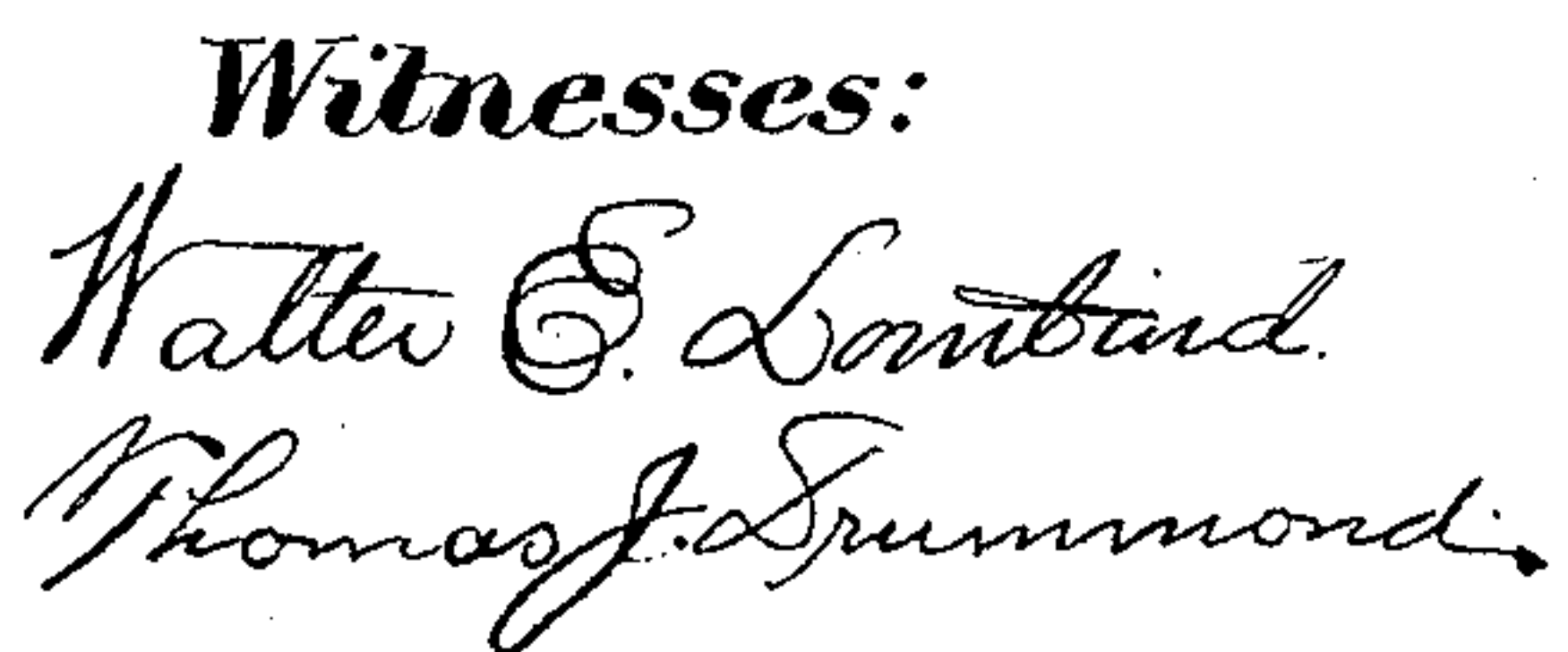


J. F. GOODRIDGE.
POCKET CASH REGISTER.

Patented Jan. 19, 1897.



Inventor:
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UNITED STATES PATENT OFFICE.

JAMES F. GOODRIDGE, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO CHARLES J. ROLFE, OF CONCORD, MASSACHUSETTS.

POCKET CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 575,476, dated January 19, 1897.

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To all whom it may concern:

Be it known that I, JAMES F. GOODRIDGE, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Pocket Cash-Registers, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to provide an improved cash-register especially adapted for pocket use.

A distinctive feature of my invention lies in providing independent actuators for the cents and dollars wheels or indicating devices, to thereby enable the operator to register one or more dollars without requiring him to actuate the cents-wheel or indicating device a number of times for each dollar to be registered. Suitable devices are, however, employed by which a sufficient number of successive movements of the cents wheel or device will automatically move the dollars wheel or device to indicate the registration of one dollar in amount.

My invention also comprehends the use of a rotatable manually-operated actuating device, preferably arranged like the winding-stem of a watch, and which by continuous operation is capable of moving the indicating wheel or wheels or devices within the inclosing case to indicate any desired amount of registration as distinguished from the reciprocating.

