

(No Model.)

3 Sheets—Sheet 1.

J. W. REHILL.
CASH REGISTER.

No. 570,818.

Patented Nov. 3, 1896.

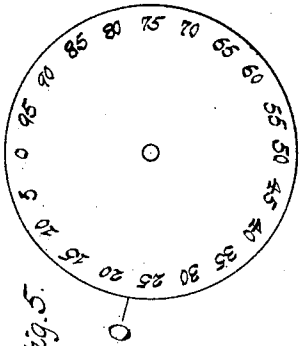


Fig. 5.

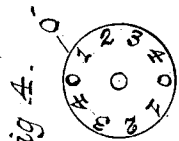


Fig. 4.

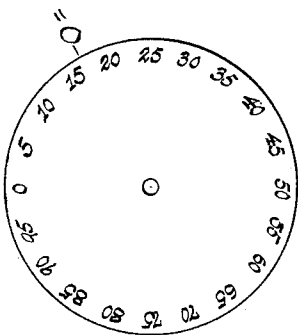


Fig. 3.

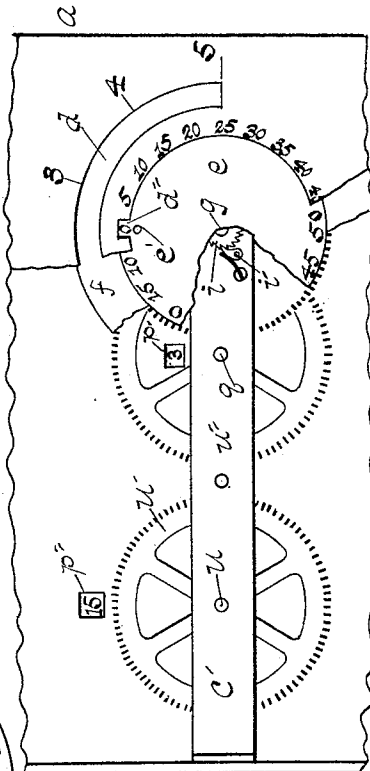


Fig. 1.

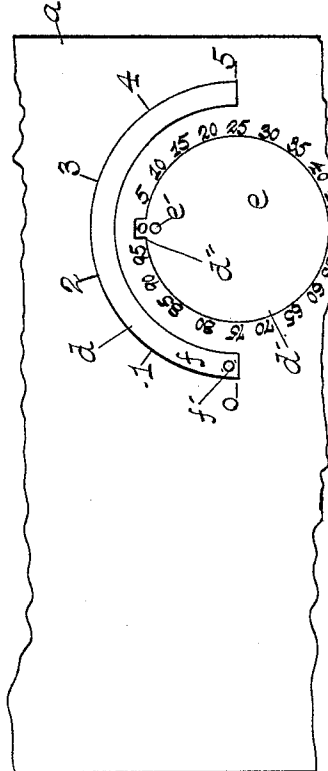


Fig. 2.

