D. E. HUNTER.

LOCK.

APPLICATION FILED JULY 21, 1915.

1,178,724.

Patented Apr. 11, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

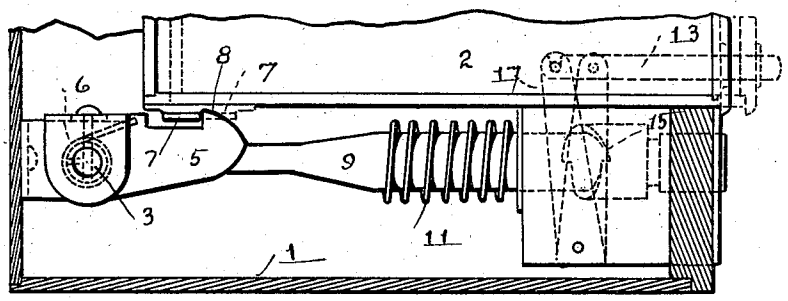
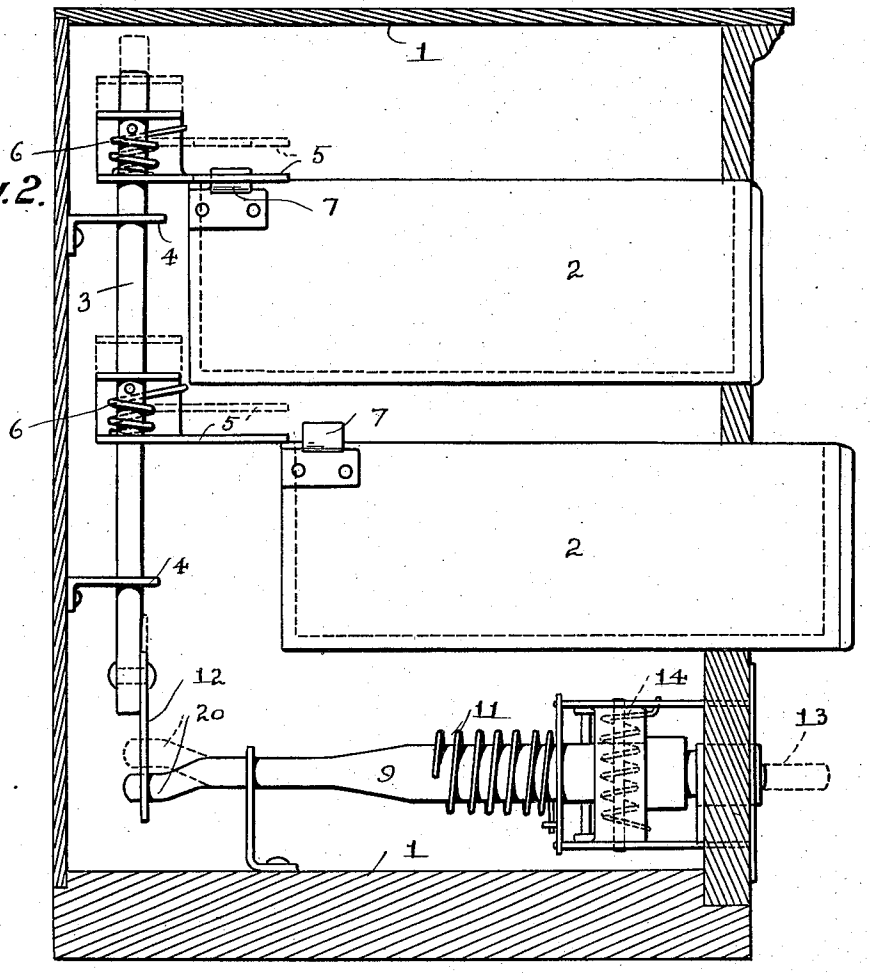


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 6.

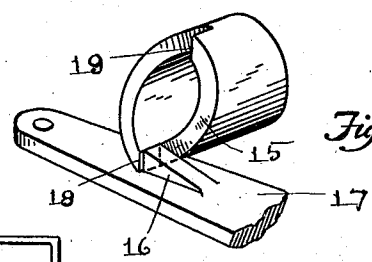


Fig. 5.

