(No Model.) 2 Sheets—Sheet 1.

L. S. FIELD.

CASH REGISTER.

No. 490,647. Patented Jan. 31, 1893.

FIG. 1.

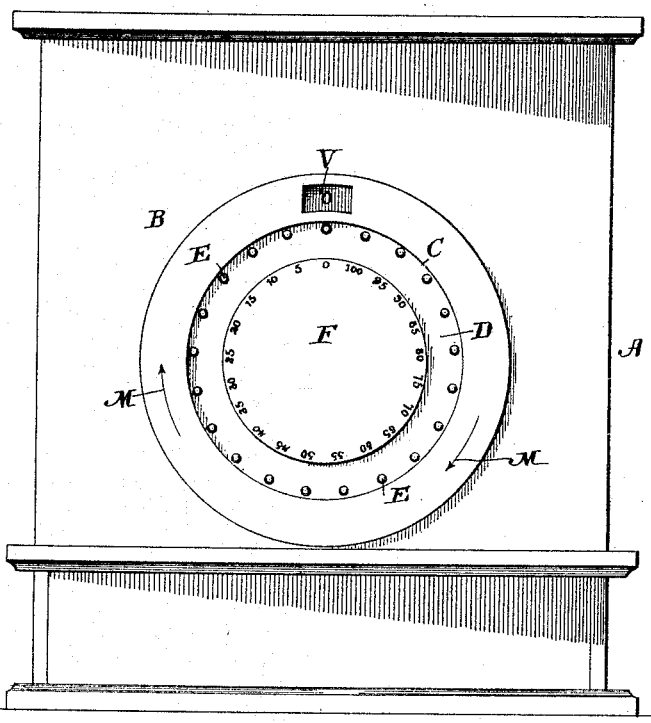
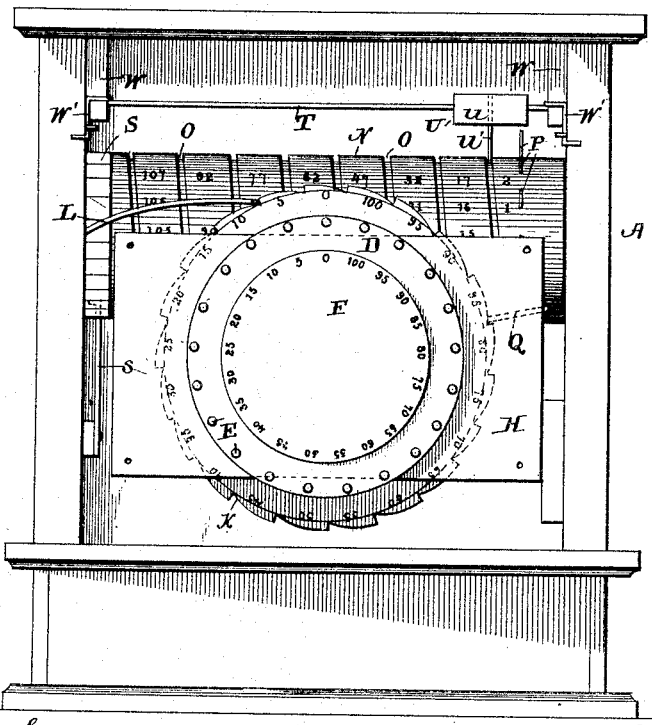


FIG. 2.



Witnesses

Jas. K. McCathran

Inventor

By his Attorneys, L. S. Field

C. A. Snow & Co.

(No Model.) 2 Sheets—Sheet 2.

L. S. FIELD.

CASH REGISTER.

No. 490,647. Patented Jan. 31, 1893.

FIG. 3.