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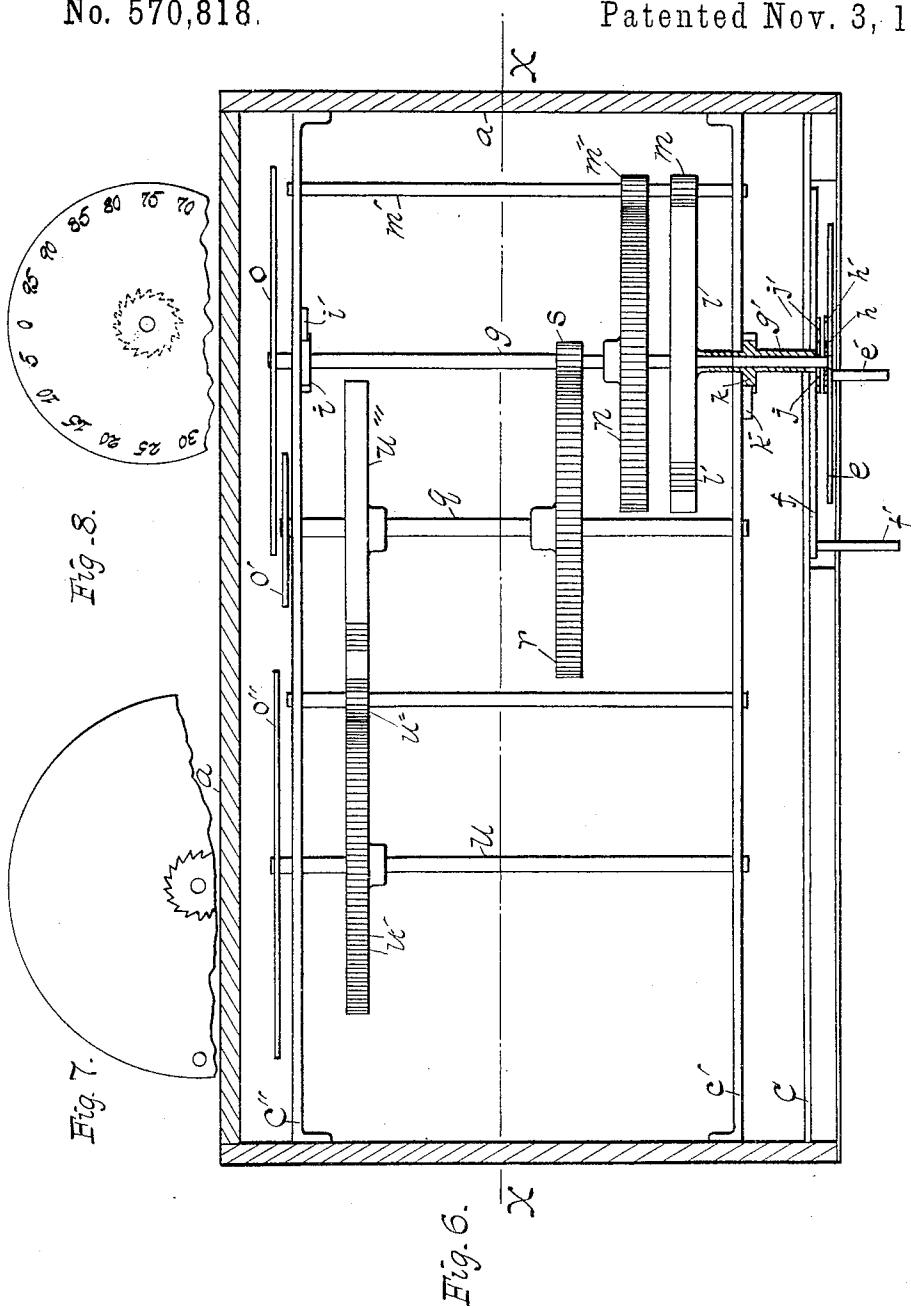
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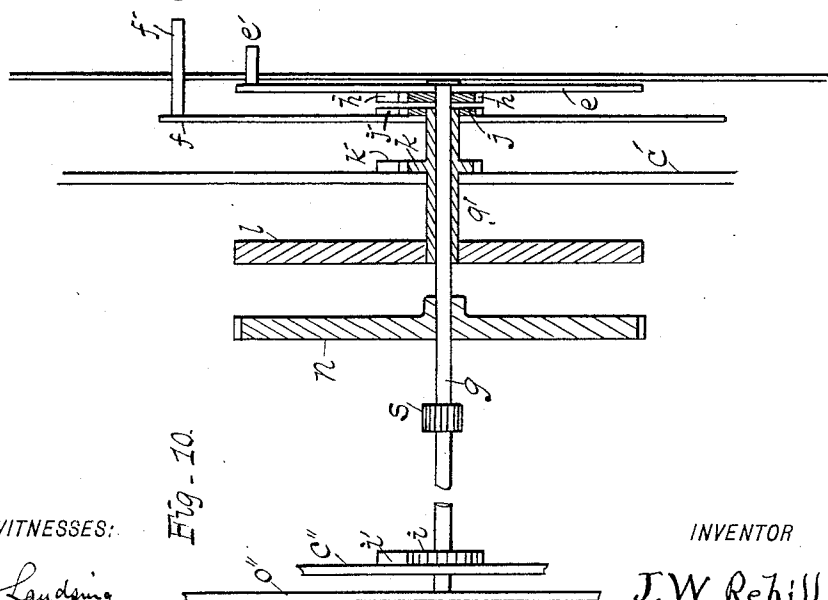
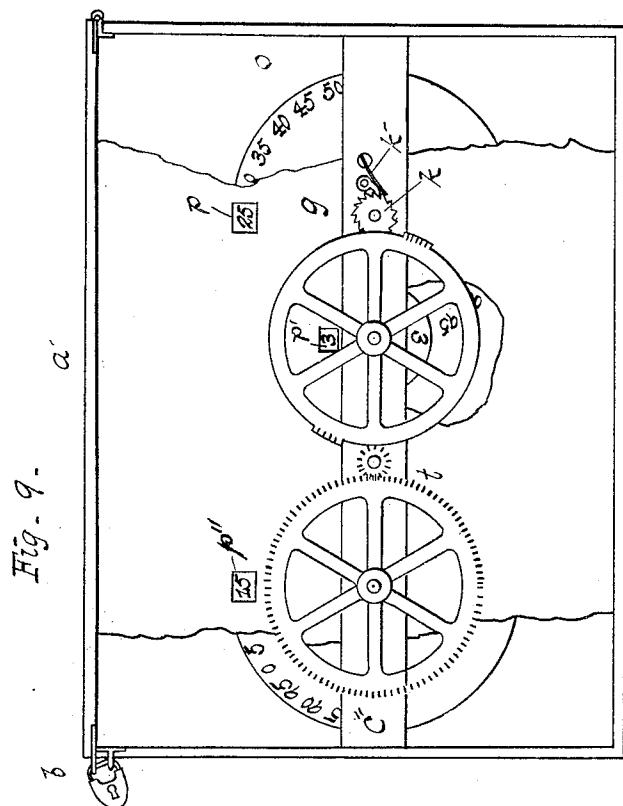
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3 Sheets—Sheet 3.

