

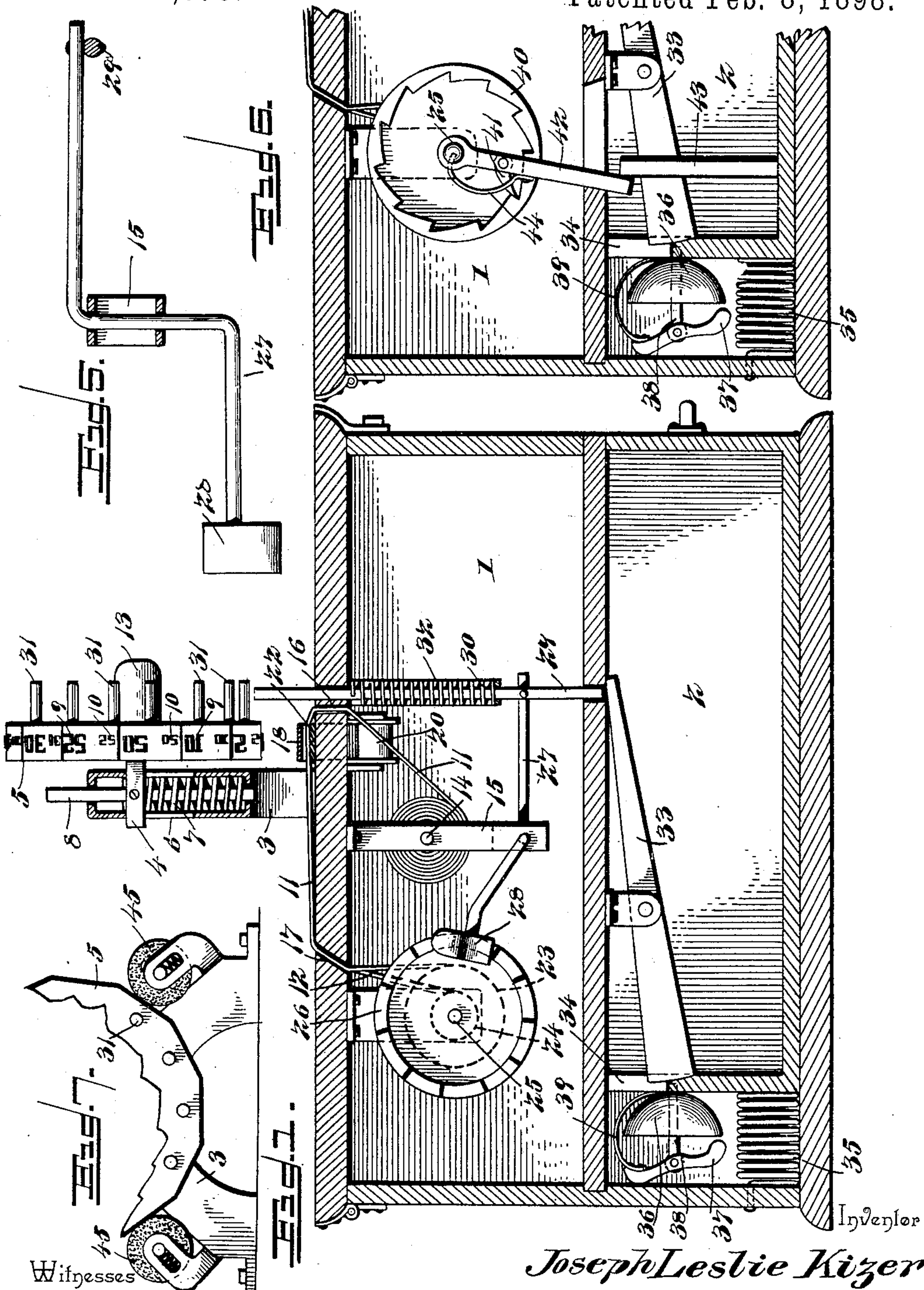
(No Model.)

2 Sheets—Sheet 1.

J. L. KIZER.
CASH REGISTER.

No. 598,876.

Patented Feb. 8, 1898.



Witnesses

E. J. Stewart
J. H. Riley

By *W. S.* Attorneys,

Cashnow & Co.

