A. D. HEATH.

LOCK.

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1,247,532.

Patented Nov. 20, 1917.

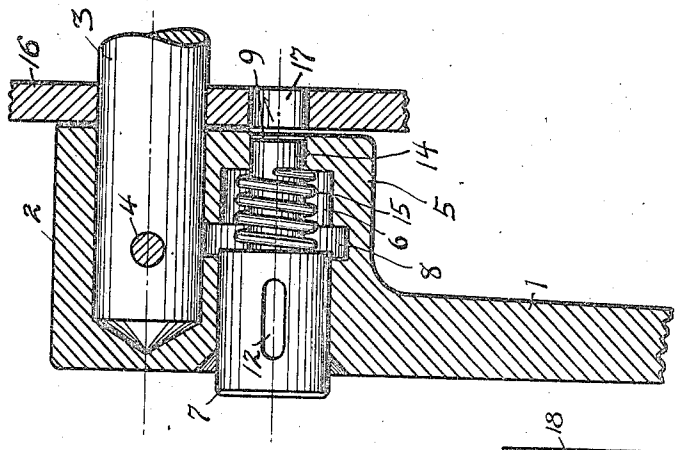


Fig. 3.

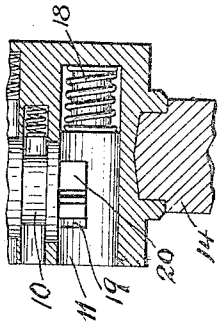


Fig. 4.

Fig. 2.

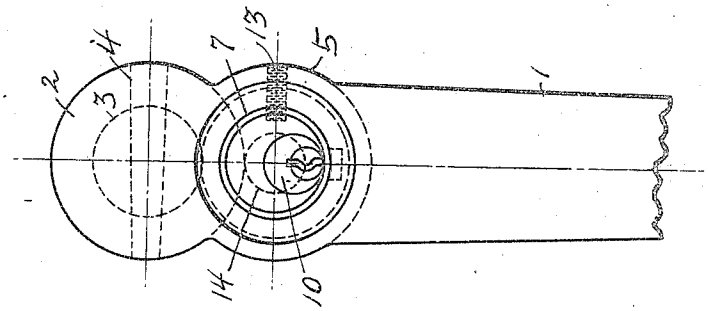


Fig. 1.

WITNESSES:

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LOCK.

1,247,532. Specification of Letters Patent. Patented Nov. 20, 1917.

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To all whom it may concern:

Be it known that I, ALMON D. HEATH, a citizen of the United States of America, and resident of Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Locks, of which the following is a specification.

This invention relates to improvements in locking mechanisms, and the object thereof is to afford a locating device for securing actuating cranks, levers, etc., from unauthorized operation. A further object of the invention is to so construct the device that the locking means may be put into effect by an operation of extreme simplicity.

The objects of the invention are accomplished by the construction illustrated in the accompanying drawings in which:

Figure 1 is a front elevation of a portion of an operating crank having the device applied thereto;

Fig. 2 is an elevation of the same in a plane at right angles thereto and with a portion thereof cut away and in section;

Fig. 3 is an elevation similar to Fig. 2 with a greater portion shown in section, and Fig. 4 is a detail of the lock barrel in section showing the spring-pressed lock-bolt engaged by the lock.

Similar characters of reference indicate corresponding parts throughout the several views and referring now to the same:

1 is an operating crank having a head (2) that is secured fixedly to a drive-shaft (3) by means of a pin (4). The head has integral therewith a boss (5) having therein a chamber (6) in which is mounted a longitudinally movable lock-barrel (7). Contiguous with the chamber (6) is an annular recess (8), and an opening (9) extends from the chamber through the inner end of the boss in line with the center thereof.

