

E. K. HELLER.
CASH REGISTER.

No. 499,885.

Patented June 20, 1893.

Fig. 1.

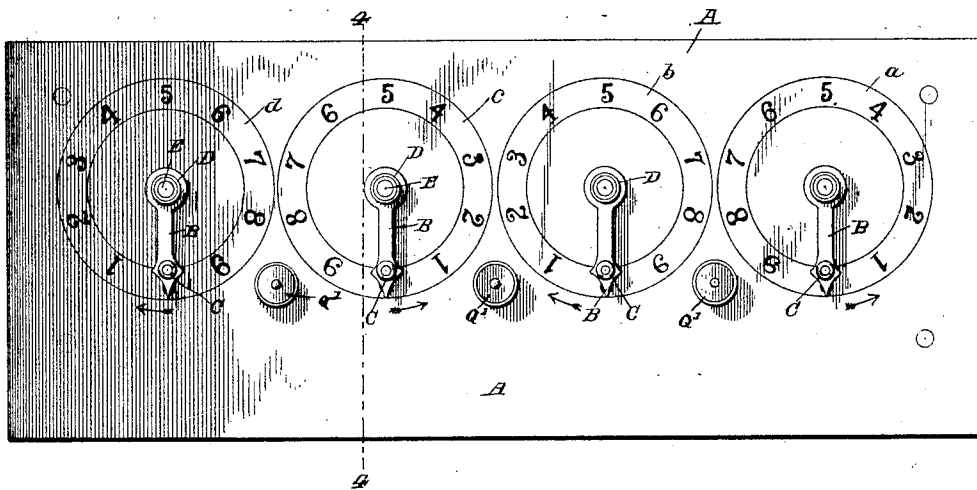


Fig. 2.

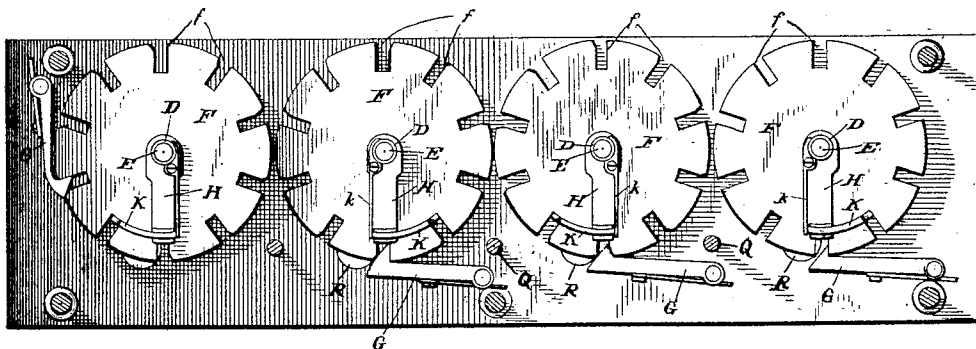


Fig. 8.

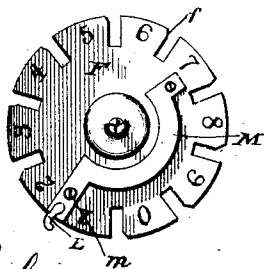
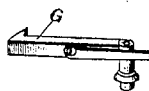


Fig. 6.



Witnesses

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

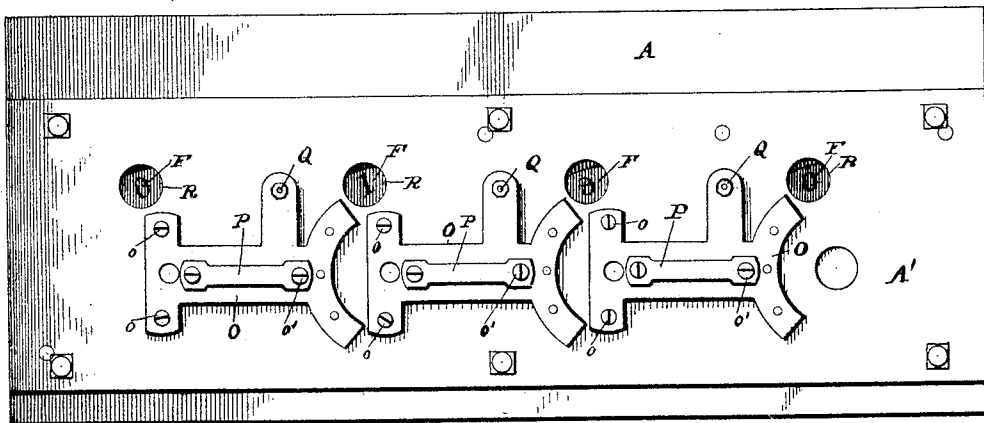


Fig. 4.

