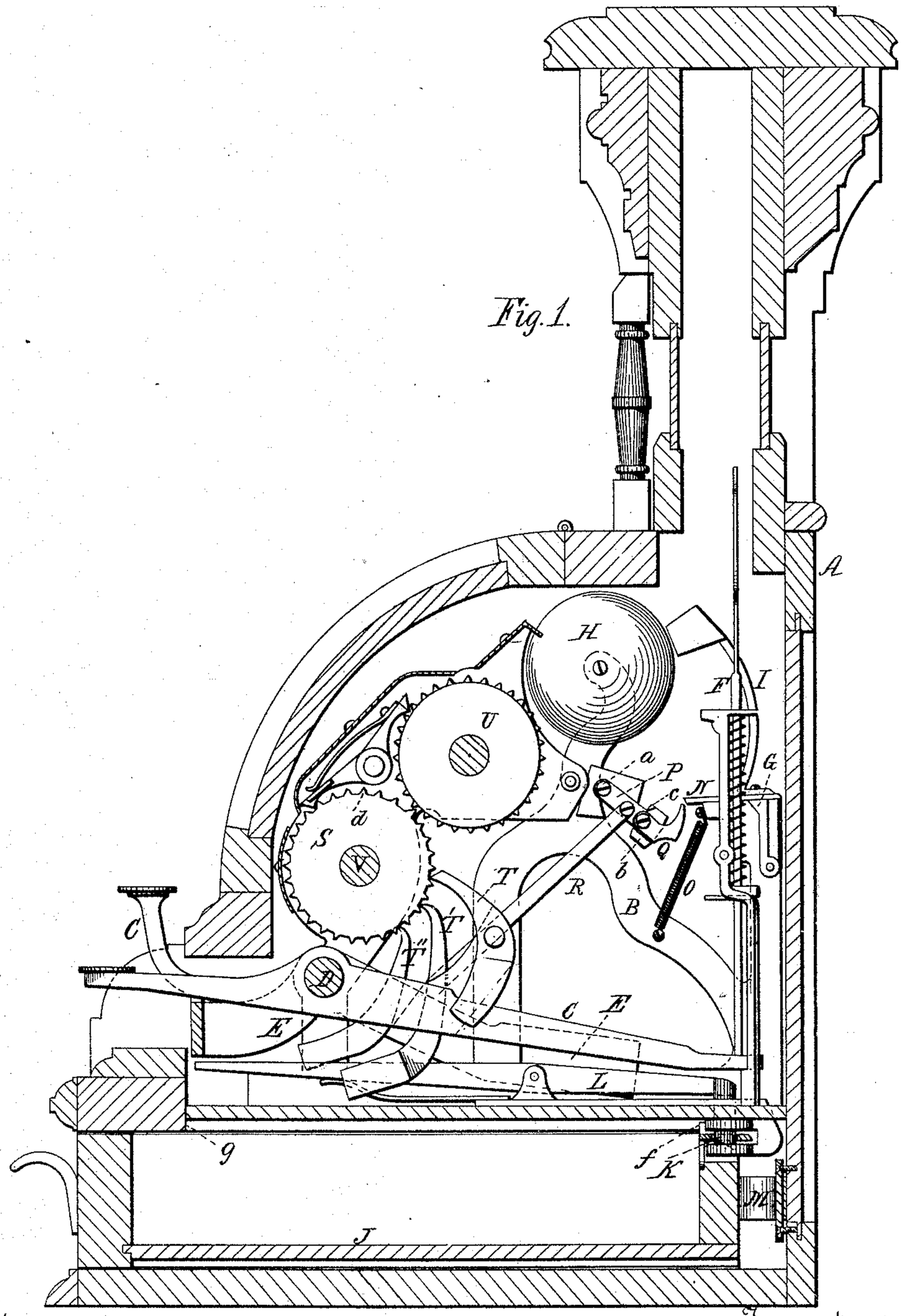
(No Model.) 2 Sheets—Sheet 1.

F. J. PATTERSON, I. P. DAVIS & A. HERRMAN.

CASH REGISTER AND INDICATOR.

No. 351,460. Patented Oct. 26, 1886.

Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

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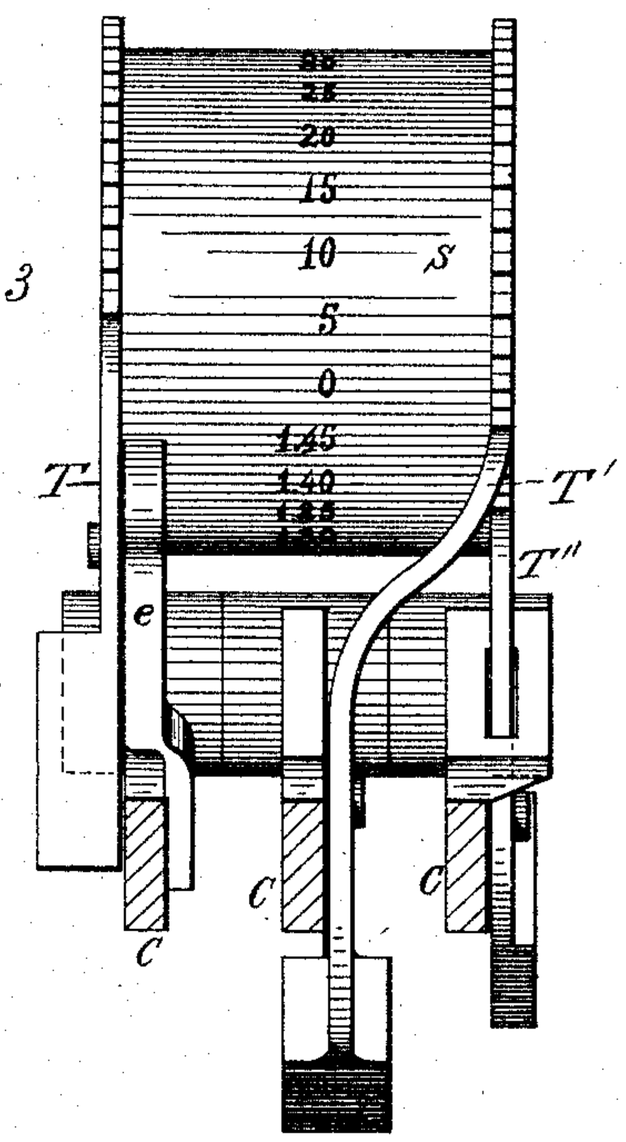
Fig. 3



