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1,452,846

G. PULLMAN

TIME RECORDER FOR LOCKS

Filed Dec. 21, 1921

2 Sheets-Sheet 1

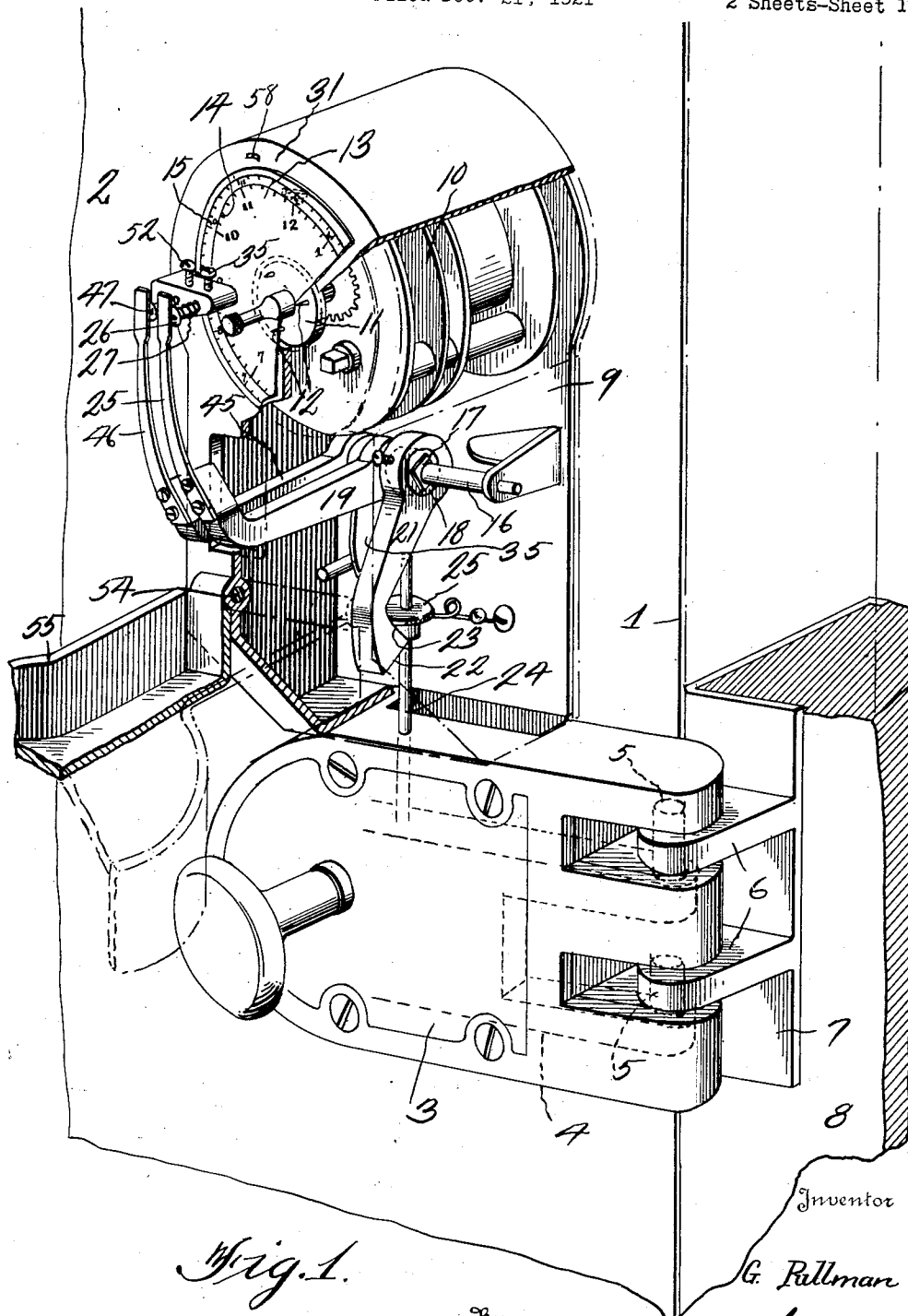


Fig. 1.