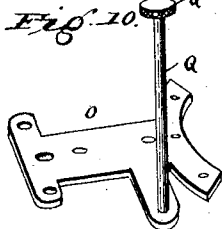
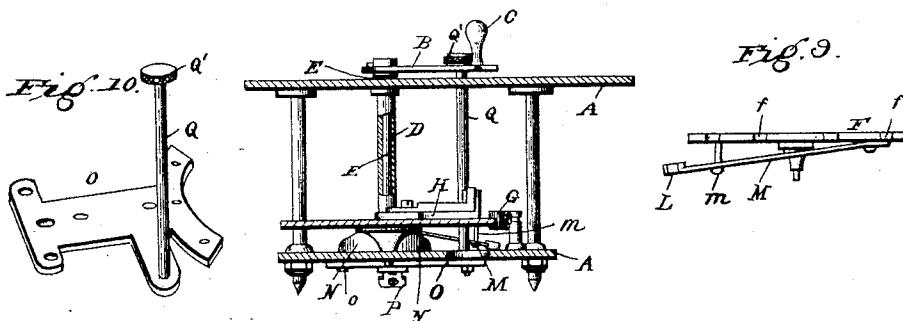


Fig. 5.

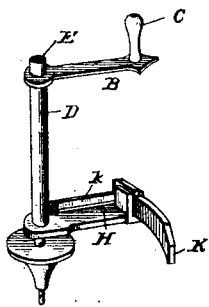


Fig. 7.

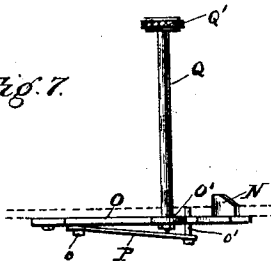
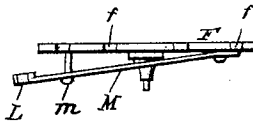


Fig. 9.



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UNITED STATES PATENT OFFICE.

EUGENE K. HELLER, OF SAUK CITY, WISCONSIN.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 499,885, dated June 20, 1893.

Application filed August 20, 1892. Serial No. 443,653. (No model.)

To all whom it may concern:

Be it known that I, EUGENE K. HELLER, a citizen of the United States, residing at Sauk City, in the county of Sauk and State of Wisconsin, have invented a new and useful Cash-Register, of which the following is a specification.

My invention relates to improvements in cash registering devices, the object in view being to provide a simple device which will add the successive amounts registered thereon, and register the sum, so that the total amount registered may be seen at any time.

Further objects and advantages of my invention will appear in the following description, the novel features thereof being particularly pointed out in the appended claims.

In the drawings, Figure 1 is a plan view of a registering device embodying my improvements. Fig. 2 is a horizontal sectional view taken beneath and close to the top plate. Fig. 3 is a reverse plan view of the registering device. Fig. 4 is a transverse vertical sectional view, taken parallel with and close to one of the spindles on line 4-4 of Fig. 1. Fig. 5 is a detail view of one of the operating pawls. Fig. 6 is a similar view of one of the stop-pawls. Fig. 7 is a similar view of one of the cams and the supporting plate by which it is carried. Fig. 8 is a reverse plan view of one of the notched disks, showing the gravity catch carried thereby. Fig. 9 is a detail section of one of the disks. Fig. 10 is a detail view of a push-rod and plate detached from the frame.

A represents the top plate, provided with a series of dials, *a, b, c, d*, of any desired number, four only, being shown in the drawings, as this is sufficient to show the construction and operation of my invention. These dials are numbered, each being provided with ten numerals, which represent, respectively, units, tens, hundreds, and thousands, or, in other words, cents, dimes, dollars, and ten-dollars. Over the face of each dial operates a pointer or indicator, B, provided with a handle, C, said pointer being carried by a tubular shaft or sleeve, D, mounted upon the vertical spindles, E. These spindles are mounted at their front and rear ends, respectively, in the front and rear plates, and near their rear (or lower)

ends are arranged the disks, F, one upon each spindle, and secured firmly thereto, the same being provided in their peripheries with notches, *ff*.

G G are stop-pawls, provided with actuating springs, and arranged to hold the disks in their several adjusted positions by engaging the said notches. The noses of these pawls are beveled upon one side to allow each disk to be turned in one direction; adjacent disks being rotatable in opposite directions, as indicated by the alternate bevels upon the pawls.

Secured to the lower ends of the sleeves D by which the pointers B are carried, and operating over the upper surfaces of the disks F are the radial arms, H, which carry the operating pawls K, also provided with actuating springs, *k*, said pawls engaging the peripheral notches in the disks.

