

(No Model.)

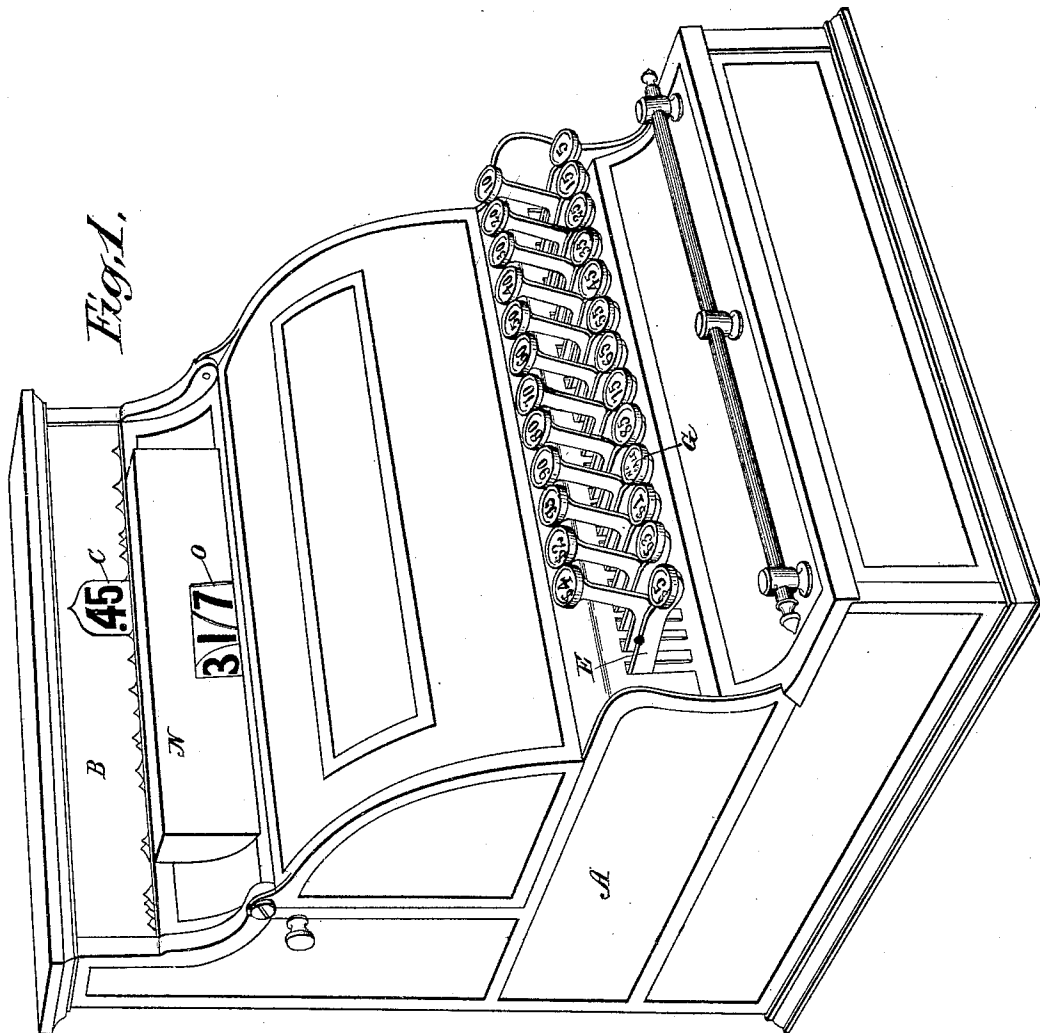
3 Sheets—Sheet 1.

L. F. BROUS.

IRREGULAR NUMBER INDICATING DEVICE FOR CASH REGISTERS.

No. 551,665.

Patented Dec. 17, 1895.



Witnesses.
S. H. Brainerd.
J. S. Gleason.

Inventor.
Louis F. Brous
by Edward Rector
his atty.