The barrel (7) contains a lock (10) of the cylindrical type having a lock-bolt (11) that is adapted to be projected from the side of the barrel in which it is contained. The barrel containing the lock has in its side an elongated slot (12), and a screw (13) extends through the side of the boss and projects into the slot to prevent the barrel from turning within the chamber but admits, owing to the slot, longitudinal movement therein of the barrel. From the inner end of the barrel extends a stud (14) adapted to fit loosely in the opening (9) in the boss, and a compression spring (15) placed upon the stud within the chamber and between the barrel and adjacent end wall of the chamber, tends to hold the barrel in its outermost position.

Apparatus with which the present invention is intended for use, such as a dispensing pump or similar apparatus has a housing (16) through which the drive-shaft (3) projects sufficiently for the attachment of the crank, and in the housing is made an opening (17) in line with the opening (9) in the boss that is immediately adjacent thereto, so that the stud (14) when pressed to its innermost position will extend into the opening (17) thus preventing the crank from being turned.

The lock-bolt 11 is pressed outwardly by a spring 18, and in a slot 19 made in the lock-bolt a projection 20 on the end of the lock 10 extends and moves the lock-bolt inwardly to unlocked position when the lock is turned. When the lock-bolt is thus actuated its outer end is withdrawn from the recess 8 thus admitting the outward movement of the barrel 7.

In the operation of the device the crank is locked by simply pressing the barrel (7) inwardly so as to move the end of the stud into the opening (17) in the housing. As the barrel is pressed inwardly in the chamber the spring (15) is compressed, and the bolt (11) of the lock snaps into the recess and prevents the barrel from retracting. The crank is then securely locked from turning. The crank is released from its locked position by introducing the key into the lock and turning it so as to disengage the bolt from the recess, thus permitting the spring to move the barrel outwardly which has the effect of withdrawing the stud from the opening in the housing, thereby releasing the crank from its locked position.

What I claim is:—

1. In combination with an apparatus having a housing and rotatable drive-shaft, a crank, the head of which has a contiguous chambered boss, the crank being fixed upon the end of the drive-shaft and the boss having an internal recess formed therein, there being also registering openings in the boss and housing, a longitudinally movable barrel arranged in the chamber of the boss and

having a stud adapted to be projected through said openings, a compression spring arranged within the chamber and acting against the inner end of the barrel and adjacent end wall of the chamber, and a spring lock contained within the barrel, the bolt of which is adapted to engage in the recess in the boss and hold the barrel in its innermost position.

2. In a device of the class described, a crank having a chambered boss with an internal recess formed therein contiguous with the chamber, there being an opening through the inner end of the boss leading from the chamber, a spring locking device longitudinally movable in the chamber of the boss, the bolt of which is adapted to lockingly engage in the recess, a spring within the chamber acting against the locking device to move it from locked position, a stud in connection with the locking device extending through the opening in the end of the boss, and means for limiting the longitudinal movement of the locking device.

3. In a device of the class described, a stationary member; a crank mounted in connection therewith having a chamber therein parallel with and eccentric of its axis, there being a recess contiguous with the chamber and openings in the stationary member and crank in alinement with the chamber, a locking device mounted in the chamber, having longitudinal movement therein and adapted to have locking engagement in said recess, and having also a stud adapted to be projected through the openings in the crank and stationary member when said openings register with each other; and a spring within the chamber tending to hold the locking device from locked position.

4. In a device of the class described, a stationary member; a chambered rotating member in juxtaposition with the stationary member, there being an internal recess contiguous with its chamber, and openings in said members in alinement with said chamber; and a spring-pressed longitudinally movable locking device in the chamber adapted to have locking engagement in the recess and to extend through said openings.

5. In a device of the class described, a chambered movable member having an internal recess contiguous with the chamber; a spring pressed locking member longitudinally movable within the chamber and adapted to lockingly engage in the recess; and having also a stud adapted to extend beyond the movable member when the locking member engages the recess; and a stationary member recessed to receive the stud.

In testimony whereof I affix my signature, in presence of two witnesses.

ALMON D. HEATH.

Witnesses:
L. E. BAKER,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."