

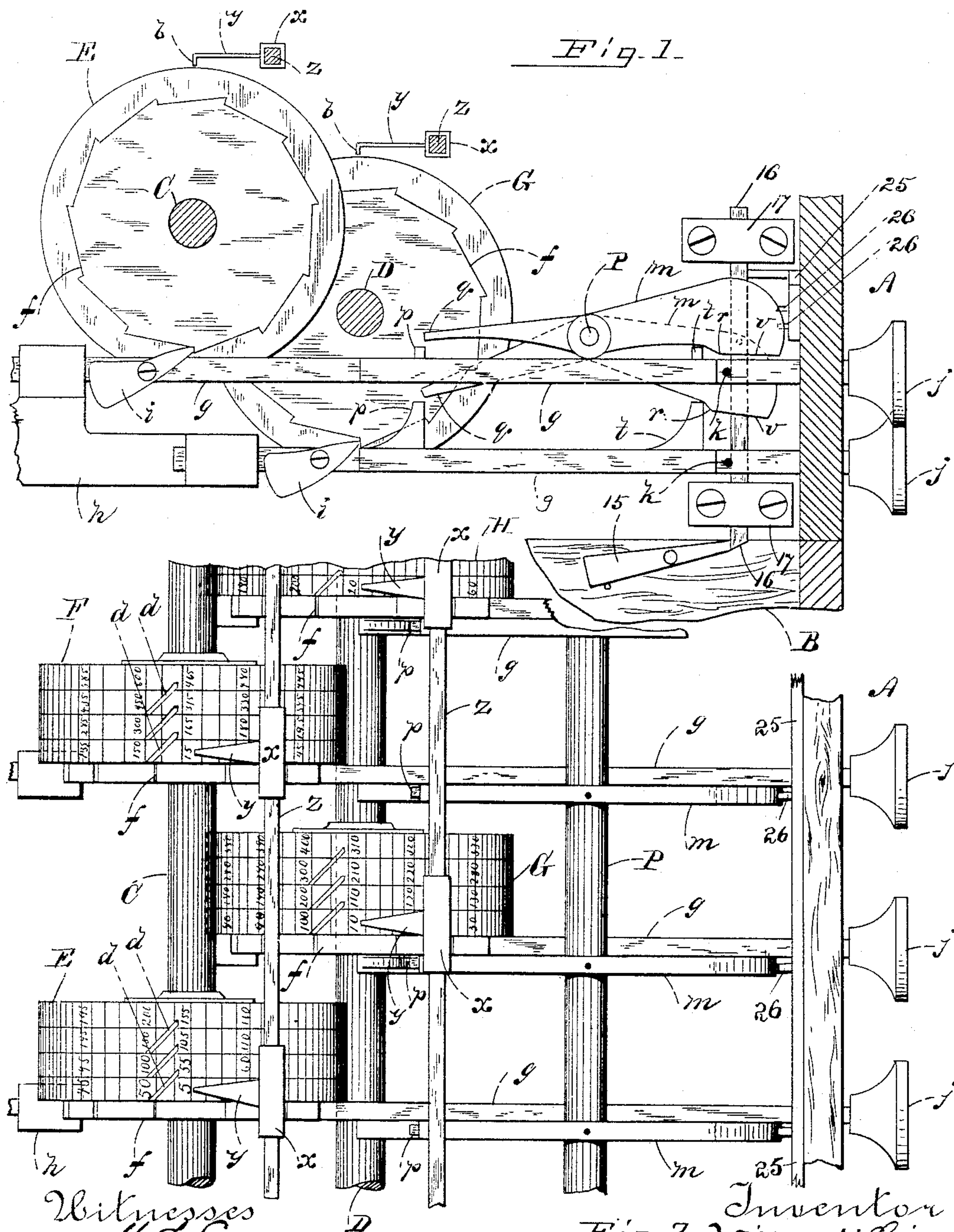
(No Model.)

W. H. GILMAN.

CASH REGISTER.

No. 448,021.

Patented Mar. 10, 1891.



Witnesses  
M. F. Egan  
H. Durfee

Inventor  
Willard H. Gilman

Per C. A. Shaw & Co.  
Attorneys.



# UNITED STATES PATENT OFFICE.

WILLARD H. GILMAN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO RICHARD S. DODGE AND ARTHUR W. TICE, OF SAME PLACE, AND RICHARD NAGLE, OF LYNN, MASSACHUSETTS.

## CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 448,021, dated March 10, 1891.

Application filed June 11, 1890. Serial No. 355,000. (No model.)

*To all whom it may concern:*

Be it known that I, WILLARD H. GILMAN, of Boston, in the county of Suffolk, State of Massachusetts, have invented certain new and useful Improvements in Cash-Registers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional end elevation illustrating the operating mechanism of my improved cash-register, the case and money-drawer being broken away; and Fig. 2 a top plan view of the same.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to machines for registering cash sales of merchandise; and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A designates the case, the front wall of which alone is shown, and B the money-drawer. Two shafts C D are journaled longitudinally in the case in different horizontal planes. A series of register-wheels E F are mounted loosely on the shaft C, and a corresponding series of wheels G H are mounted on the shaft D and alternate with those on the shaft C. The faces of these wheels are divided by peripheral lines into two or more parts divided into spaces by intersecting cross-lines. The spaces thus formed are numbered consecutively in each division, the numbers in each succeeding division beginning with the next higher number to that in the preceding division—as, for example, the spaces in the first division of wheel E are numbered with each fifth numeral from 5 to 50, this wheel being designed to record five-cent sales. The spaces in the next succeeding di-

vision are numbered beginning with 55 and terminating with 100, and so on for the remaining spaces on the wheel.