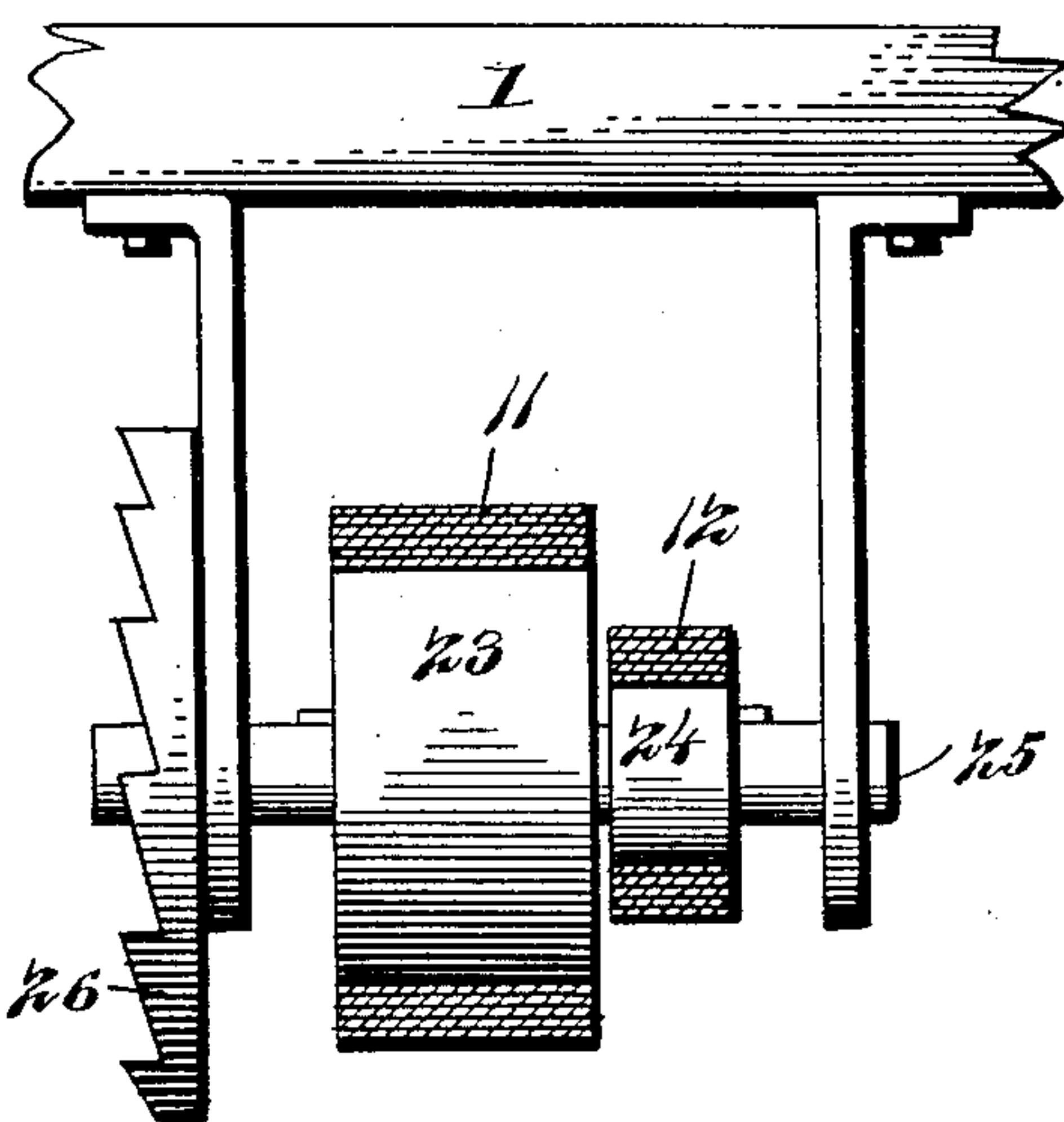
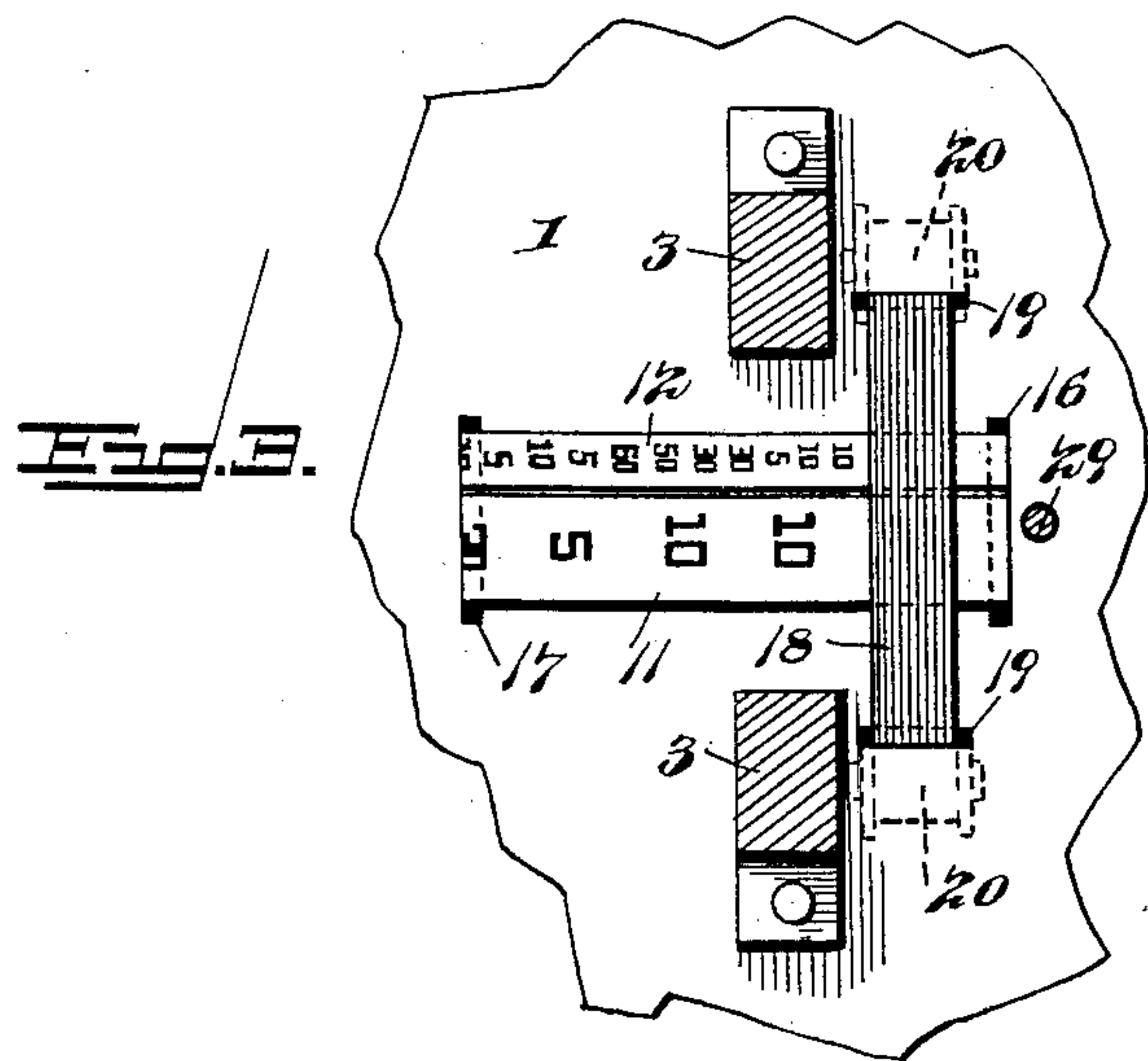