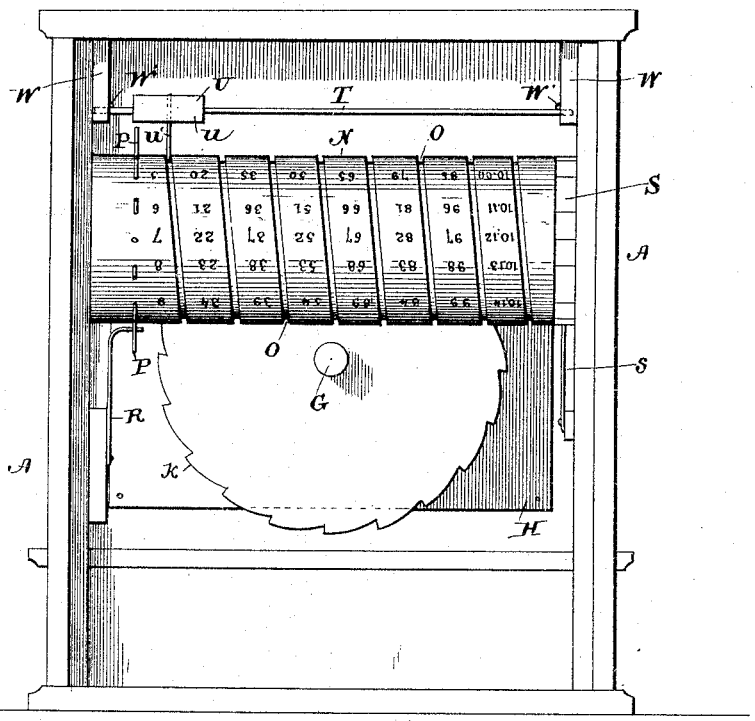


FIG. 4.

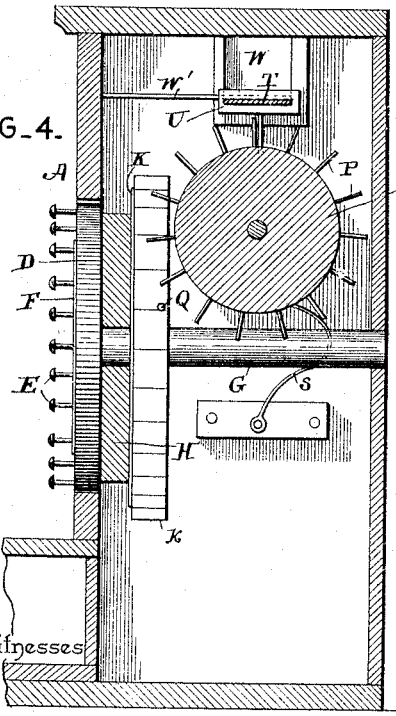
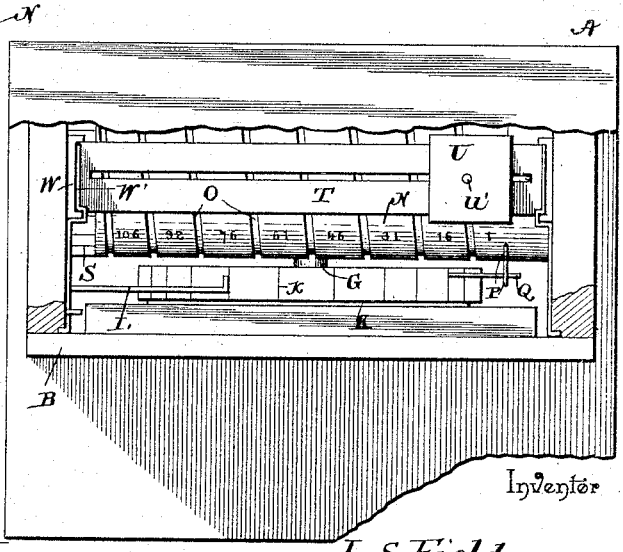


FIG. 5.



Witnesses

Jas. K. McCathran

Inventor

L. S. Field

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

LINUS S. FIELD, OF STORM LAKE, IOWA.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 490,647, dated January 31, 1893.

Application filed June 22, 1892. Serial No. 437,596. (No model.)

To all whom it may concern:

Be it known that I, LINUS S. FIELD, a citizen of the United States, residing at Storm Lake, in the county of Buena Vista and State of Iowa, have invented a new and useful Cash-Register, of which the following is a specification.

My invention relates to improvements in cash registers, my object being to provide a cheap, simple, and effective device for registering the amounts of cash sales and receipts, the amount of each purchase being exposed by the salesman to the view of the purchaser.

My invention is fully described in connection with the drawings, wherein;—

Figure 1 is a front view of a cash register embodying my improvements; Fig. 2 is a similar view with the front plate removed; Fig. 3 is a rear view with the rear plate removed; Fig. 4 is a vertical sectional view of the same; Fig. 5 is a plan view, partly broken away.

A represents the case of the register, the front plate, B, of which is provided with a circular opening, C, in which is fitted a circular, rotary dial, D, provided with knobs or pins, E, preferably twenty-one in number. A smaller dial-plate, F, carried by the rotary dial is provided with a series of numerals, one numeral being opposite each of the knobs or pins on the dial. The numeral, 0, (zero) is opposite one of the knobs or pins, and the numerals opposite the other knobs or pins are arranged in regular succession, 5, 10, 15, 20, &c., up to 100; the knob or pin designated 100 being next to the pin marked, 0. The numerals in this series increase in value toward the left, as shown in Fig. 1.

