(No Model.)

G. W. GROVE.

REGISTERING LOCK FOR CASH REGISTERS.

No. 485,930. Patented Nov. 8, 1892.

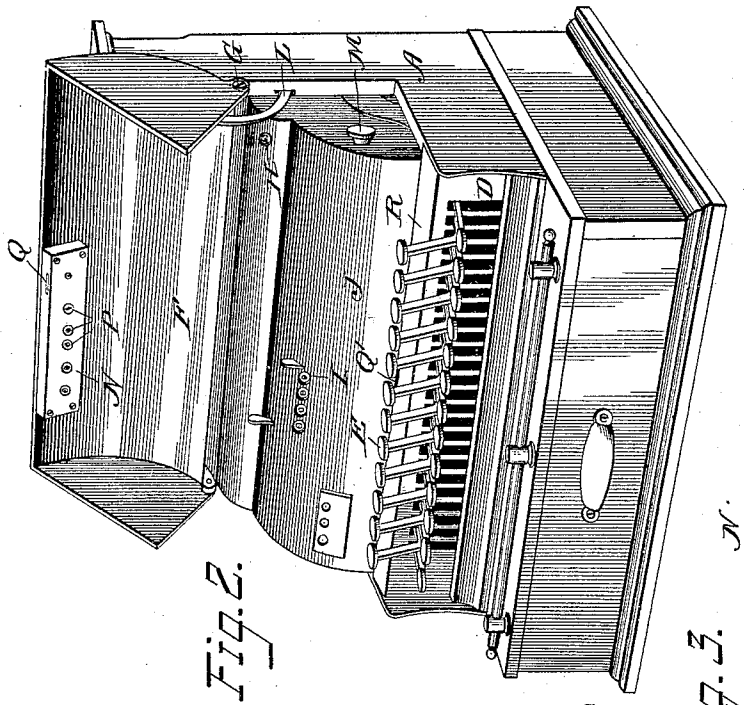

Fig. 2.

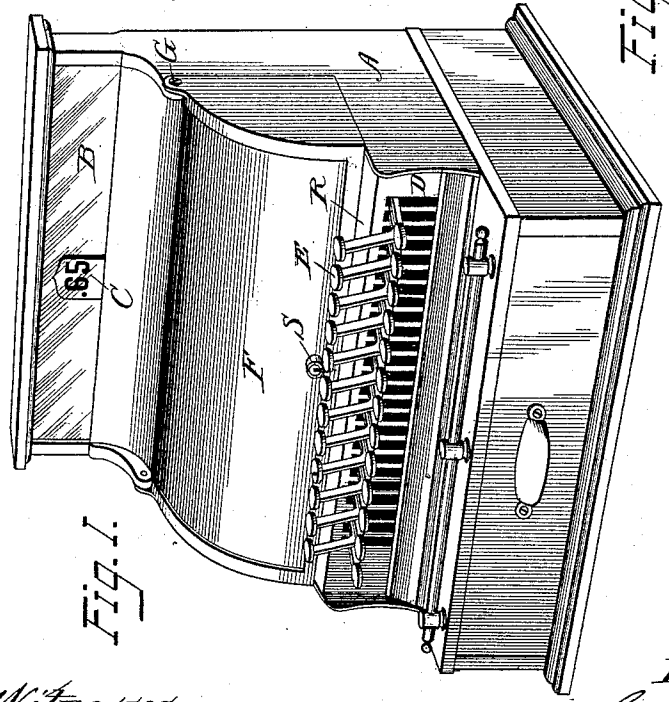

Fig. 1.

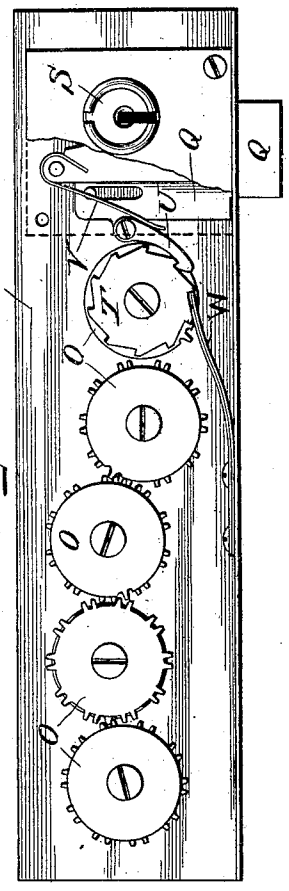

Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE W. GROVE, OF DAYTON, OHIO, ASSIGNOR TO THE NATIONAL CASH REGISTER COMPANY, OF SAME PLACE.