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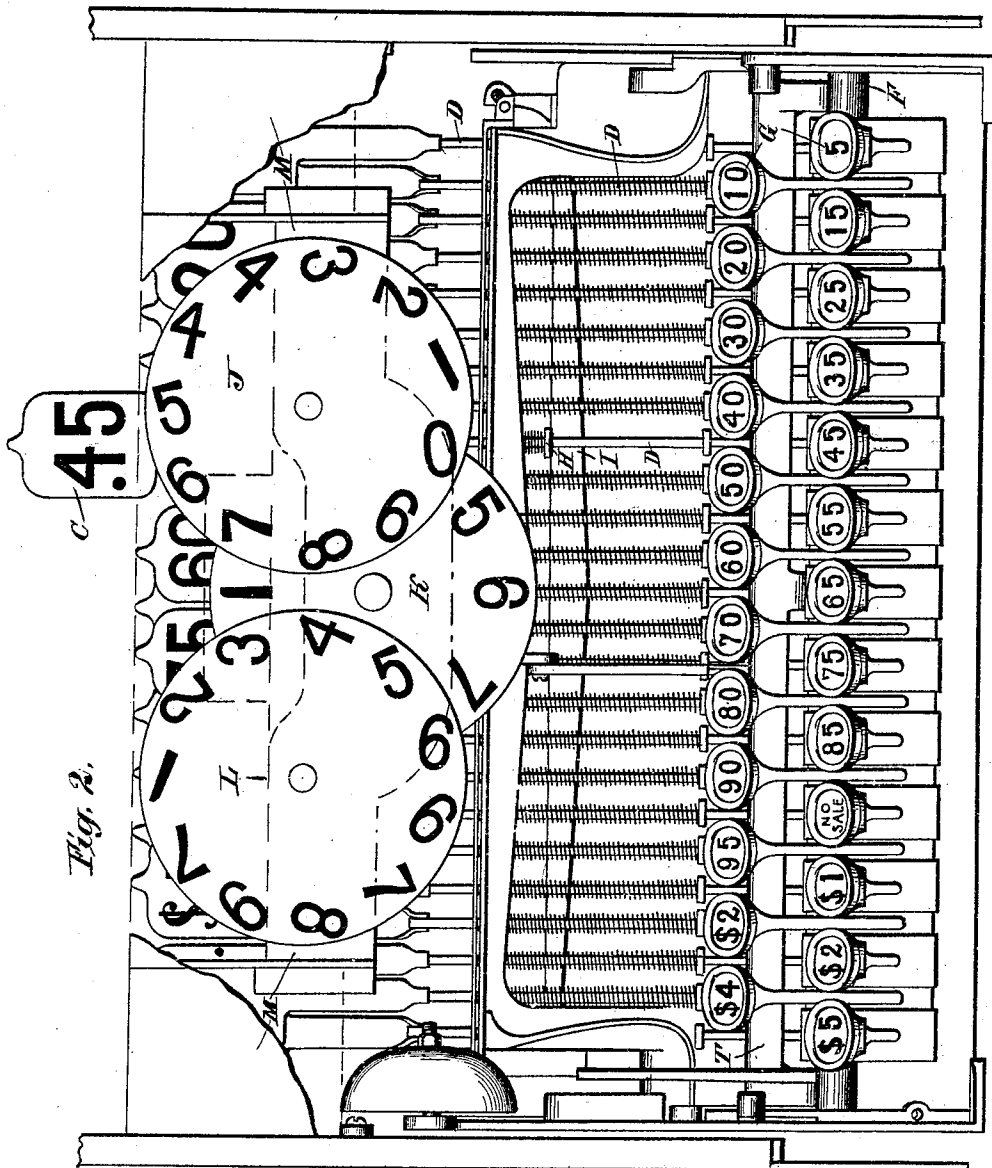
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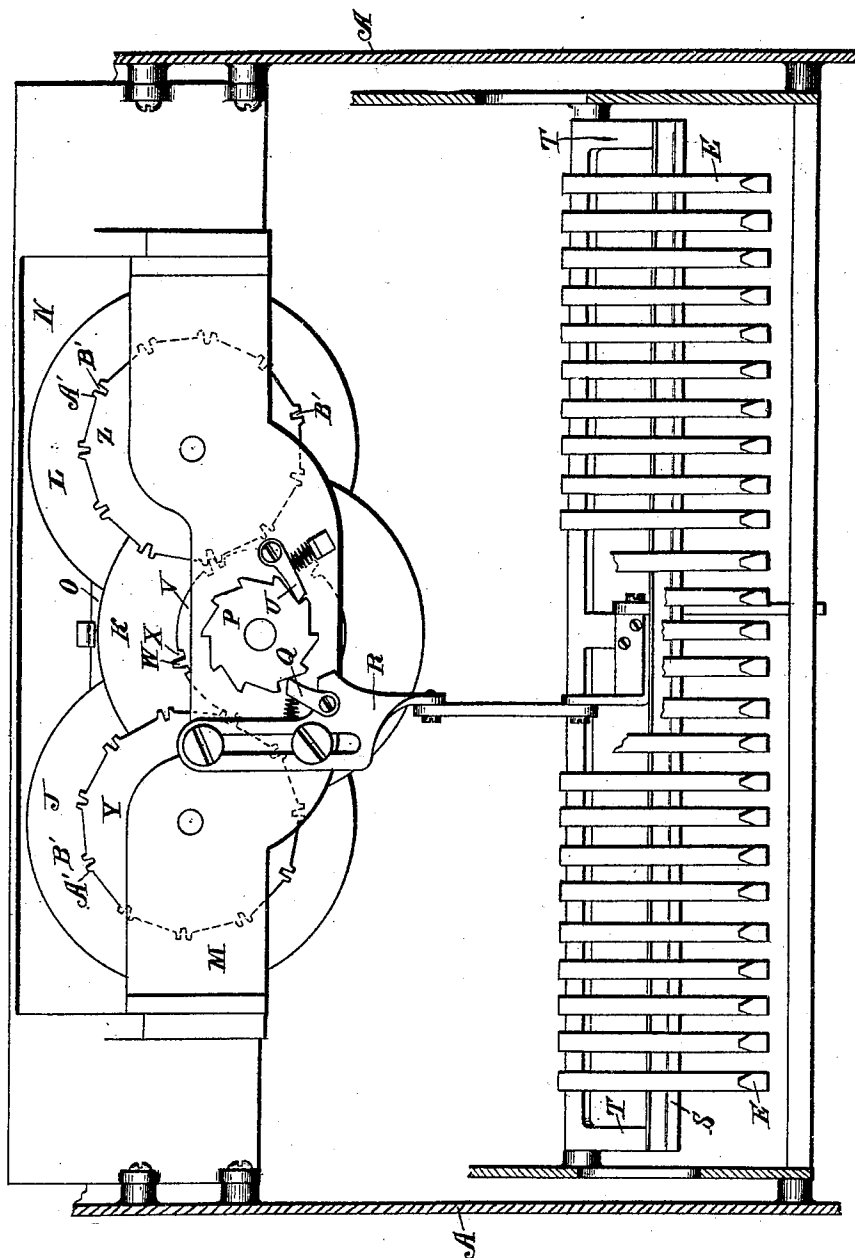
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Fig. 3.