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UNITED STATES PATENT OFFICE.

JOHN WALLACE REHILL, OF SOMERVILLE, NEW JERSEY.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 570,818, dated November 3, 1896.

Application filed November 19, 1895. Serial No. 569,393. (No model.)

To all whom it may concern:

Be it known that I, JOHN WALLACE REHILL, a citizen of the United States, and a resident of Somerville, county of Somerset, and State of New Jersey, have invented a new and useful Improvement in Cash-Registers, of which the following is a specification.

My present invention relates to a device for registering inside of a locked box the total amount of cash or other form of money received during the day in a store or other business place. At any time the box is unlocked and opened the total amount received up to that time is found indicated inside, it being supposed that every time the clerk receives money he turns certain handles to certain places for the purpose of registering the amount, which cannot be tampered with by himself or others.

In order to describe the invention accurately, I have annexed the drawings, which exhibit all the details of the mechanical construction.

Figure 1 is a front elevation of the device with certain parts broken away for the purpose of showing certain elements not otherwise visible from the outside. Fig. 2 is an elevation of the front of the box, which indicates the appearance of the same when in its normal condition. Fig. 3 is one of the interior registering-disks, Fig. 4 another, and Fig. 5 another. Fig. 6 is a plan of the whole device with the cover removed. Fig. 7 is a view by itself of one of the front dials, and Fig. 8 of one of the other front dials. Fig. 9 is a vertical section at or about the line X in Fig. 6. Fig. 10 is a section taken radially in respect to the main arbor of the device, so as to show clearly the nature of the operation.

a is the containing-box, having the cover *a'*, adapted to be locked by the padlock *b*. There are three plates for bearings of the wheels, and they are lettered, respectively, *c*, *c'*, and *c''*.