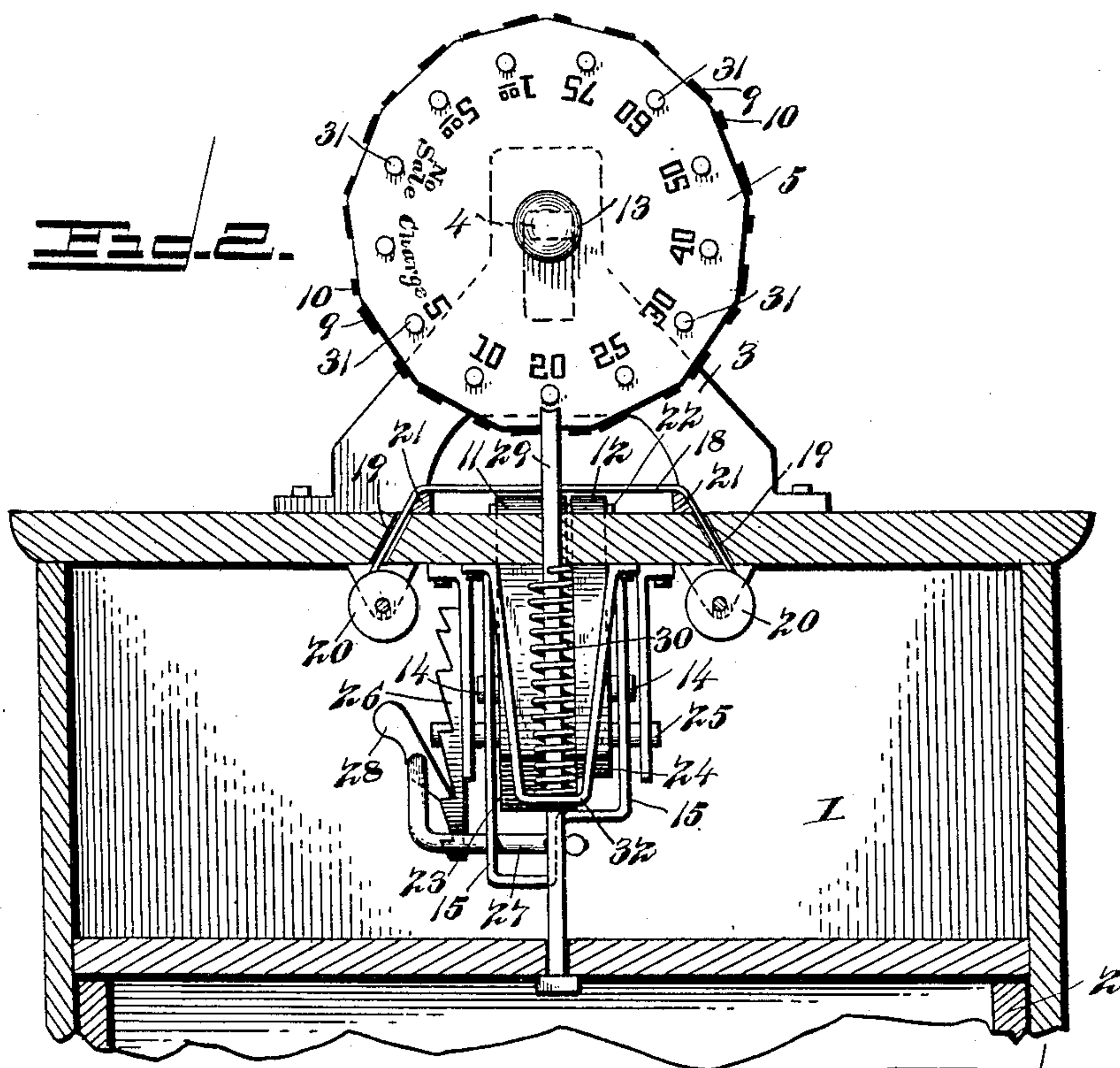
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2 Sheets—Sheet 2.