The above, together with other features of my invention, will be hereinafter more fully described, and particularly pointed out in the claims.

In the drawings, Figure 1, in face view, shows a pocket cash-register containing my invention. Fig. 2 is a horizontal section of the same, partially broken away, the section being taken on the irregular section-line $x x$, Fig. 3. Fig. 3 is a cross-section taken on the dotted line $x' x'$, Figs. 1 and 2. Fig. 4 is a cross-section taken on the dotted line $y y$, Fig. 2; and Fig. 5 is a perspective detail, to be referred to.

In the particular embodiment of my invention selected for illustration herein and shown in the drawings, A is a suitable inclosing case, preferably circular in contour and made as

nearly as possible to conform both in size and style to the ordinary watch, in order that it may be conveniently carried in the pocket of the user. This case A is provided at one side with a large view-opening, beneath which is arranged a suitable glass a , as with a watch. Within this case I have arranged a suitable frame piece or plate b , (shown best in Figs. 3 and 4,) provided at its center with a pin or stud b' , on which is loosely journaled the sleeve c of the dollar-registering wheel c' . Upon the sleeve c of the dollar-wheel I have loosely journaled the sleeve d of the cents-registering wheel d' , the two wheels having relative movements independent of each other and on the stud b' .

In the present embodiment of my invention the cents-registering wheel d' is toothed at its periphery, like the ordinary tooth or gear wheel, and is engaged or in mesh with a suitable crown-pinion e , fast on the spindle e' , projecting outwardly through and at the edge of the inclosing case and through the stem a' , common to stem-winding watches, said spindle at its outer end being provided with a suitable winding actuator or crown e^2 .

If desired, the usual ring e^3 may be provided to enable the register to be carried in the vest-pocket like the watch, and, if desired, attached to the watch-chain, whereby it is conveniently accessible for use.

Coöperating with the teeth of the registering-wheel d' I have provided a back-stop pawl d^2 , (see Fig. 2,) pivoted at d^3 and provided with a beveled end, in order that rotation of the wheel for registration may be had at will, when said pawl, by springing between successive adjacent teeth of the said wheel, serves, by means of its click over the teeth, as an indicator to enable the operator to determine at all times the number of teeth through which the wheel has been rotated by the actuator. In such case the number of teeth on the wheel d' will preferably be one hundred, the wheel being designed for rotation for a distance equivalent to one tooth for each cent to be registered. A spring d^3 is shown as acting to press the pawl or dog into engagement with the teeth of the wheel.

At the back of the wheel d' and secured thereto I have provided the lug or projection

d^4 , (shown best in Figs. 4 and 5 and in dotted lines, Fig. 2,) which, just prior to the completion of each full rotation of the said wheel d' , engages the depending tail of the pawl-carrier f' , pivoted at f^x and at its upper end carrying the pawl f in engagement with the ratchet-teeth, provided upon and at the periphery of the dollars-registering wheel c' . (See Figs. 2 and 5.) A spring f^2 on the ear b^2 tends to press the pawl f into normal engagement with the teeth of the registering-wheel c' , and a spring f^3 , also on said overhanging ear, acts on the carrier f' and holds the same normally in its rearmost position. By this connecting device or mechanism the registering-wheel c' is moved a distance sufficient to indicate the registration of one dollar at the end of each complete rotation of the cents-registering wheel d' . I have, however, also provided said dollar-registering wheel c' with an actuator of its own, by which the said wheel may be moved independent of the cents-wheel, if desired. Referring to Fig. 2, the said independent or dollar actuator is shown as an arm h , fulcrumed upon the stud b' between the wheel c' and the frame-plate, and at its outer end itself projects, or in the present instance is provided with a finger-piece h' which projects, through a slot a^x in the edge of the case in position to be accessible to and readily moved by the operator, said arm being shown as provided with a pivotally-mounted pawl h^2 , held by the spring h^3 in engagement with the ratchet-teeth on the periphery of the dollar-registering wheel c' .

In the present instance the spring h^3 is carried by a curved dust guard or closure h^4 , mounted on the arm h and completely closing at all times the slot a^x to exclude dust, the said guard moving back and forth within the case with each movement of the arm h .

