E. H. CROSBY.

COUNTER FOR LOCKS.

APPLICATION FILED MAR. 10, 1921.

1,394,475. Patented Oct. 18, 1921.

Fig. 1.

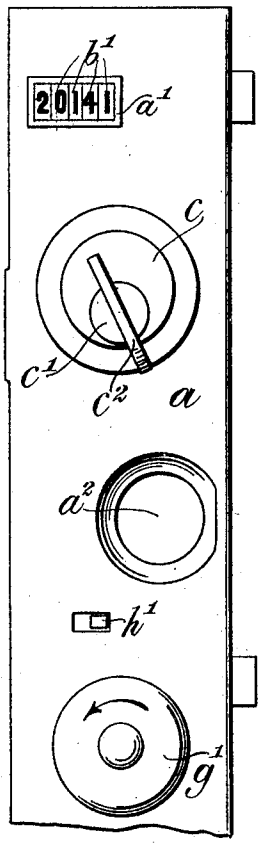


Fig. 2.

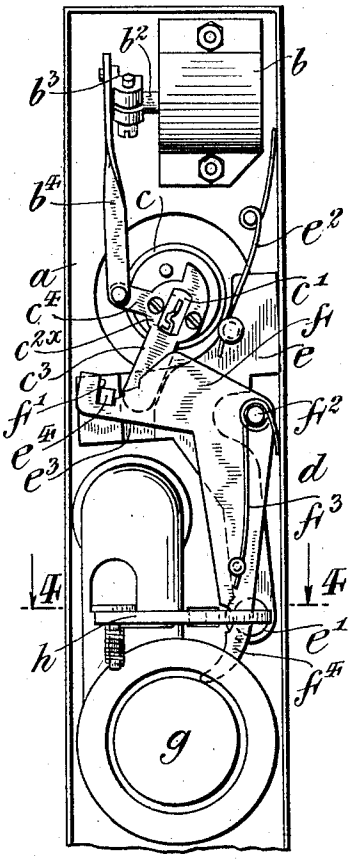
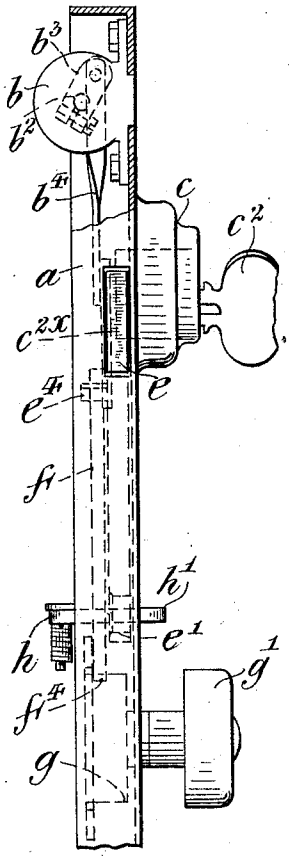


Fig. 3.



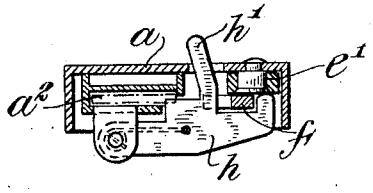


Fig. 4.

INVENTOR

Edwin Harris Crosby

BY

Redding & Greeley

ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWARD HARRIS CROSBY, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE VEEDER MANUFACTURING COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF CONNECTICUT.

COUNTER FOR LOCKS.

1,394,475. Specification of Letters Patent. Patented Oct. 18, 1921.

Application filed March 10, 1921. Serial No. 451,422.

To all whom it may concern:

Be it known that I, EDWARD HARRIS CROSBY, a citizen of the United States, residing at 252 Edgewood street, Hartford, Connecticut, U. S. A., have invented certain new and useful Improvements in Counters for Locks, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