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Inventor

Joseph Leslie Kizer

Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH LESLIE KIZER, OF LOUISIANA, MISSOURI.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 598,876, dated February 8, 1898.

Application filed January 25, 1897. Serial No. 620,640. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH LESLIE KIZER, a citizen of the United States, residing at Louisiana, in the county of Pike and State of Missouri, have invented a new and useful Cash-Register, of which the following is a specification.

This invention relates to improvements in cash-registers.

10 The object of the present invention is to improve the construction of cash-registers and to provide a simple and comparatively inexpensive one adapted to print and record the sales and capable of exposing in large figures the amount of the sales to the purchasers and of conveniently arranging in small figures the amount of the sales in order to make only a small or comparatively short column to be added by the operator when it is
15 desired to ascertain the total amount of the sales.

A further object of the invention is to provide a cash-register which will sound an alarm each time the cash-drawer is opened and
25 which will render it impossible to open the said drawer without indicating it on the record-strips.

The invention consists in the construction and novel combination and arrangement of
30 parts, as hereinafter fully described, illustrated in the drawings, and pointed out in the claims hereto appended.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of a cash-register constructed in accordance with this invention. Fig. 2 is a transverse sectional view. Fig. 3 is a detail view illustrating the arrangement of the record-strips and the ink-ribbon. Fig. 4 is a detail view illustrating
40 the manner of mounting the rolls or winding up the record-strips. Fig. 5 is a detail view of the ratchet-lever. Fig. 6 is a sectional view showing a modification of the record-strip-actuating device. Fig. 7 is a detail view illustrating a modification of the inking device.

Like numerals of reference designate corresponding parts in the figures of the drawings.

50 1 designates a case or cabinet provided at its bottom with a money-drawer 2 and having a standard or support 3 mounted upon the top

of it. The case or cabinet may be constructed of any suitable material, and the standard 3, which has its lower portion forked, has a vertically-movable shaft or spindle 4 mounted
55 upon it. The shaft or spindle 4, which is disposed horizontally, carries a rotary printing-wheel 5 and is arranged in slots 6 of the upper portion of the standard, which is hollow
60 and which receives a coiled spring 7. The coiled spring, which supports the shaft or spindle 4 and which holds the same normally at the upper ends of the slots 6, is mounted on a vertical rod 8, which forms a guide for the
65 shaft or spindle 4.

The rotary printing device consists of the disk or wheel 5, which is provided at its periphery with a series of straight faces receiving type 9 and 10, and the latter are of different sizes, the larger being arranged to print
70 on a record-strip 11 and the smaller on a record-strip 12. The larger or wider record-strip is designed to expose the figures to the view of customers, so that they may see at a glance
75 the amount of the sale, and the narrower strip is designed for the convenience of the operator and has the numbers compactly arranged in order to make a comparatively small column of figures to facilitate their addition. 80

The rotary printing-wheel may be provided with any number of straight peripheral faces and any number of type-numerals may be provided, and in addition to such type-numerals some of the faces, as indicated in Fig. 2 of the
85 accompanying drawings, may be supplied with such words as "No sale," "Charge," or the like to indicate on the record-strips the reason for opening the cash-drawer. The front face of the printing-wheel is provided
90 with a series of numerals corresponding with those on the peripheral faces, and the printing device is rotated by means of a centrally-arranged knob or handle 13. To operate the cash-register, the handle of the printing device is grasped and the wheel rotated to bring
95 the proper numeral opposite the record-strips 11 and 12, and the wheel is then forced downward, printing the amount upon the strips.

The record-strips 11 and 12, which are preferably, respectively, an inch and a half-inch wide, are unwound from rolls of paper mounted on a shaft 14, which is journaled or otherwise supported in a hanger 15, and the said
100

strips extend upward and forward to a front slot 16, through which they pass and are extended rearward along the top of the cabinet to a rear slot 17. An ink-ribbon 18, which is located above and disposed transversely of the record-strips, extends through slots 19 of the top of the case or cabinet and is arranged on reels 20. The ribbon 18 is supported by strips 21 or any other suitable means for holding it normally out of contact with the record-strips to prevent the latter from being smeared, and an elastic bed 22, of rubber or other suitable material, is mounted on the top of the cabinet and located beneath the record-strips to cushion the printing device.

The record-strips 11 and 12 are wound up on rolls 23 and 24, fixed to a shaft 25 and varying in diameter, whereby when the shaft 25 is partially rotated to advance the record-strips the wider one, which carries the larger figures, is advanced to a greater extent than the narrower one, which has the smaller figures compactly arranged on it.