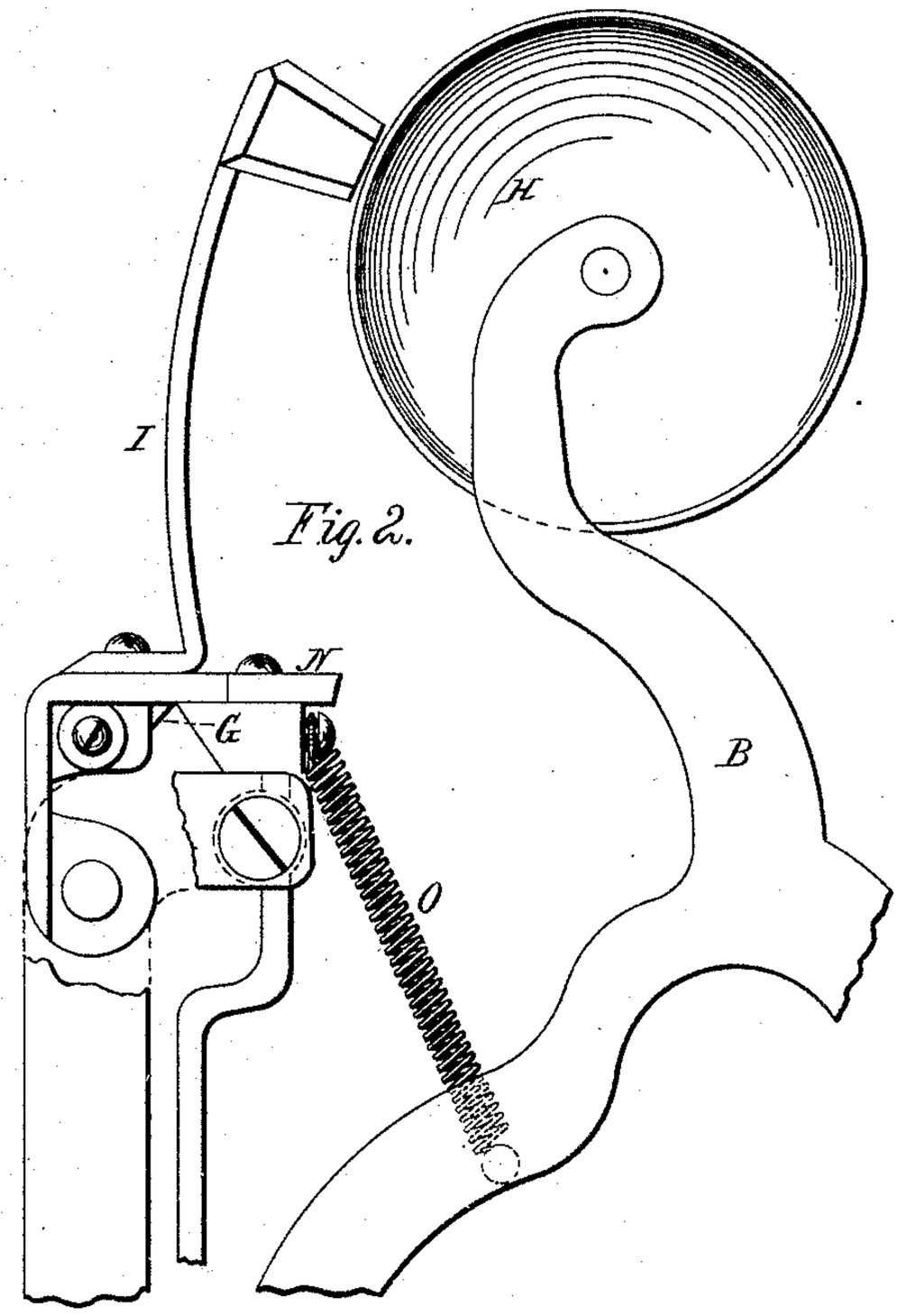
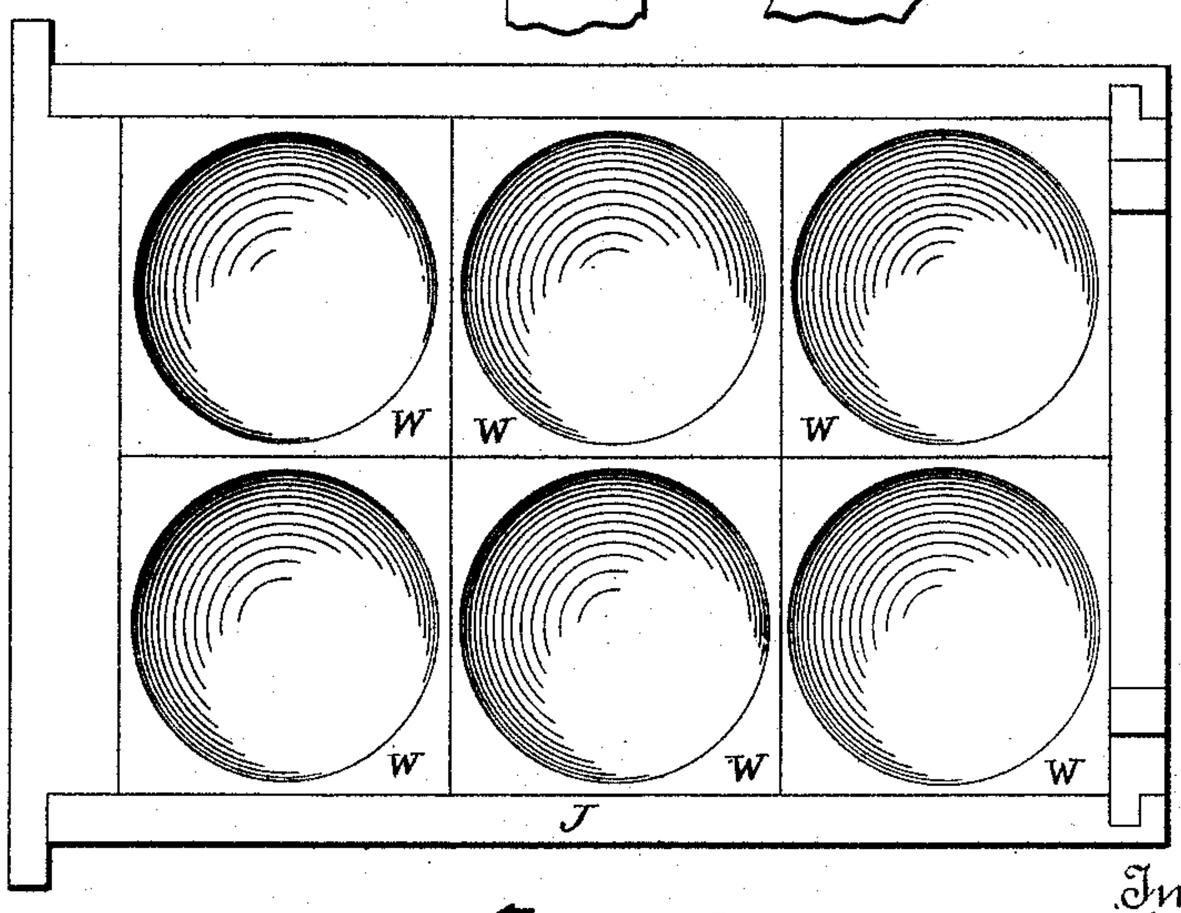