The increasing use at railway stations and other places of parcel lockers in which the user places his parcel, then locks the door and finally, upon the deposit of a coin, releases and removes the key, has led to the application of counters for the purpose of recording, for the benefit of the owner of the lockers, the number of times each locker has been used, as a check upon the employee who collects the coins from time to time. It has been proposed heretofore to operate each counter through a spring pressed portion of the releasing mechanism, but it has been found that the swift and sometimes irregular action of the spring pressed member effects an overthrow of the counter, so that it does not record accurately the number of times the key has been released, that is, the number of times the locker has been used. It is the purpose of this invention to provide means whereby the counter shall be actuated with certainty whenever the key is moved to lock the door, preparatory to the withdrawal of the key, and shall be actuated without liability of overthrow. To this end a counter is operated by the movement of the hand of the user in locking the door, acting through the key-operated member of the lock, such movement of the hand not being swift enough to occasion an overthrow of the counter. The invention will be more fully explained hereinafter with reference to the accompanying drawing in which it is illustrated and in which—

Figure 1 is a view in front elevation of a complete lock and coin-controlled key-releasing mechanism, as applied to the door of a locker, the lower end being broken away.

Fig. 2 is a view of the same in elevation as seen from the opposite side.

Fig. 3 is an edge view of the same as seen from the left hand in Fig. 1, a portion of the casing being broken away.

Fig. 4 is a detail view in section on the plane indicated by the broken line 4—4 of Fig. 2.

In the embodiment of the invention shown in the drawing, a one-piece metal casing a, properly secured to the door of the locker, receives a counter b of usual construction, a cylinder lock c and a coin-controlled bolt releasing mechanism d.

The counter b is of usual construction, exhibiting number wheels b' through a sight opening a' in the casing and having an actuating shaft b^2 with an actuating arm b^3, oscillation of the shaft b^2, by the arm b^3, serving to advance the unit number wheel one space at each operation.

The lock c may also be of ordinary construction, preferably being of the type commonly known as a cylinder lock and having a cylinder or key operated member c', which is adapted to receive the proper key c^2 and to be moved thereby through a partial rotation, sufficient to effect the necessary movement of the bolt e to unlock the door. The lock is of such construction, well known in the art, that the key can be withdrawn from the lock only when the bolt or latch e has been shot and the door locked. The locker is therefore normally unlocked, with the key in position in the lock. The user, having placed his parcel in the locker, closes the door, inserts a coin which enables him to release the bolt to lock the door and then to remove the key. The present invention is not concerned with the particular construction of the bolt operated means or the coin-controlled releasing means, but for a better understanding of the operation of the invention these parts will be described briefly. The bolt e is pivoted at e' and is acted upon by a spring e^2 which tends normally to throw the bolt into locking position. To the inner end of the cylinder c' of the lock is secured a plate c^{2x} which has an arm c^3 entering a recess e^3 in the bolt member e, whereby upon partial rotation of the cylinder c', by means of the key, the bolt can be withdrawn against the action of the spring e^2. The bolt member e has a lug e^4 engaged, so as to prevent the locking movement of the bolt member e, in a notch f' of an L-shaped member f, pivoted at f^2 and held normally by a spring f^3 in locking position. A finger f^4 of the L-shaped member f, projects into proximity to

a coin carrier g, adapted to be rotated by a knob g', when a coin has been put into the coin receiving opening a^2 and has dropped into position to be engaged by the coin carrier g, a spring pressed latch h normally prevents the falling of the coin into engagement with the coin carrier and also hold the L-shaped member f against movement, the latch h is disengaged by pressure against the projection h'.

Obviously the counter may be placed in any convenient position with respect to the key operated member of the lock and the operative connections between the key operated member and the counter will of course be suited to the location of the counter. As shown, the plate $c^{2\times}$, secured by screws to the cylinder c', has an arm c^4 which is connected by a link b^4 with the arm b^3 on the actuating shaft b^2 of the counter b. It will be understood that the advancing movement of the counter is effected by the movement of the hand of the user through the key c^2, the cylinder c', the arm c^4 of the plate $c^{2\times}$, and the link b^4, so that there is no liability of overthrow of the counter. The movement of the actuating shaft b^2 in the opposite direction, under the influence of the spring actuated locking movement of the bolt member e, has no tendency to cause any undesirable movement of the counter.

I claim as my invention:

The combination with a lock having a key-operated cylinder, of a counter, a spring pressed bolt member, a plate secured to the cylinder and having an arm in operative engagement with the bolt member and a second arm, and an operative connection between said second arm and the counter.

This specification signed this 8th day of March, A. D. 1921.

EDWARD HARRIS CROSBY.