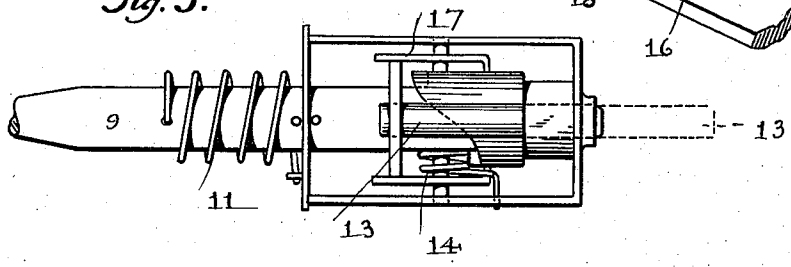
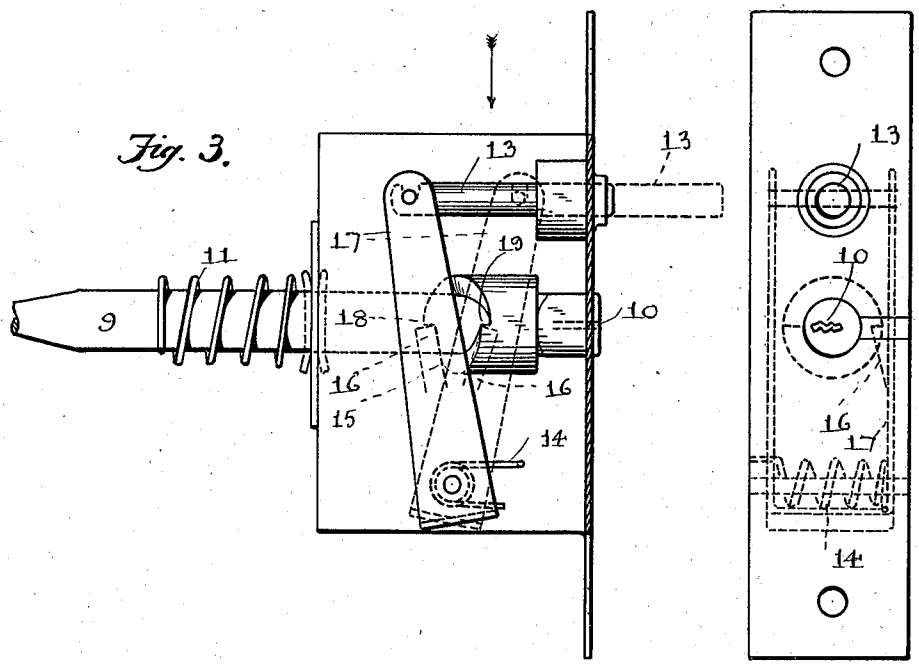


Fig. 4

Fig. 3.



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LOCK.

1,178,724. Specification of Letters Patent. Patented Apr. 11, 1916.

Application filed July 21, 1915. Serial No. 41,044.

To all whom it may concern:

Be it known that I, DAVID E. HUNTER, a citizen of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented new and useful Improvements in Locks, of which the following is a specification.

The present invention relates to locks; and its object is to provide an improved lock and an improved device for indicating whether the same is locked or unlocked. This and any other objects appearing hereinafter are attained by, and the invention finds preferable embodiment in, the structures hereinafter described and illustrated by the drawings, in which:—

Figure 1 is a fragmentary top plan view of a cabinet drawer, and casing (shown in horizontal section), to which my lock is applied; Fig. 2 is a side view of two such drawers, and a casing (shown in vertical section), with my lock applied thereto; Fig. 3 is a plan view of parts of my lock; Fig. 4 is a front view thereof; Fig. 5 is a side view of said parts viewed in the direction of the arrow in Fig. 3; Fig. 6 is a view in perspective of a helical cam and its rider.

In the embodiment of my invention chosen for illustration by the drawings and detailed description herein a suitable casing 1 is provided with opening and closing members, of any desired form, as the slidable cabinet drawers 2. A bolt 3 vertically slidable in guides 4 in the back of the casing, is provided with catches 5 movable thereon transversely to the bolt's movement. These catches are spring-pressed at 6 so as to automatically holdingly engage with the drawers, (as with their keepers on "strikes" 7.) in the closed position of the drawers. The catches have inclined faces 8 wherewith the drawers (or their said keepers) in their closing movement, (in the lowered position of the bolt shown in solid lines in the views) are adapted to engage to move the catches against their springs until the drawers are closed, whereupon the catches are pressed by their springs into their holding or locking engagement. Unlocking means for moving the bolt to carry the catches out of their said holding engagement is provided. In the views, such means comprises a rotatable rod 9 adapted to be turned in a contra-clockwise direction by a key inserted into the keyhole 10, to rotate the rod a half turn and against the pressure of the spring 11. When the rod is thus turned from the locked position of the mechanism shown in solid lines in the views, the bolt 3 is raised by the rod's crank 20 and by the link 12 to the position shown in dotted lines in Fig. 2, carrying the catches upwardly out of engagement with the drawers' keepers, whereupon the drawers may be drawn out.