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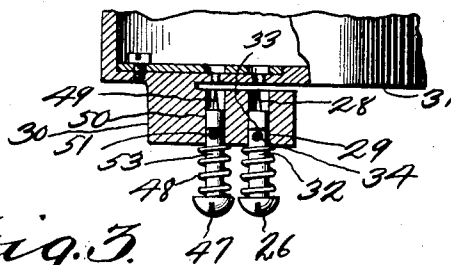
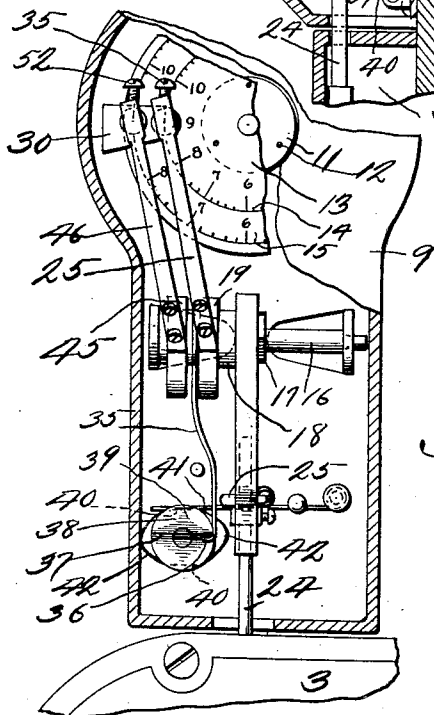
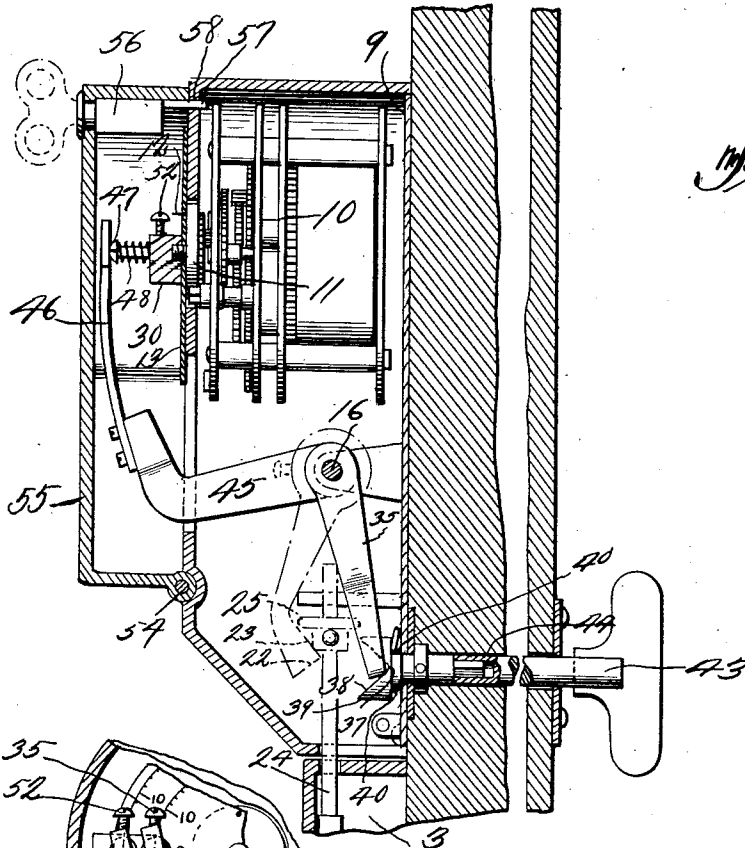
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TIME RECORDER FOR LOCKS

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

GEORGE PULLMAN, OF NEW YORK, N. Y.

TIME RECORDER FOR LOCKS.

Application filed December 21, 1921. Serial No. 524,049.