The spaces of wheel G are numbered by tens, beginning with 10, said wheel registering ten-cent sales. The spaces of wheel F are numbered in like manner by fifteens, beginning with 15, said wheel being employed to record fifteen-cent sales, and so on through the different wheels of the two series.

Each wheel E G is provided with a ratchet *f*. A horizontally-arranged rod *g* is mounted in the front of the case A, and in a bracket *h* near each registering-wheel, each of said rods bearing a weighted pallet *i*, engaging the ratchet *f* of the adjacent wheel, and rotating said wheel the distance of one tooth as its rod is drawn outward. Each rod bears on its outer end a knob *j*, imprinted with the numeral registering the numeral by which the spaces on its wheel increase, said rods and knobs forming the keys of the machine. A stop *k* on each rod determines its outward movement. A rocking-shaft P is mounted in the case parallel with the shafts C D and above the rods *g*. A series of locking-pawls *m* are mounted on said rocking-shaft, respectively, above each key-rod. On each rod *g*, a vertical stud or projection *p* is secured in such position that the point *q* of the adjacent pawl *m* may be projected in front of said stud and lock the key against withdrawal. The head of each pawl *m* is cam-shaped at *r*. A stud *t* on each rod *g* is in position to engage its pawl-cam *r* as said rod is drawn outward. These parts are so arranged that the stud *p* on said rod, as it moves, passes under the point *q* of the pawl before its stud *t* begins to elevate the head of said pawl. As the pawl is moved by the stud *t*, it rocks the shaft P from right to left, throwing the points *q* of the remaining pawls in front of their studs *p* and locking their key-rods against withdrawal. The stud *t* engaging a flat portion *v* of the pawl-head sustains said pawl and prevents the shaft P from returning until the rod which has been withdrawn is again pushed inward, when the weight of the pawl-heads rock said shaft to free the remaining keys.

Two horizontal rods *z*, rectangular in cross-section, are arranged, respectively, above the



register-wheels. A series of sleeves *x* are fitted to slide on these rods. Each sleeve has a pointed horizontally-arranged arm *y* provided with a vertical finger *b*.

5 A diagonally-arranged vertical partition *d* extends across each division of the indicator-wheels and leads from the highest numeral of said division to the lowest numeral of the succeeding division. As said wheels com-  
10 plete a rotation, the finger *b* of the index-arm *y* is engaged by a partition, and said arm moved thereby on its rod until its point rests on the lowest numeral of the next division.

The money-drawer B slides in the bottom  
15 of the case in the usual manner, and is provided with a locking pawl or dog 15, which engages the lower end of a vertical rod 16 fitted to slide in brackets 17 in the case. A spring at the back of the drawer throws it  
20 outward when released in the usual manner.

A horizontally-arranged bar 25 is secured to the rod 16 and bears a series of cams 26, disposed in position to be engaged, respect-  
25 ively, by the heads of the pawls *m* when elevated, tripping the rod 16 and releasing the drawer.

In the use of my improvement when a sale, for example, of five cents, is made the key having its knob *j* marked "5" is drawn out-  
30 ward. The drawer-locking mechanism is thereby released. The stud *t* on its rod throws the head of the pawl *m* upward, rocking the shaft P and throwing the points of the remaining pawls downward in front of  
35 the corresponding studs *p*. This locks all of the remaining keys against withdrawal. The movement of the rod *g* causes the corresponding wheel E to rotate the distance of one tooth of the ratchet *f*, which corresponds to  
40 one space on the periphery, the index-point *b* being now disposed over the numeral 5. The drawer being pushed in is locked by the rod 16 in the usual manner, the dog 15 riding under said rod. When sufficient five-cent sales  
45 have been made to move the wheel E a complete revolution, its first partition *d* engages the finger *b* and slides the index over the numeral 55. When sales of larger amounts are made, the key which has been previously em-  
50 ployed is first pushed inward. This releases

its pawl from the stud *t* and permits the rocking of the shaft P to free the remaining keys, which may then be used to record the amounts on their respective wheels G F in like manner.

By adding the amounts registered on the  
55 various wheels by their respective indices *y* the gross amount of sales may be determined.

The numbers in the spaces of the wheels shown advance by fives; but it will be understood that said spaces may be numbered in  
60 any desired manner.

Having thus explained my invention, what I claim is—

1. The combination of a case, a series of sliding keys, a series of locking-pawls actu-  
65 ated by said keys, a money-drawer, and a drawer-locking mechanism adapted to be released by said pawls, substantially as described.

2. The combination of a case, a rotary reg-  
70 ister-wheel having its face divided into numbered spaces by peripheral lines, and short diagonal partitions on said face at a given point on its periphery, and a sliding index-  
75 finger adapted to be engaged by said partitions to shift it into a succeeding division at each complete revolution of said wheel, substantially as described.

3. The case, drawer, and locking mechanism, in combination with the sliding keys *g*,  
80 provided with the studs or projections *p t*, and the pawls *m*, mounted on the shaft P, substantially as described.

4. The case, drawer, and locking mechanism, in combination with the sliding keys *g*,  
85 provided with the studs *p t*, the pawls *m*, the wheels E G F H, and actuating mechanism, substantially as described.

5. The rotary register-wheels provided with numbered spaces and diagonal partitions, in  
90 combination with the sliding index-fingers *y*, the keys *g*, provided with pawls *i*, engaging ratchets on said wheels, and the locking-pawls *m*, arranged to operate substantially as set forth.

WILLARD H. GILMAN.

Witnesses:

K. DURFEE,  
O. M. SHAW.