The shaft 25 carries a ratchet-wheel 26, which is engaged and actuated by a ratchet-lever 27, fulcrumed between its ends on the hanger 15 and provided at its rear end with a pawl 28, arranged to engage the ratchet-teeth of the wheel 26. The ratchet-teeth are arranged on one of the side faces of the wheel 26 and are engaged by the lower end of the pawl 28, whereby when the rear portion of the ratchet-lever 27 moves downward the ratchet-wheel will be rotated forward the distance of one of its teeth.

The front end of the lever 27 is connected with a vertically-reciprocating rod 29, normally maintained in an elevated position by a coiled spring 30 and having its upper end arranged to be engaged by a series of pins 31 of the printing device. The pins 31, which are arranged horizontally, are mounted on the front face of the printing-wheel, being disposed centrally of the straight peripheral faces, whereby when one of the latter is arranged over the record-strips a pin will lie directly above the rod 29. By this arrangement the pins 31 serve as guides, and if the printing-wheel is turned until one of the pins 31 is directly over the rod 29 and is pushed down it will always insure the proper position of the type for an impression. The upper end of the rod is provided with a seat to receive the pins 31, and the spring 30 is supported by a hanger 32 and is connected at its upper end to the rod 29. When the rod 29 is moved downward by the printing device, the pawl 28 is carried upward and does not affect the ratchet-wheel or the rolls 23 and 24; but when the hand is removed from the knob or handle of the printing device the spring 7 returns the latter to its initial position and the spring 30 moves the rod 29 upward, forcing the pawl 28 downward and partially rotating the ratchet-wheel. By this construction the record-strips are advanced and the wider one is carried forward sufficiently to

expose the numerals, indicating the amount of the sale to the view of a customer, so that he can readily see whether the correct amount has been registered.

The lower end of the vertically-movable rod 29 is arranged to engage a longitudinal locking-lever 33, fulcrumed between its ends and having its rear portion or arm heavier than the front portion and adapted to engage the back of the cash-drawer 2, whereby the latter is retained in its closed position and is prevented from being opened without indicating the fact on the record-strips. The back of the drawer is provided with a slot 34, and when the rod 29 is moved downward the rear end of the lever is lifted out of engagement with the cash-drawer and is brought opposite the slot or opening 34. The cash-drawer is then thrown outward by a coiled spring 35, interposed between the inner end of the drawer and the rear of the cabinet in position to be compressed when the cash-drawer is forced inward to close it. The locking-lever 33 engages the cash-drawer automatically when the same is closed and locks it, as will be readily apparent.

A bell 36 is secured to the back or inner end of the cash-drawer and is struck when the drawer is opened by a hammer 37, fulcrumed between its ends on a stem 38 and engaged by a curved spring 39. The stem 38 is disposed centrally of the bell and extends rearward beyond the same, and the curved spring 39, which engages the upper end of the bell-hammer 37, is compressed when the drawer is closed, as illustrated in Fig. 1 of the accompanying drawings, whereby when the drawer is opened the spring 39 will throw the upper end of the bell-hammer rearward, causing the lower end of the same to strike the bell.

Should the drawer be opened by operating the printing device, so that the type does not actually come in contact with the ink-ribbon or the record-strips, the latter will be advanced and a blank space will be left on each record-strip, thereby indicating that the drawer has been opened without registering a sale or any other character of the printing device.

In Fig. 6 of the accompanying drawings is illustrated a modification of the actuating device for advancing the record-strips. In this construction the ratchet-wheel 40 is provided with internal teeth, which are engaged by a pawl 41 of a depending ratchet-lever 42, and the latter is fulcrumed at its upper end on the shaft of the ratchet-wheel 40 and has its lower portion arranged to be engaged and forced rearward by a post or arm 43 of the cash-drawer. When the cash-drawer is opened, the lever is thrown forward by a spring 44 the distance of one of the teeth of the ratchet-wheel 40, whereby when the drawer is closed the arm or post 43 will swing the lever 42 rearward and rotate the ratchet-wheel partially.

Instead of inking the printing device by

means of a ribbon yieldingly mounted inking-rolls 45 may be located at opposite sides of the standard or support. The inking-rolls 45, which may be arranged in any suitable form of supports, are held in contact with the periphery of the printing-wheel by springs, and they have sufficient movement to permit the printing-wheel to force them apart as it moves downward during the operation of the cash-register.