An indicator is provided to show whether or not the drawers are holdingly engaged by the catches. In the views, this indicator comprises a slidable plunger 13 protruding through the front of the casing, and moved outwardly by the spring 14 when such action is permitted by the unlocking rotation of the rod 9 on whose helically-disposed cam 15 travels the cam rider 16 whose swinging arm 17 controls the outward movement of the plunger. In the locked position of the mechanism the rider abuts against a stop 18 at the end of the cam; and in the unlocked position of the mechanism, the rider is held by the spring 14 in an offset 19 at the other end of the cam, such parts thus constituting means for retaining the unlocking means in its unlocking position. If now the plunger is pushed inwardly from its position shown in dotted lines in the views, the rider is released from the offset and the rod 9 is rotated by its spring 11 and lowers the bolt 3 to carry the catches into their holding engagement with the drawers if they are entirely closed. If however, a drawer is partially open, in the position shown in dotted lines in Fig. 1, the bolt is held from descending to its lower limit by the catch striking on the keeper of such partially open drawer, as shown in said figure. The drawer in such partially open position thus holds the catch against holding engagement. The bolt being thus held from descending to its locking position as to both drawers, the plunger is thereby held partially projected from the front of the casing, thus indicating that the drawers are not locked. It sometimes happens that a drawer is thought to be entirely closed when it is almost so but not quite, as shown in dotted lines in Fig. 1. In such case, the indicator, as stated, shows the fact: when, however, any drawer is opened far enough that the downward movement of the catch will not strike the drawer at all, as in

the case of the lower drawer in Fig. 2, such manifest open condition of the drawer cannot escape attention.

It will be seen that the key is turned to unlock the drawers, but that they are locked by simply pushing in the plunger.

The invention being intended to be defined solely by the claims, is not to be limited by details of construction shown or described.

I claim:

1. In a device of the character described; an opening and closing member; a movable bolt; a catch carried by the bolt and automatically movable thereon in a direction transverse to the bolt's movement into holding engagement with said member; and unlocking means adapted to move the bolt and carry the catch out of its said holding engagement.

2. In a device of the character described; an opening and closing member; a slidable bolt; a catch carried by the bolt and movable thereon under spring pressure into holding engagement with said member, and having an inclined face wherewith the said member in its closing movement is adapted to engage and move the catch against its spring; and rotatable unlocking means adapted to be turned by a key to move the bolt and carry the catch out of its said holding engagement.

3. In a device of the character described; an opening and closing member; a movable bolt; a catch carried by the bolt and movable thereon into holding engagement with said member; unlocking means adapted to move the bolt and carry the catch out of its said holding engagement; and a movable indicator operable in connection with the unlocking means and adapted in certain positions to indicate the non-holding position of the catch, and in another position the holding position of the catch.

4. In a device of the character described; an opening and closing member; a catch adapted to holdingly engage said member; rotatable unlocking means adapted to move the catch out of its said holding engagement, and having a helically-disposed cam; an indicator adapted to indicate in a certain position the holding engagement of the catch and in other positions, the non-holding position of the catch; a cam rider riding on the cam and engaging the indicator and adapted to move the indicator by the rotation of the unlocking means.

5. In a device of the character described; an opening and closing member; a catch adapted to holdingly engage said member; rotatable unlocking means adapted to move the catch out of its said holding engagement, and having a helically disposed cam, and being spring-pressed against its unlocking movement; an indicator adapted to indicate in a certain position the holding engagement of the catch and in other positions, the non-holding position of the catch; a cam rider riding on the cam and engaging the indicator and adapted to move the indicator by the rotation of the unlocking means.

6. In a device of the character described; an opening and closing member; a movable bolt; a catch carried by the bolt and movable thereon into holding engagement with said member; unlocking means adapted to move the bolt and carry the catch out of its said holding engagement, and being spring-pressed against its unlocking movement; and a movable indicator operable in connection with the unlocking means and adapted in certain positions to indicate the non-holding position of the catch and in another position the holding position of the catch.

7. In a device of the character described; an opening and closing member; a catch adapted to holdingly engage said member; unlocking means adapted to move the catch out of its said holding engagement and being spring-pressed against its unlocking movement; means for retaining the unlocking means in its unlocking position; a movable indicator operable in connection with the unlocking means and adapted in certain positions to indicate the non-holding position of the catch and in another position the holding position of the catch; and means operable by the movement of the indicator toward its holding-indicating position for releasing said retaining means.

8. In a device of the character described; an opening and closing member; a movable bolt; a catch carried by the bolt and automatically movable thereon transversely to the bolt's movement into holding engagement with said member, and adapted to be held in one position of said member against such engagement; unlocking means adapted to move the bolt and carry the catch out of its said holding engagement; and a movable indicator operable in connection with the unlocking means and adapted in certain positions to indicate the non-holding position of the catch and in another position the holding position of the catch.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

DAVID E. HUNTER.

Witnesses:
I. E. LUNDQUIST,
MARY SMITH.

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