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UNITED STATES PATENT OFFICE.

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IRREGULAR-NUMBER-INDICATING DEVICE FOR CASH-REGISTERS.

SPECIFICATION forming part of Letters Patent No. 551,665, dated December 17, 1895.

Application filed January 30, 1894. Serial No. 498,465. (No model.)

To all whom it may concern:

Be it known that I, LEWIS F. BROUS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Cash Registers and Indicators, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

The indicators constitute the detective element of machines of this class—the element which insures the operation of the proper keys by the clerk and the consequent registration of the full amount of money he receives. Without the indicators the machine would be simply an adding-machine and the clerk would be at liberty to operate keys representing less amounts than those actually received, and be thereby enabled to defraud the proprietor; but in order that the indicators shall serve their purpose of compelling the clerk to register the actual amount he receives it is necessary that they shall be observed by the customers or bystanders, for it is fear upon the part of the clerk that they will notice that he has displayed the wrong indicator which obliges him to display the right one. For the purpose of attracting the attention of such persons to the machine and to the displayed indicator machines of this character are always provided with an alarm-gong, which is sounded at each operation. This, however, does not always serve the desired purpose, for many customers are indifferent to the proper or improper operation of the machine, or its operation at all, provided they receive back their proper change, and in any event if they see the clerk go to the machine and operate it and sound the alarm and open the cash-drawer they are not apt to notice what particular indicator is displayed, unless they are standing quite near the machine, and to assume that the machine has been properly operated. Inasmuch as the chief value of these machines in practical use consists in the obligation imposed upon the clerk of keeping an exact registry of all the money he receives and accounting for it to the proprietor, and inasmuch as this obligation is made effective by the presence of

