleeve has slots *k''* to render it springy where it connects with the pencil and depressions *k'''* on its free end for receiving a screw-driver. The pencil projects through the slot *a'''* and a slot *k''''* in the plate F.

The plate F serves as a fixed inner wall of the clock-casing, as shown. The main portion of the casing is provided at its base with a lug *l*, which is pivoted between the lugs *f'* and affords a shoulder *l'*, which serves in the dotted position of Fig. 2 to engage the plate F and support the clock in a horizontal position. Also the casing is provided at its upper portion with a slot *m*, which receives the bolt of a lock *m'*. The plate F is secured to the door by screws *m''*, some of which are concealed beneath the main casing of the clock.

The clock comprises suitable works *n*, having an hour-arbor *n'*, which rotates once in twenty-four hours. The usual clock-train is employed, except that a speed-reducing pinion and wheel *n''*, Fig. 5, is introduced between the pinion *n'''* and the wheel *n''''*, where-

as the wheel n^4 is ordinarily driven directly by the pinion n^3 . The clock is provided with a dial n^5 , having an annular rib n^6 on its face, which is turned toward the door. The dial bears two sets of numbers, running from "1" to "12," and is marked with "A. M." and "P. M." characters. The dial is rigidly attached to a split ring or sleeve n^7 , which slips upon and firmly clasps the arbor n^1 , and the convex surface of the annular rib n^6 is suitably coated to receive a slate-pencil mark, which can be erased readily with a dampened sponge. A spring p serves as a bearing or rest for the dial when the latter is pressed upon by the pencil.

The operation will be understood readily from the foregoing detailed description. The parts are assembled in a manner which readily will be understood, it being noted, however, that the pencil-holder k is screwed into place after the lever D is in position and before the main casing of the clock is closed and locked. The dial rotates once in twenty-four hours, and whenever the bolt B^2 is actuated the bell-crank lever is oscillated, causing the pencil to make a mark across that portion of the rib n^6 of the dial which chances to be in the path of the pencil. The dial is so arranged that the time is indicated at the path of the pencil, so that the time of actuation appears in alinement with the mark made by the pencil. The record for each day may be examined at a certain hour and the marks erased with a damp sponge or cloth, the dial being capable of use for an indefinite period. The key which serves to open the clock being in the possession of the one in authority and some of the attaching-screws of the plate F being inaccessible without first opening the clock, tampering with the mechanism is prevented.

Obviously any suitable dial or equivalent means for receiving the pencil-marks may be employed, and any suitable marking, recording, or indenting device may be employed, the gist of the invention lying in the manual actuation of the marking device through the medium of the lock. Obviously, also, it is within the spirit of my invention to employ the spring-latch as a locking-bolt and actuate the marking device from said latch. Therefore the term "bolt" where employed in the appended claims is to be given a wide enough signification to include the latch. Moreover, the dial and marking device may be located in any desired position without departure from my invention.

Changes in details of construction within the spirit of my invention may be made. Hence no undue limitations should be understood from the foregoing detailed description.

What I regard as new, and desire to secure by Letters Patent, is—

1. In a time-recording lock, the combination of a clock-driven dial, a lock having a bolt, a marking device, and mechanical motion-transmitting connection between said

bolt and marking device, whereby said marking device is actuated through the medium of said bolt.

2. In a time-recording lock, the combination of a suitably-actuated dial, a marking device, a lock provided with a bolt, and mechanical connections between said bolt and marking device whereby the marking device is actuated positively in two directions through the medium of said bolt when the bolt is reciprocated.

3. In means of the character set forth, the combination of a clock-driven dial provided with an annular rib, a marking device having a point movable transversely of said rib, and means for actuating said marking device, for the purpose set forth.

4. In means of the character described, the combination of a clock having an arbor, a dial provided with a split-ring center fitting on said arbor, a marking device, and means for actuating said marking device, for the purpose set forth.

5. In means of the character described, the combination of a door, a lock applied thereto having a locking-bolt, a clock with a suitable dial applied to said door at said lock, and a marking device having a laterally-projecting point coacting with said dial and actuated normally from said bolt.

6. In means of the character described, the combination of a door, a lock applied thereto, an escutcheon or door-plate, a clock having a dial, and supported by said escutcheon, and a marking device coacting with said dial and actuated from said lock, for the purpose set forth.

7. In means of the character described, the combination of a door, a lock applied thereto, an escutcheon or door-plate, a clock having a dial, and pivotally attached to said escutcheon, a lock serving to secure said clock in the closed position, and a marking device coacting with said dial and actuated from said lock, for the purpose set forth.

8. In means of the character described, the combination of a door, a lock applied thereto, an escutcheon or door-plate, a clock having a dial, and pivotally attached to said escutcheon, a lock serving to secure said clock in a closed position, a marking device coacting with said dial and actuated from said lock, and attaching means for said escutcheon removable only after opening the clock, for the purpose set forth.

9. In means of the character described, the combination of a door, a clock supported at one side of the door and having a dial at the side adjacent to said door, a lock, and a marking device having a laterally-projecting point coacting with said dial and actuated from said lock, for the purpose set forth.

10. In means of the character described, the combination of a door, a clock supported at one side of the door and having a dial at its inner side, a lock provided with a reciprocable bolt, a bell-crank lever located in a recess

in said door and actuated by said bolt, and a laterally-projecting marking device carried by said lever.

11. The combination of a door recessed to
5 receive a lever, and having a lateral opening,
a lock, a lever movable in said recess and actuated from said lock, a pencil adjustably
connected with said lever and projecting
through said opening, and a clock having a
10 dial located to receive marks from said pencil, for the purpose set forth.

12. As a new article of manufacture, a door-escutcheon provided with a key-opening and with clock-attaching means.

13. As a new article of manufacture, a door-
15 escutcheon provided with a key-opening and with clock-attaching means and perforated to receive a marking-point.

AUSTIN B. HAYDEN.

In presence of—

ALBERT D. BACCI,
M. S. MACKENZIE.