REGISTERING-LOCK FOR CASH-REGISTERS.

SPECIFICATION forming part of Letters Patent No. 485,930, dated November 8, 1892.

Application filed August 12, 1892. Serial No. 442,898. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. GROVE, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented a certain new and useful Improvement in Cash Registers and Indicators, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

The working parts of machines of this character are usually inclosed in a casing or cabinet provided with a lid or door which is capable of being unlocked and opened and closed and locked. This lid must be opened to obtain access to the interior of the machine for the purpose of ascertaining the amount shown upon the sales-registering mechanism at any given time, as at the end of a day's business. The proprietor of the establishment or other person in authority is supposed to carry the key to the lock of this lid, so that no one else can obtain access to the interior of the machine. It has been found necessary, or at least very desirable, in the practical use of such machines to provide means for automatically registering the openings and closings of the lid and preserving such record in unalterable condition beyond the reach of any one, so that if the clerk or other unauthorized person should obtain possession of a key to the lock he cannot unlock and open the lid without leaving a record of that fact.

My invention relates to a novel combination of a registering device with the lock for the lid, by which the register is actuated each time the lid is unlocked and locked to preserve a record of such operations, and its novelty will be hereinafter set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a cash-register embodying my invention; Fig. 2, a corresponding view with the lid unlocked and thrown open, and Fig. 3 a plan view of one side of the register plate and lock with a portion of the casing of the latter broken away to expose the parts within.

The same letters of reference are used to indicate identical parts in all the figures.

The working parts of the machine are inclosed in the usual casing or cabinet A, provided in its upper rear portion with a sight-opening or window B, through which the indicators C are exposed, and having in its lower forward portion a slotted plate D, through which project the front ends of the operating-keys E. This casing is provided with a lid F, which in this instance is hinged to the body of the casing at G, and when unlocked may be swung up to the position shown in Fig. 2. The numbers upon the registering-wheels are exposed through sight-openings at H and I in the curved metal plate J, which covers the mechanism beneath the lid, Fig. 2. At the end of a day's business or other given time the proprietor unlocks the lid F and swings it up to the position shown in Fig. 2, where it will be caught and held by a curved catch-piece L, which plays in a slot in the side of the casing and is provided with a shoulder, which catches against the lower end of the slot when the lid is swung up to such position. He then notes the amount shown upon the sales-registering wheels through the sight-openings H I and resets the wheels to zero. This latter operation is accomplished by first operating such a key as will cause the cent-registering wheel to expose its "0" through the opening at H, and then turning all of the dollar-wheels to zero by giving their supporting-shaft a complete revolution by means of the thumb-piece M, secured upon its projecting end, Fig. 2. The lock for the lid is secured upon one side of a plate N, which also carries a train of registering-wheels "O," whose numbers are exposed through sight-openings in the plate at P, as seen in Fig. 2. The plate N is permanently and securely fastened to the inner face of the lid at its lower edge by screws or rivets, with the lock and wheels confined in inaccessible position between the plate and lid, but with the numbers upon the wheels exposed through the openings P, Fig. 2. The bolt Q of the lock is in this instance a sliding one and co-operates with a locking recess or socket Q′ in the upper side of the cross-bar R of the casing. The barrel S of the lock is extended and projects through the lid to the outer side thereof in position to receive the key when the lid is in its closed position, Fig. 1. The primary wheel of the train of registering-wheels O is pro-

vided with a ratchet T, and the sliding bolt Q of the lock has pivoted to it a pawl U, which is pressed by a spring V into engagement with the ratchet. At each movement of the bolt in one direction the pawl will slip over and engage a fresh tooth of the ratchet and upon the reverse movement of the bolt will turn the ratchet and registering-wheel and expose the next higher number on the latter at the corresponding sight-opening P, Fig. 2. A spring-holding pawl W, co-operating with the ratchet V, prevents backward movement of the wheel. The primary wheel adds onto the second, the second onto the third, and so on in the usual manner. In the present instance the parts are shown as so arranged that the registering-wheel will be turned by the inward movement of the locking-bolt at the unlocking of the lid; but, if desired, the arrangement may be reversed, so that the registering-wheel will be actuated by the outward movement of the bolt at the locking of the lid, it only being necessary that it shall be actuated once by both the unlocking and locking of the lid.