To all whom it may concern:

Be it known that I, GEORGE PULLMAN, a citizen of the United States, residing at New York city, in the county of New York, State of New York, have invented a new and useful Time Recorder for Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to time recorders and has for its object to provide in combination with a lock having a movable bolt therein and carried on a door, a time recording device actuated by said bolt when the bolt is actuated for puncturing a time scale on a clock controlled disc, thereby recording the time the lock was unlocked. Also to provide means whereby the watchman upon making his rounds, may insert a key in the door, and actuate mechanism, which will cause a second scale carried by the disc to be penetrated thereby recording the time the watchman made his rounds.

A further object is to provide adjacent a lock, a time recording device, said time recording device comprising a rotatable disc having spaced time scales thereon, said disc being continually rotated by a time device, and to provide bell crank levers pivotally mounted and having one of their arms registering with disc puncturing pins, whereby upon a rocking of the bell crank levers the scale of the time disc will be punctured. One of the bell crank levers is actuated by a movement of the unlocking mechanism within the lock and the other bell crank lever being provided with a lug disposed in a V-shaped notch of a rotatable member, which when rotated actuates the bell crank lever. Also to provide means comprising a spring whereby the rotatable notched member will be held and moved to a position where its notch is in the same plane as the lug of the bell crank.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawings, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed

without departing from the spirit of the invention.

In the drawings:—

Figure 1 is a perspective view of the time lock parts being broken away to better show the structure and showing the device applied to a door adjacent the lock.

Figure 2 is a vertical sectional view through the time recording device.

Figure 3 is a front elevation of a portion of the time recording device, part of the casing being broken away to show the structure.

Figure 4 is a horizontal sectional view through a portion of the casing showing the time disc puncturing devices.

Referring to the drawings, the numeral 1 designates the free end of a conventional form of door 2, and secured to said door adjacent the free edge 1 is a conventional form of lock 3 having a vertically movable bolt 4 therein, which is provided with lugs 5 which cooperate with apertured lugs carried by a keeper plate 7 which is secured to the door frame 8. Secured to the door 2 adjacent the lock 3 is a casing 9, in which casing is disposed a conventional form of clock 10 preferably round as shown, which clock rotates a disc 11 having a plurality of spaced prongs 12, on which a paper time disc 13 is disposed and is adapted to be rotated according to the time of the day. The disc 13 is provided with a time scale 14, which scale is punctured or penetrated when the lock is operated, thereby recording the exact time the door 2 is opened or the lock unlocked. The other scale 15 is adapted to be pierced for recording the exact time a watchman inspected the door or the premises.

Rockably mounted in the casing 9 adjacent the clock 10 and below the clock is a shaft 16 on the rectangular portion 17 of which the sleeve 18 carried by the arm 19 is mounted, and secured on the rectangular shaped portion 17 of the shaft 16 by means of a set screw 20 is a downwardly extending arm 21. The lower end of the arm 21 is disposed adjacent the lock 3 and provided with angularly disposed cam surfaces 22 and 23. Extending upwardly from the lock 3 and vertically moved when the bolt 4 of the lock is moved is a vertically disposed shaft 24 which is provided with a disc shaped member 25, which

member when the shaft 24 is moved downwardly engages the cam surface 23 and forces the arm 21 outwardly thereby rocking the shaft 16. When the shaft 16 is rocked as set forth above the arm 19 moves upwardly and its flexible finger 25 moves inwardly thereby forcing the piercing pin 26 inwardly against the action of the coiled spring 27, and consequently punching the time scale 14 at the graduation which is in registration with the piercing point 28 of the pin 26. The pin 26 is slidably mounted in an aperture 29 of a lug 30 carried by the casing and between which lug and the face 31 of the casing 9, the side of the disc 13 is disposed. The upper side 32 of the pin 26 is flattened thereby forming the shoulder 33 which is engaged by the end 34 of the screw 35, which screw limits the outward movement of the pin. It will be seen that by providing flexible arm 25, that any variation in the movement of the end thereof will be taken up in the flexing action thereof and that the degree of accuracy in the positioning of the disc 25 in relation to the cam surfaces 22 and 23 will to a certain extent be immaterial. It will be noted that the pin 26 will be forced inwardly every time the lock bolt 4 is actuated, therefore the owner of the store or other place where the device is used will know the exact time the door was unlocked or locked.