A spring h^5 (shown in dotted lines, Fig. 2) tends to hold the dollar-actuator h normally in its position at the right, Fig. 2, movement of the same by the operator from said position toward the left, in the direction of the arrow, serving to move said registering-wheel any number of teeth, limited only by the length of the slot a^x , each tooth through which said wheel is moved representing the registration of one dollar, so that it is possible for the operator, by varying the extent of movement of the actuator h , to register at one operation amounts ranging from one to five or any other number of dollars represented by the full movement of the actuator.

A spring-actuated click-pawl h^6 , engaging the teeth of the ratchet-wheel, serves to indicate to the operator the number of teeth through which the said wheel is moved by its actuator, and also to retain said wheel against retrograde movement.

To provide ready means for indicating to the operator at all times the amount registered or the distance that the operating-wheels are moved, I have provided the sleeves c and d of the dollar and cents registering

wheels, respectively, with indicating-hands m and n , adapted to move over or in relation to a suitable dial o , arranged beneath the glass a . The hands m and n are shown as and preferably are made of different lengths and adapted to rotate in connection with two distinct series of indicating-characters, such, for instance, as m' and n' , representing registrations, respectively, of dollars and cents, the hand n being herein shown as of greater length than the hand m to coöperate with the series of characters n' , which is arranged outside the series m' , with which the hand m operates.

The operation of the device will be clearly understood from the previous detailed description of its construction, it being briefly stated as follows, viz: The operator wishing to register the amount of an expenditure which does not exceed one dollar, say, for instance, twenty-five cents, rotates the actuator e^2 , as in winding a watch, until the cents-hand n exhibits a movement along its series n' of indicating-characters equivalent to or representing twenty-five cents in amount, or until the click-pawl h^6 by successive clicks along the teeth of the cents-wheel indicates to the ear of the operator a registration of twenty-five teeth or twenty-five cents. If the operator wishes to register an expenditure of one or more dollars, the same is conveniently accomplished through the dollar-actuator h without changing the aggregate number of cents expended. When, however, the registration of a number of cents less than one dollar carries the total number of cents registered to an amount exceeding one dollar, the dollar-wheel and its hand are automatically moved to record the expenditure of a dollar, the subsequent movement of the cents-hand showing the number of cents registered in excess of that dollar.

For simplicity of construction the parts are arranged as shown, so that the dollars and cents hands and their wheels rotate in opposite directions, as indicated by the arrows, Fig. 2, but it is obvious that such modifications as would suggest themselves to any one skilled in the art both hands and their wheels or either of them may be made to rotate in the same direction, and it is obvious that the invention is susceptible of other modifications within the spirit and scope of my invention.

Having described one embodiment of my invention, what I claim, and desire to secure by Letters Patent, is—

1. A pocket register containing cents and dollars registering wheels, with connecting devices whereby predetermined rotation of the cents-wheel causes automatic predetermined ultimate rotation of the dollars-wheel and two accessible manual actuators in constant operative relation to and for operating said cents and dollars wheels respectively, movement of one of said actuators causing rotation of said cents-wheel and thereby of said dollars-wheel, movement of the other of

said actuators causing rotation of said dollars-wheel independently of and without rotation of said cents-wheel, whereby there are presented to the operator at all times operable means for independently registering cents or dollars, substantially as described.

2. A pocket register containing a plurality of registering-wheels with connecting devices whereby predetermined rotation of one wheel causes automatic predetermined rotation of another wheel and two accessible manual actuators in constant operative relation to and for operating said first and last named wheels respectively, movement of one of said actuators causing rotation of said first-named wheel and thereby of said last-named wheel, movement of the other of said actuators causing rotation of said last-named wheel independently of and without rotation of said first-named wheel, whereby there are presented to the operator at all times, ready for operation, means for independently rotating said first and last named registering-wheels, substantially as described.

3. The described pocket register, comprising an inclosing case, a plurality of registering-wheels arranged therein, a rotatable actuator protruding through the edge of said case

and arranged to engage and rotate one of said wheels, a swinging actuator also protruding through the edge of said case and arranged to engage and move another of said wheels, independently of said first-named wheel, said last-named wheel being however operated at the end of a predetermined rotation of said first-named wheel, substantially as described.

4. The described pocket register comprising a case, a plurality of registering-wheels arranged side by side therein, a rotatable actuating-stem projecting from the edge of said case and arranged when rotated about its own axis to rotate one of said wheels and an independent actuator for another of said wheels said independent actuator also projecting to the edge of said case and made rotatable about the axis of said last-mentioned wheel, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES F. GOODRIDGE.

Witnesses:

FREDERICK L. EMERY,
THOMAS J. DRUMMOND.