The horizontal shaft, G, by which the rotary dial is carried is mounted, just in rear of said dial, in a transverse plate, H, and at its rear end in a bearing in the rear plate of the case, and in addition to said dial the shaft carries a rotary indicator, K, which rotates with the dial and is provided with a corresponding series of numerals as shown in Fig. 2. The periphery of the indicator is serrated or provided with ratchet teeth, *k*, which are engaged by a retaining pawl, L, to prevent the dial, or indicator, from being reversed. They can be rotated only toward the right, as indicated by the darts, M, upon the rim which surrounds the opening in the front plate of the case.

In rear of the indicator, and above the shaft, above mentioned, is mounted a transverse cylinder, N, which is inscribed with a spiral series of numerals, arranged in consecutive succession, as, 1, 2, 3, 4, 5, 6, &c., up to 100, 200, or 300 according to the size of the cylinder and the choice of the manufacturer. This series of numerals extends spirally around the cylinder, beginning at the right, and following the direction of a spiral groove, O, which is cut in the face of the cylinder, as shown in Figs. 2, 3 and 5.

The cylinder is provided at one end, namely, the right, with a series of radial pins, P, each of which is opposite one of the numerals in the first circle of the spiral series. Each of the numerals in the spiral series is opposite one of these pins, as shown.

The indicator carries a radial arm, Q, which is adapted to engage the pins, P, successively, as the dial is rotated, whereby for each complete revolution of the dial the cylinder is turned through an arc corresponding to the distance between two successive numerals on its surface. That is, one revolution of the dial, from the numeral, 0, around to the same again will cause the cylinder to rotate through an arc corresponding to the interval between 0 and 1, or between 1 and 2, or between any two successive numerals thereon.

A click, R, consisting of a steel spring, is arranged to engage the radial pins, P, and indicate by the click the rotation of the cylinder through an arc corresponding to the interval between two successive numerals. The cylinder is provided, furthermore, at one end with a ratchet, S, which is engaged by the pawl, *s*, to prevent the reverse rotation thereof.

Above the cylinder, upon a transverse guide-bar, T, is mounted a sliding pointer, U, consisting of the slotted body-portion, *u*, which slides upon the guide-bar, and the depending metallic point, *u'*, which engages and operates in the spiral groove in the face of the cylinder. As the cylinder is rotated by the action upon its radial pins of the arm on the rotary indicator, the pointer follows the groove in the cylinder and is moved, thereby, toward the left, each partial revolution of the cylin-

der causing the pointer to mark a higher number of the spiral series.

The numerals upon the indicator are visible, individually, through a perforation, V, above the dial, the size of the perforation being only sufficient to expose one numeral at a time.

The numerals on the indicator represent cents, and it is necessary to turn the dial through an entire revolution, corresponding to one-hundred cents, in order to cause the cylinder to turn through an arc corresponding to the interval between two successive numerals in the spiral series, each of the latter designating one dollar.

The extremities of the transverse bar, T, are seated in brackets, W W, and are held firmly in place by the pressure springs, W′, which bear downwardly upon the ends of the bar. When it is desired to set the machine the bar may be raised against the pressure of the springs, sufficiently to allow the pointer to clear the grooves in the cylinder.

The machine being set, as shown in Figs. 1 and 2, with the zero exposed in the perforation above the dial, and the pointer opposite the pin marked zero on the cylinder, the operation of the register is as follows: The knob or pin opposite the numeral corresponding to the amount of the purchase is grasped and the dial is rotated in the direction indicated by the above-mentioned darts until the said numeral, (corresponding to the amount of the purchase), is visible through the perforation above the dial.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States, is;—

1. In a cash register, the combination with a rotary dial bearing a series of consecutive numerals, of a rotary cylinder provided with a spiral groove inscribed with a continuous series of numerals, a horizontally slidable pointer traveling upon a guide bar and engaging the groove of the cylinder, and means for communicating motion from the dial to the cylinder, consisting of an arm carried by the dial to successively engage radially-disposed pins upon the cylinder, substantially as specified.

2. In a cash register, the combination with the rotary dial, of the cylinder provided with a spiral groove inscribed with a continuous series of numerals, the transverse guide bar, fitted at its extremities in brackets and held in place by pressure springs, and the pointer mounted upon said guide bar and engaging the groove in the cylinder, whereby as the latter is rotated the former is moved laterally to indicate successive numerals, substantially as specified.

3. In a cash register, the combination of the rotary dial provided with projecting knobs or pins designated by numerals, the indicator carried by said dial and inscribed with a corresponding series of numerals, only one of said numerals being visible through a perforation in the case at one time, the cylinder provided with a spiral groove inscribed with numerals and having a series of radial pins to be engaged by a radial arm on the indicator, and the pointer engaging the groove in the cylinder, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LINUS S. FIELD.

Witnesses:
W. C. SKIFF,
F. L. WIRICK.