In many cities patrol systems are maintained, that is watchmen patrol sections of the city and examine the premises, also try the doors. Under present conditions the owner of the property has no way of knowing how many rounds the patrolman makes or the time the patrolman inspects the premises. To overcome this difficulty and provide means whereby the time of inspection of the property by the patrolman is recorded the shaft 16 is provided with a downwardly extending arm 35, the lower end of which terminates in a right angledly disposed arm 36. The arm 36 engages in the bottom 37 of a V-shaped notch 38 in a rotatable cylindrical member 39. The rotatable member 39 is provided with flattened sides 40 which are engaged by the leaf spring 41 and are prevented from assuming any position other than a position where the bottom 37 of the V-shaped notch 38 will be in substantial parallel relation with the arm 36 and to further insure the above the member 39 is provided with cams 42. When the member 39 is rotated through the medium of the key 43 which is inserted in the key hole 44 and is rotated by the watchman, the arm 35 is forced outwardly, thereby rocking the arm 45 carried thereby upwardly and consequently moving its spring arm 46 inwardly and forcing the pin 47 inwardly against the action of the spring 48, thereby causing the piercing point 49 of the pin 47 to be forced inwardly. The pin 47 is disposed in an

aperture 50 of the lug 30 and is held against outward displacement by the lower end 51 of the screw 52 being disposed within a recess formed by the flattened portion 53 of the pin 47.

From the above it will be seen that a device is provided in combination with a lock, whereby the time the lock is opened or closed will be accurately recorded, and one wherein the time of inspection of the door or premises by patrolmen will also be accurately recorded, thereby providing an accurate record for the owner of the property for maintaining a check on employees and others.

Hingedly connected to the casing 9 as at 54 is a cover 55, which cover houses the mechanism and is provided with a conventional form of lock 56 having a detent 57 cooperating with an aperture 58 in the casing 9, by means of which lock the tampering with the mechanism by unauthorized persons will be obviated. The invention having been set forth what is claimed as new and useful is:—

1. A time recording device located adjacent a lock, said time recording device comprising a clock rotated disc having time scales thereon, lever means actuated by the lock upon an operation of the lock whereby the time of actuation of the lock will be recorded on one of the scales of the disc and key actuated lever means whereby the time may be recorded on one of the scales independent of the lock actuated means, and without actuating the locks.

2. The combination with a lock disposed on a door, of a time recording device carried by the door adjacent the lock, said time recording device comprising a clock, a time disc having scales thereon and rotated by the clock, piercing pins in registration with the scales and normally held outwardly by springs, independent bell crank levers pivoted adjacent the underside of the clock, said bell crank levers being provided with flexible arms overlying the rear side of the clock and having their ends registering with the piercing pins, means whereby upon a lock actuation, one of said levers will be rocked and the disc pierced and key actuated means cooperating with the other bell crank lever and forming means whereby said last named bell crank lever may be rocked for piercing the disc independently of the lock actuated bell crank and without actuating the lock.

3. The combination with a time recording device disposed adjacent a lock and comprising a clock rotating a disc having a time scale thereon, said scale having in registration therewith piercing members normally held out of engagement therewith by springs, of bell crank levers pivoted adjacent the clock, leaf spring arms carried by one of the arms of said bell crank levers and register-

ing with one of the piercing members, an
arm of one of said bell crank levers being
actuated upon an actuation of the lock, an
arm of the other bell crank lever having a
5 lug angularly disposed, said lug being dis-
posed in the bottom of a transversely V-
shaped slot of a rotatable member, means
whereby said rotatable member may be ro-
tated for rocking the bell crank lever inde-

pendently of the lock and without actuating 10
the lock.

In testimony whereof I have signed my
name to this specification in the presence
of two subscribing witnesses.

GEORGE PULLMAN.

Witnesses:

JAMES S. ROWNAN,
J. C. WATSON.