The catches, L, which are carried respectively by the disks, are connected thereto by arms, M, which are loosely pivoted at one end to the rear or under surface of the disk and operate near their outer ends upon guide-pins, *m*. Each catch L is arranged to fit in a notch of the disk to which it is connected, and it projects beyond the periphery of the same to engage a notch of the adjacent disk which corresponds with the dial having a larger denomination; that is, the catch carried by the cents dial is designed to engage the notches of the dimes dial, so as to turn the latter the distance of one notch, or one numeral, for each complete rotation of the cents dial. The catches L are disengaged from their notches by gravity.

To cause the catches L to enter their respective notches at certain points of the rotation of the several disks, I employ cams, N, arranged in the paths of the catches and carried by supporting plates, O, secured to the under side of the bottom plate A', as shown clearly in Fig. 3. These plates O are loosely mounted at one end upon small screws *o o* secured to the bottom plate A' and are capable of vertical movement at their free ends, guided by the guide-screws, *o'*, which plates O are actuated to hold the cam N normally in the path of the catches L, as shown in Fig. 4, by the springs, P.

Push bars, Q, provided at their front ends

with push buttons, Q', are attached to the cam-supporting plates O, whereby the cams may be depressed out of the paths of the catches when necessary to set the disks F to zero.

The disks F are provided upon their lower faces with numerals (see Fig. 8) corresponding with those upon the dials, and apertures, R, are formed in the lower plate, through which one of said numerals of each disk may be seen, so that the latter may be properly adjusted prior to the operation of the register. The function of the push-bars is to enable the plates O and the cams N to be depressed so that the latter may not elevate the catch L sufficiently to engage a notch in the adjacent disk. In this way either of the disks may be turned freely, for the purpose of setting, without affecting either of the other disks.

The operation of my improved machine is as follows: Having arranged the disks so that the cipher is visible through each of the apertures in the bottom plate by turning the pointers in the direction indicated by the darts in Fig. 1, meanwhile depressing the cams N by means of the push-buttons and having arranged the pointers by turning in the opposite direction to indicate a cipher upon each dial, if it is desired to register sixteen dollars and fifty-five cents, the pointer upon dial *d* is turned to the numeral 1, the pointer upon dial *c* is turned to 6, the pointer upon dial *b* is turned to 5, and the pointer upon dial *a* is turned to 5. Now, subsequently, if it is desired to register three dollars and forty-five cents, the pointer upon dial *c* is moved three spaces, that upon dial *b* is moved four spaces, and that upon dial *a* is moved five spaces, the final movement of the pointer upon dial *a*, from the numeral 9 to 0, causing all of the other pointers to move the distance of one space, whereby that upon dial *d* now indicates 2 (which indicates twenty dollars), and the pointers upon the remaining dials indicate 0.

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

1. In a device of the class described, the combination of the front and rear plates, the spindles mounted in bearings therein, disks fixed to such spindles and provided with peripheral notches, sleeves rotatably mounted upon said spindles, pointers fixed to said sleeves fixed dials upon the front plate traversed by said pointers, arms fixed to said sleeves and carrying pawls to engage said peripheral radial notches at their inner ends, retaining pawls engaging the notches in each disk, and means carried by the disks for com-

municating motion from one to another, substantially as described.

2. In a device of the class described, the combination of rotatable disks provided with peripheral notches, catches loosely connected to and carried by the disks, each catch being adapted to lie in one of the peripheral notches of the disk by which it is carried, the pointers, the dials traversed by said pointers, the pawls respectively connected to said pointers and engaging the notches in the disks, the movable cams in the paths of the said catches, and means to operate the cams, substantially as described.

3. In a device of the class described, the combination of the rotatable disks having spindles and peripheral radial notches, sleeves mounted upon said spindles and provided with radial arms, pawls carried by said arms and engaging the peripheral notches, pointers fixed to said sleeves, retaining pawls engaging said notches, gravity catches adapted to lie in one of the notches in each disk, and means to cause each catch to enter its respective notch, substantially as described.

4. In a device of the class described, the combination of rotatable disks, provided with spindles, and having peripheral notches, operating pawls loosely mounted upon said spindles to engage the said notches, catches having arms which are loosely connected to said disks, spring pressed cams in the paths of said catches, and push-bars connected to the cams, substantially as described.

5. In a cash registering device, the rotatable disks provided with peripheral notches, as described, the gravity catches, the fixed dials the pointers traveling over said dials, and the operating pawls connected to and operated by said pointers, in combination with the cams, normally arranged in the paths of said catches, the supporting plates upon which said cams are arranged, the same being spring-actuated, and the push rods connected to said supporting plates, substantially as specified.

6. In a device of the class described, the combination of the notched disks F, means to rotate such disks, catches loosely connected to the disks to lie in the notches thereof, loose plates O, cams carried by said plates in the paths of the said catches, and actuating springs P attached to the plates O, substantially as described.

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

EUGENE K. HELLER.

Witnesses:

WM. DRESEN,
GEORGE GASSER.