Fig. 2.

Fig. 4.



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UNITED STATES PATENT OFFICE.

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CASH REGISTER AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 351,460, dated October 26, 1886.

Application filed April 1, 1886. Serial No. 197,461. (No model.)

To all whom it may concern:

Be it known that we, FRANK J. PATTERSON, ISAAC P. DAVIS, and AL HERRMAN, all citizens of the United States, and residing at Dayton, in the county of Montgomery and State of Ohio, have jointly invented certain new and useful Improvements in Cash Registers and Indicators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Our invention relates to improvements in cash registers and indicators, designed for the use of store-keepers and others, as a means of accurately registering the total receipts for any given period of time—as a day, for instance—and for indicating to the customers that the amount paid has been registered by disclosing to their view such amount upon figured tablets.

The novelty of our invention will be herein set forth, and distinctly pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional side elevation of a cash register and indicator embodying our present invention. Fig. 2 is an enlarged detail view, with portions broken away, showing the gong-hammer, gong, and wing-retracting mechanism. Fig. 3 is an enlarged rear elevation of one of the registering-wheels and its three operating-keys in section. Fig. 4 is a plan view of the spring-projected drawer or till.

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

The object of the present machine is to indicate to the purchaser upon a figured tablet the amount of the sale by operating the proper key, and at the same time to sound an alarm and release the money drawer or till, which is partially projected from the case, while the same operation of the key also insures the registration of the amount paid in by revolving figured wheels a certain distance, which wheels may be in banks, and so connected that one complete revolution of the lower bank turns the corresponding wheel of the next bank one notch.

Referring to the drawings, it is sufficient here to say that A is the case; B, the frame-work supporting the mechanism within the case; C, the operating-keys journaled upon the shaft D; E, the vibrating frame, which is operated whenever any key is depressed; F, the tablet-rods; H, the bell or gong; I, the gong-hammer secured to the wing G; J, the money drawer or till located in the lower part of the case A, and which, when shut, is held locked by the bolt K, and when unlocked by the depression of the bolt lever L is projected by the spring M.

By reference to Figs. 1 and 2, the first feature of our invention may be thus explained. Upon the end of the wing G next the gong is a forwardly-projecting plate, N, with a beveled or knife edge. A spring, O, secured at its upper end to the wing, or a projection thereof, and at its lower end to the frame, serves to retract the wing and cause the hammer to strike the gong, or weights may be employed, as in Serial No. 182,808, of J. Ritty.

Pivoted to the frame B, on the side next the gong, as at *a*, is an arm, P, carrying loosely pivoted thereto a toggle-piece or wiper-block, Q, which is held up in alignment with the arm P by a shoulder or stop, *b*, and is prevented from being thrown up out of operating position by a second shoulder or stop, *c*. The arm P has pivoted to it a bar or link, R, whose lower end is pivoted to the vibrating frame E in such manner that when the frame E is vibrated the arm P will be raised and the beveled or rounded face of the wiper-block will come in contact with the plate N, thereby pressing back the wing and bell-hammer until the wiper-block having passed above the plate N, the spring O, or weight, if used, retracts the wing and hammer, thereby holding the tablet exposed and sounding the alarm. The wiper-block, by the retraction of the vibrating frame and arm P, is drawn back, and owing to its joint with the arm P passes the plate N and resumes its normal position by its gravity, as will be readily understood.