the indicators and the clerk's consequent fear of detection by means of them in case he attempts to defraud the proprietor, it is the object of my invention to provide more efficient means than have heretofore been employed to attract the attention of customers to the machine and to the indicators displayed by the clerk. To that end I purpose to enlist their interest in the use of the machine and make it an object to them to notice it when the clerk operates it. For that purpose I provide an auxiliary indicator actuated at each operation of the machine to display different numbers in irregular order, no matter what key is used or what amount registered. The proprietor will interest his customers in watching this auxiliary indicator by some plan or system suitable to his business. Thus, in a grocery store, he may display signs or have it otherwise announced or understood that when a certain number is displayed upon the auxiliary indicator by the register of a customer's purchase the customer shall be given a credit or discount of a certain per cent. upon the amount of such purchase; or in a cigar store, that the display of such number shall entitle the purchaser to one or more extra cigars of the same kind as those he has purchased, and so on. As before stated the numbers are arranged to be displayed by the indicator in irregular order, so that it will not be possible to tell from the number in view what one will next be displayed. The inducements offered by the proprietor will cause the customer to watch the machine when his purchase is registered. If he is not standing near it when his purchase is made he will follow the clerk when the latter goes to it to register the purchase and will in most cases stand immediately in front of the machine or quite near it when it is operated. In such position, although it is the auxiliary indicator which has attracted him to the machine, he will rarely fail to notice the regular cash-indicator which is thrown into view at the same time. Even if he has no interest in it, or is not thoroughly familiar with the uses and purposes of the machine, the display of an indicator representing a less amount than his purchase will naturally excite his curiosity and in most cases cause comment or in-

quity. The clerk will therefore fear to incur the risk of detection and will operate the proper key and display the indicator representing the full amount of the purchase, and thereby necessarily register such amount within the machine and be obliged to account for it to the proprietor.

Having now explained the general nature and object of my invention, I will next describe it in detail in the particular form in which it has in the present instance been illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a common form of cash register and indicator embodying my invention; Fig. 2, a front elevation of the machine without the casing and with the registering mechanism removed, and Fig. 3 a rear elevation with the same parts and the cash-indicators and associated devices removed.

The same letters of reference are used to indicate identical parts in all the figures.

The working parts of the machine are inclosed in the usual casing A, having in its upper rear portion a glass-covered window B for the exposure of the regular cash-indicators C. These indicators are carried by the vertically-guided rods D, which rest at their lower ends upon the rear ends of the key-levers E, which are fulcrumed upon a horizontal rod F in the lower forward part of the machine and project at their front ends through vertical slots in the casing and are provided with the numbered finger-buttons G. The rods D are provided with collars H, which co-operate with the pivoted supporting bar or wing I in the usual well-known manner to temporarily hold the operated indicators elevated and exposed to view at the window B.

The auxiliary indicator heretofore referred to consists in this instance of three circular dials J K L mounted in a frame M consisting of two parallel vertical plates extending across the machine in front of the row of cash-indicators C. The upper halves of the disks are inclosed in a rectangular housing N upon the front of the casing, and the two disks J L overlap the disk K, so that single figures upon each of the three disks may be exposed at once through a sight-opening O in the housing N and read as one number. Fast on the shaft of the middle disk K, upon the rear side of the frame M, is a ratchet P engaged by a pawl Q pivoted to a vertical sliding-plate R guided upon the rear side of the frame M and pivotally connected at its lower end to the cross-bar S of the usual vibrating frame of the machine. Such frame consists of the cross-bar S, overlying all of the keys, and its supporting side arms T by which it is hung to the framework. When the front end of any one of the key-levers is depressed, its rear end will lift the bar S and cause the pawl to turn the disk K forward one number. A holding-pawl U pivoted to the rear side of the frame

M and engaging the ratchet P prevents backward turning of the disk.

Fast upon the rear side of the disk K, between the two plates of the frame M, is a disk V, provided upon its periphery with several teeth W and adjacent notches X. This disk is adapted to co-operate with disks Y Z fast upon the rear sides of the disks J L, respectively, and each provided upon its periphery with a series of sets of teeth or projections A' and interposed notches B'. The disks V Y Z co-operate with each other in much the same manner as the similar disks of the common Geneva movement, the disk V locking the disks Y Z from movement except when it is turned until one of its teeth W enters a notch B' in the disk Y or Z and the two teeth A' adjacent such notch enter the notches X adjacent the tooth W of the disk V. At such time the disk V will turn the disk Y or Z until the engaged notches and projections clear each other, whereupon the disk Y or Z will again become locked against the periphery of the disk V, while the latter is free to turn forward alone until another one of its teeth W engages another notch B' in the disk Y or Z. In this manner the movements of the indicator-disk K are intermittently transmitted to the disks J and L.

The teeth upon the disk V are arranged at such distances apart or in such irregular order that they will actuate the disks Y Z at some operations of the machine, and at others not, or will sometimes actuate the disk Z, at other times the disk Y, and at times both of them. This arrangement would of itself cause the numbers upon the indicating-dials to be displayed in irregular order at succeeding operations of the machine, but, as before stated, the numbers upon the dials are in this instance themselves arranged in irregular order, so that for both reasons it is impossible for the customer or bystander to tell what number is going to be displayed at any given operation of the machine. While I prefer to provide for the irregular operation of the disks Y and Z, as above described, and also to arrange the numbers upon the dials in irregular order, yet my invention contemplates the display of the indicating numbers in irregular order by either means or by both combined.