The top of the case or cabinet is hinged at the back and may be swung upward to afford access to the record-strips, and a suitable locking device is designed to be provided for securing the front or free edge of the top of the cabinet to the body portion.

It will be seen that the cash-register is simple and comparatively inexpensive in construction, that it is positive and reliable in operation, and that it is capable of printing the amounts of the sales and of exposing them in position to be readily seen by the customers, and also of arranging them compactly, so that they may be conveniently added by the operator when it is desired to ascertain the total amount of the sales. It will also be apparent that the cash-drawer cannot be opened without sounding the bell, and that each time the cash-drawer is opened will be indicated by the record-strips.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. In a device of the class described, the combination of a cabinet provided with a cash-drawer, a locking device for holding the same closed, a vertically-movable rod adapted to operate the said locking device for releasing the cash-drawer, a vertically-movable rotary printing device provided at its periphery with type and having an annular series of pins extending from one of its faces and arranged to engage the vertically-movable rod, a record-strip extending beneath the rotary printing device in position to be engaged by said type, a ratchet-wheel connected with the record-strip, and a ratchet-lever engaging the ratchet-wheel and arranged to be operated by the said mechanism, whereby the record-strip will be advanced after the printing operation has been completed, substantially as described.

2. The combination of a cabinet, a cash-drawer, a locking-lever arranged to engage the cash-drawer to hold the same closed, a vertically-movable rod mounted in the case or cabinet and arranged to engage the said lever, a record-strip, a ratchet-wheel connected with and adapted to advance the record-strip, a ratchet-lever connected with and actuated by said rod and engaging the ratchet-wheel, and a vertically-movable rotary printing device arranged to engage the record-strip and provided with a series of projecting pins

to actuate the vertically-movable rod, substantially as described.

3. In a device of the class described, the combination of a cabinet, record-strips, rolls of different diameters rotating together and receiving and adapted to advance the record-strips unequally, a printing device carrying type-numerals of different sizes to correspond with the movement of the record-strips, and means for advancing the record-strips after the printing operation has been completed, substantially as described.

4. In a device of the class described, the combination of a cabinet provided with a hollow slotted standard, a shaft passing through the slot of the standard and capable of vertical movement, a spring housed in the hollow standard and supporting the shaft and holding the same normally elevated, and a vertically-disposed rotary printing-wheel mounted on the shaft and provided at its periphery with type, substantially as described.

5. In a device of the class described, the combination of a cabinet, a vertical printing-wheel provided at its periphery with type and capable of vertical movement, a record-strip arranged to be engaged by the type, a series of pins carried by the printing-wheel, a movable rod arranged to be engaged by the pins, a locking device for holding a cash-drawer closed arranged to be operated by the movable rod, and mechanism operated by the rod for advancing the record-strip, substantially as described.

6. In a device of the class described, the combination of a cabinet provided with a drawer, a bell mounted on and carried by the drawer, a lever fulcrumed between its ends in rear of the bell and having one end arranged to be engaged by the cabinet when the drawer is closed, and having its other end arranged to strike the bell and a spring engaging the lever and arranged to be compressed by the drawer in closing and adapted to throw the lever into contact with the bell when the drawer is opened, substantially as described.

7. In a device of the class described, the combination of a cabinet, a vertically-movable rotary printing-wheel provided at its periphery with type, a record-strip arranged to be engaged by the type, an inking device comprising a pair of yieldingly-mounted rolls located at opposite sides of the printing-wheel and adapted to be spread apart by the same in the downward movement thereof, and actuating mechanism operated by the printing device for advancing the record-strip, substantially as described.

8. The combination of a cabinet provided with a cash-drawer, a locking device for holding the same, a record-strip, a vertically-movable rod, connections between the record-strip, the locking mechanism and the rod, and a vertically-movable rotary printing-wheel carrying a handle and provided at its

periphery with type, said printing-wheel having an annular series of pins extending horizontally from one of its faces and arranged to engage the upper end of the vertically-movable rod, substantially as and for the purpose described.

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In testimony that I claim the foregoing as

my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH LESLIE KIZER.

Witnesses:

FRED. D. STICHTER,
JOHN WILSON.