The next feature of our invention is best illustrated in Figs. 1 and 3. Heretofore in "wheel-machines," so called, there has been one registering-wheel of a bank to each key. We now seek to simplify the construction by grouping the keys into a series of three to one wheel, or two to one wheel, or in the same

machine to have groups of both three, two, and one keys to each wheel, respectively. This we do in the following manner: Each wheel S of the lower bank has at each end as many projections or teeth *d* as there are figured spaces around the wheel. This wheel is as wide as the group of keys by which it is to be operated, and by pivoting the gravitating dogs T, T′, and T″ to the keys at varying distances from the center of vibration D of each key, and by bending the middle one, T′, as seen in Fig. 3, to engage with the teeth on either side of the wheel, the wheel will be turned the required distance to correctly register the value of the key operated. For instance, the dog T″ is pivoted to the five-cent key and is nearest the fulcrum D. It is so adjusted that by operating that key to its farthest limit the wheel is turned only one notch. The next dog, T′, is pivoted to the ten-cent key at such a distance from the fulcrum that by operating that key to its farthest limit the wheel is turned two notches. The next dog, T, is pivoted to the fifteen-cent key, or to an upward extension, *e*, of said key, at such a distance from the fulcrum that by operating that key to its farthest limit the wheel is turned three notches.

In operating any key it will be seen that the dogs of the other keys of that wheel become mere overriders, and act as stops to prevent the retraction of the wheel upon the release of the key operated. It will be further observed that the extent of vibration of all the keys is the same, and the extent of turning of the registering-wheel is determined by the distance of the operating-dog from the axis of vibration of the key or its fulcrum. In this illustration of the first registering disk or wheel, S, there are thirty teeth on each side, and thirty corresponding numbered spaces in a series of 0, 5, 10, 15, and so on to $1.45. In the corresponding wheel, U, of the bank above the series would begin with $1.50 and continue in a series $3, $4.50, $6, and so on. It will be readily understood that as many independent wheels S may be placed side by side upon the shaft as are required to suit the number of keys in a machine, and the grouping of these keys may be in twos or threes, as desired.

We provide the till J with a nest of bowls, W, for the more ready removal of the money, especially where coin is largely used, and where it is desirable that the drawer should be permanently connected to the machine, as is frequently the case. The drawer is provided with stops *f* at its rear, which, coming in contact with a shoulder, *g*, at the front of the case, prevent the removal or disconnection of the drawer without preventing it from being drawn nearly out. The bowls W can be separately removed and their contents emptied into the proprietor's pocket or other receptacle, after which, having read off the totals represented by the wheels S, he could retire to his private room and ascertain if the cash tallied with the reading by counting it. It is evident that the entire drawer may be fitted with bowls W, or any portion of it which may be divided off for that purpose.

Having thus fully described our invention, we claim—

1. The combination, with the vibrating tablet, supporting-wing, and gong-hammer secured thereto, of the series of operating-keys, a vibrating frame operated by depressing any of said keys, a vibrating arm, P, connected to and operated by said vibrating frame, and a wiper-block pivoted to said arm P, and a projecting plate, N, upon the wing, in close proximity to the wiper-block, whereby the upper play of the arm P causes the operation of the wing and sounding of the gong-hammer, and the return-stroke of the arm P brings back the wiper-block to its normal operating position, substantially as described.

2. The combination, in a cash-register, of a transverse shaft, a series of keys mounted thereon and representing various values, a registering-wheel provided with a progressive series of characters corresponding with those represented by the keys, and located immediately above the series of keys, a gear-wheel located on the wheel, and a dog located on each key and engaging said gear-wheel, the dog of each key being located at a distance from the shaft D, to insure a leverage sufficient to effect a rotation of the cylinder proportionate with the value of the particular key operated, the dogs of the several keys being bent so as to all engage the gear-wheel in the same vertical plane, substantially as set forth.

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