In the use of my invention the proprietor when he unlocks and opens the lid to examine the registry of sales will note the number indicated upon the wheels O of the lid-register through the openings P and make a memorandum of it. When he has taken off the amount shown upon the sales-registering wheels through the openings H I, he resets them to zero and closes and locks the lid. When he unlocks and opens the lid the next time to examine the registry of sales at the end of the next day's business, the lid-register should show the number which he made a memorandum of the day before plus one, and if it shows more than this number he will know that the lid has been unlocked during his absence.

The lid-register is a continuous one, and as it is so secured to the lid as to be inaccessible both to the clerk and the proprietor it is never reset to zero until it reaches the limit of its capacity, whereupon it will run out and begin at zero again. With five wheels in the train, as shown in the drawings, the register is capable of registering ninety-nine thousand nine hundred and ninety-nine operations of the lock, so that it would not be practicable for the clerk after unlocking and opening the lid to manipulate the lock sufficiently to run the register out and bring it around to the proper number again.

The novelty of my invention does not depend upon the construction of the lock itself nor upon the particular form of connection between the lock and registering-wheels. The bolt of the lock may be a swinging bolt instead of a sliding one, if desired, and the pawl may be actuated by it in any suitable manner instead of being pivoted directly to it. So, too, the lock may be secured to the body of the casing instead of to the lid and its bolt be arranged to co-operate with a locking-recess in or a catch upon the lid.

I am aware that it is not broadly new to provide cash-registers with what are known as "lid-registers" for registering the number of openings and closings of the lid; but heretofore such lid-registers have been entirely independent of the lock for holding the lid closed and have been actuated by the act of opening or closing the lid, the manipulations of the lock itself having no effect upon them. I am also aware that in many forms of "indicator-locks" a train of registering-wheels have been actuated by the bolt of the lock; but,

Having thus fully described my invention, I claim—

1. In a cash register and indicator having a casing inclosing the sales-registering mechanism and provided with a lid required to be opened to permit an inspection of such mechanism, the combination, with such casing and lid, of a lock controllable by a key from the exterior of the casing for holding the lid closed and a registering mechanism permanently secured in inaccessible position upon the lid or casing and actuated by the movements of the lock-bolt to make a registration of the lockings and unlockings of the lid, substantially as and for the purpose described.

2. In a cash register and indicator having a casing inclosing the sales-registering mechanism and provided with a lid required to be opened to permit an inspection of such mechanism, the combination, with such casing and lid, of a lock controllable by a key from the exterior of the casing for holding the lid closed and an inaccessible registering mechanism actuated by the operations of the lock and permanently secured in a position to be hidden when the lid is closed and to expose its registrations when the lid is opened, substantially as and for the purpose described.

3. In a cash register and indicator having a casing inclosing the sales-registering mechanism and provided with a lid required to be opened to permit an inspection of such mechanism, the combination, with such casing and lid, of a lock controllable by a key from the exterior of the casing for holding the lid closed, a train of registering-wheels arranged adjacent to the lock and permanently secured upon the lid or casing in position to expose their numbers to view, but otherwise inaccessible, and a pawl actuated by the movements of the lock-bolt and co-operating with a ratchet upon the primary registering-wheel to turn said wheel at each operation of the lock, substantially as and for the purpose described.

4. In a cash register and indicator having a casing A, inclosing the sales-registering mechanism and provided with the hinged lid F, the combination, with the lid and casing, of the plate N, provided with the sight-openings P and permanently secured to the inner

face of the lid, the train of registering-wheels O, and the lock carried by said plate and confined in an inaccessible position between said plate and the lid, the barrel S of the lock, projecting through the lid into position to receive a key from the exterior thereof, and the pawl U, carried by the sliding bolt Q of the lock and co-operating with the ratchet T upon the primary registering-wheel, substantially as and for the purpose described.

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