In the front of the box there are an arc-shaped opening *d* and a circular opening whose periphery is *d'*, in which there is a notch *d''*. The opening *d* is divided into equal parts numbered in order "1," "2," "3," "4," "5." The periphery of the opening *d'* is divided into equal parts numbered in order "0," which is the same as the notch *d''*, "5," "10," "15," "20," "25," and so on up to and

including "95," which is the last division, "0" being the first. Directly behind the opening *d'* is a dial *e*, having a handle *e'*, normally located at the first mark on said periphery *d'*. There is a dial also, *f*, directly behind the dial *e*, and it is furnished with a handle *e'*. The handles *e'* and *f'* are for the purpose of turning to the right or backward the respective dials *e* and *f*.

To illustrate at this point, the operation of a person who wishes to register a certain amount in the box, without knowing the internal construction of the box necessarily, would be as follows: To register five cents, turn the handle *f'* past the division-marks "1," "2," "3," "4," and stop at "5." The registered amount inside will be five cents. Before leaving the box it is well to turn the handle *f'* back to its normal position. To register fifteen cents, turn the handle *e'* to "15" on the periphery of the opening *d'*. The fifteen cents could be registered also by turning the handle *f'* three times to the normal position to the right, or it could be registered by turning the handle *e'* to "10" and the handle *f'* to "5." To register eight cents, after both handles are in the normal position turn the handle *e'* to "5" and the handle *f'* to "3." If the amounts registered were investigated now, the three extra cents would not be found, but five cents more would be registered as soon as two cents more were registered.

To further explain at this point, let the instrument be supposed to be set at "0" inside and outside in every respect. Let the handle *f'* be turned to the figure "1." One cent will not be registered inside, but as soon as four more cents are registered it will be found that the registered amount inside is five cents. In order to understand the reason of this registering, the rest of the instrument must be understood from an explanation.

The dial *e* is loose upon an arbor *g* and the dial *f* is loose upon the tubular arbor *g'*. Each dial is provided with two pawls and two ratchet-wheels. One ratchet-wheel for the dial *e* is *h*, the pawl being *h'*, and the other ratchet-wheel is *i*, the pawl being *i'*. The pawl *h* couples up the dial *e* with the arbor *g* when turned to the right, but releases it when turned to the left. In like manner the dial *f*

is connected up by two ratchet-wheels, namely, j , whose pawl is j' , and k , whose pawl is k' . The first pawl serves to communicate motion to the tubular arbor g' when the handle f is turned to the right, while the pawl k' prevents the backward movement of the tubular arbor g' when the handle f' is turned to the left.