While it is preferable to employ a set of dials, as J K L, for the auxiliary indicator, in order that the numbers may be made conspicuous and displayed side by side at a single sight-opening below and in front of the regular cash-indicators, yet my invention is not restricted to this particular form and arrangement of such indicator, nor need the auxiliary indicator be actuated directly by the keys, since it may instead be actuated by any suitable part of the machine which is moved at each operation—as by the money-drawer, for instance—and this is especially true where the invention is applied, as it may readily be,

to machines in which the main operating device is a handle or a motor instead of the keys themselves.

So far as I am aware I am the first in the art to combine an auxiliary indicator of any sort with the regular cash-indicators and the operating-keys or other movable part of the machine for the purpose and under the mode of operation described, and my invention is therefore not limited beyond the terms of the respective claims in which it is expressed.

Having thus fully described my invention, I claim—

1. In a cash register and indicator employing a series of cash indicators, the combination of an auxiliary indicator having its indicating numbers arranged in irregular order, and connections with a movable part of the machine for actuating said indicator at each operation of the machine, substantially as and for the purpose described.

2. In a cash register and indicator employing a series of cash indicators, the combination of an auxiliary indicator and connections with a movable part of the machine having an approximately uniform movement at each operation, for actuating said indicator and displaying its numbers in irregular order at successive operations of the machine, substantially as and for the purpose described.

3. In a cash register and indicator employing a series of cash indicators, the combination of an auxiliary indicator and connections with the keys of the machine through a member having an approximately uniform movement at each operation, for actuating said indicator and displaying its numbers in irregular order at successive operations of the machine, substantially as and for the purpose described.

4. In a cash register and indicator, the combination, with the operating keys and the regular cash indicators, of an auxiliary indicator having its indicating numbers arranged in irregular order, and connections with the keys for actuating said indicator upon the operation of any one of them, substantially as and for the purpose described.

5. In a cash register and indicator, the combination, with the operating keys and the regular cash indicators, of an auxiliary indicator composed of two or more rotary members having indicating numbers arranged upon them in irregular order, means intermediate said members for causing one to intermittently actuate the other, and connections with the keys for actuating one of said members upon the operation of any one of the keys, substantially as and for the purpose described.

6. In a cash register and indicator, the combination, with the operating keys and the regular cash indicators, of an auxiliary indicator composed of two or more rotary members, means intermediate said members for causing one to intermittently actuate the other at ir-

regular intervals to display the numbers upon the two members in irregular order at successive operations of the machine, and connections with the keys for actuating one of said members at the operation of any one of the keys, substantially as and for the purpose described.

7. In a cash register and indicator, the combination, with the operating keys and the regular cash indicators, of an auxiliary indicator consisting of two or more rotary dials arranged in approximately the same vertical plane and having their indicating numbers arranged in irregular order, and connections with the keys for actuating one of said dials at the operation of any one of the keys, substantially as and for the purpose described.

8. In a cash register and indicator, the combination, with the operating keys and the regular cash indicators, of an auxiliary indicator consisting of two or more rotary dials arranged in approximately the same vertical plane, connections with the keys for actuating one of the dials, and means intermediate the dials for causing the one to actuate the other or others at irregular intervals, substantially as and for the purpose described.

9. In a cash register and indicator employing a series of cash indicators, the combination of an auxiliary indicator consisting of two or more rotary dials overlying each other and arranged in approximately the same vertical plane transversely of the machine below and in front of the cash indicators, connections with a movable part of the machine for actuating one of said dials at each operation of the machine, and means intermediate said dials for causing the one to actuate the other or others at irregular intervals, substantially as and for the purpose described.

10. In a cash register the combination of the casing A having the window B for the exposure of the cash indicators and the sight opening O below and in front of the same for the exposure of the auxiliary indicator, the reciprocating cash indicators C, the operating keys E for actuating the same, the three auxiliary indicating dials J K L arranged in approximately the same vertical plane in front of and parallel with the row of cash indicators and overlapping each other so as to expose a single number upon each of them at the sight opening O, the co-operating disks V Y Z turning with the indicating disks, the ratchet P upon the shaft of the disk K, the vibrating frame overlying the keys, the reciprocating plate R actuated thereby, and the pawl Q carried by said plate and co-operating with the ratchet P, substantially as and for the purpose described.

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Witnesses:

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