So much having been described, it now becomes proper to name the wheels which are fastened to the respective arbors. The wheel l is rigidly attached to the tubular arbor g' and is provided with two sets of teeth diametrically opposite each other, each set having five teeth. The periphery of the wheel between the teeth is on a circular line with the base of the teeth. These teeth are lettered l' , and the same are so located as to gear into a pinion m , located upon an arbor m' and having a second similar pinion m'' , which gears into a toothed wheel n , fixed upon the arbor g , to which is also attached an inside disk divided into equal divisions "0," "5," "10," "15," and so on up to and including "95," making twenty divisions. It is now evident that when the teeth l' are about to gear into the pinion m and the handle f' is at "0" or the beginning, then when the handle f' is turned to the five divisions indicated on the front plate the disk o will turn to f , because the teeth on the two pinions m and m'' and on the wheel n are so proportioned that the five teeth on the wheel l will drive the disk through a distance of one of the twenty divisions. The plate c' has a hole p , so that the divisions on the disk o may be seen one at a time. Now suppose the dial f is turned back to its normal position, the wheel l remains stationary because of the ratchet-wheels hereinbefore explained, and when the handle f' is again turned to the "5" it is evident that there will be no teeth to gear into the pinion m except the second set n' of five teeth, which will turn, as before, the disk o through another division, indicating ten cents. In this way it may be easily concluded that every time the handle f' is turned forward over five divisions there will be an additional five cents indicated on the disk o , but in order to indicate eighty-five cents, for instance, in this way additional to any former amount it would be too tedious to be obliged to turn the handle so many times, namely, seventeen. In this way may the number of cents up to a dollar be indicated. To save this trouble, the dial e is provided so that by merely turning it through one of the divisions indicated at the periphery of the opening d' five cents would be indicated on the disk o . In order to indicate eighty-five cents, the handle in an instant could be turned around to the number "85" on the periphery of the opening d' . Then the handle e' should be returned to its first position before it is employed for registering any further amount.

I have provided means for indicating a to-

tal of one dollar, two dollars, three dollars, &c., all the way up to five dollars, by means of a disk o' , carried upon an arbor g , having a wheel r , geared into a pinion s , fixed upon the arbor g . When the arbor g turns to the right, therefore, the disk o' behind the opening t in the plate c'' turns one space, the disk o makes one complete rotation, and therefore an additional dollar is registered at the opening p' . Similarly I provide means whereby every time the total amounts to five dollars the same is indicated at the opening p'' upon a third disk o'' , whose arbor u has a wheel u' geared into an idle-pinion u'' , which in turn gears into a wheel u''' , similar to the wheel l , by having two sets of teeth of five each located diametrically thereupon, the wheel u''' being upon the arbor g .

I claim as my invention—

1. A cash-register consisting of the combination of concentric dials, the one dial being arranged to rotate through half a circle only, but both in a forward and backward direction and past given equal division-marks located concentrically with said dial and the other dial being rotary forward and backward past equal division-marks located concentrically with said dial, through a whole circle, and continuously and repeatedly through said circle, an arbor to which the second dial is connected, through the medium of a pawl and ratchet-wheel, and provided with a registering-dial o , having registering-train o' and o'' , and a gear-wheel n , and adapted by the pawl and ratchet-wheel movement, to be propelled continuously in one direction only, a sleeve to which the first dial is connected through the medium of a pawl and ratchet-wheel and rotary in one direction only, and carrying a wheel l having two sets of teeth l' at or about diametrically opposite points, and an arbor m' having two pinions, one of which gears into the wheel n , and the other of which is adapted to gear intermittently with the sets of teeth l' .

2. A cash-register consisting of the combination of concentric dials, the one dial being arranged to rotate through half a circle only, but both in a forward and backward direction and past given equal division-marks located concentrically with said dial and the other dial being rotary forward and backward past equal division-marks located concentrically with said dial, through a whole circle, and continuously and repeatedly through said circle, an arbor to which the second dial is connected, through the medium of a pawl and ratchet-wheel, and provided with a registering-dial o , having registering-train o' and o'' , and a gear-wheel n , and adapted by the pawl and ratchet-wheel movement, to be propelled continuously in one direction only, a sleeve to which the first dial is connected through the medium of a pawl and ratchet-wheel and rotary in one direction only, and carrying a wheel l , having two sets of teeth l' , at or about diametrically opposite points,

and an arbor *m'* having two pinions, one of which gears into the wheel *n*, and the other of which is adapted to gear intermittently with the sets of teeth *l'*, the said arbor and the said sleeve each being provided with a pawl-and-ratchet movement, in addition to those named above for preventing a return movement of the arbor or sleeve upon the return of either of said dials.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 12th day of November, 1895.

JOHN WALLACE REHILL. [L. S.]

Witnesses:

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ARLEY I. MUNSON.