

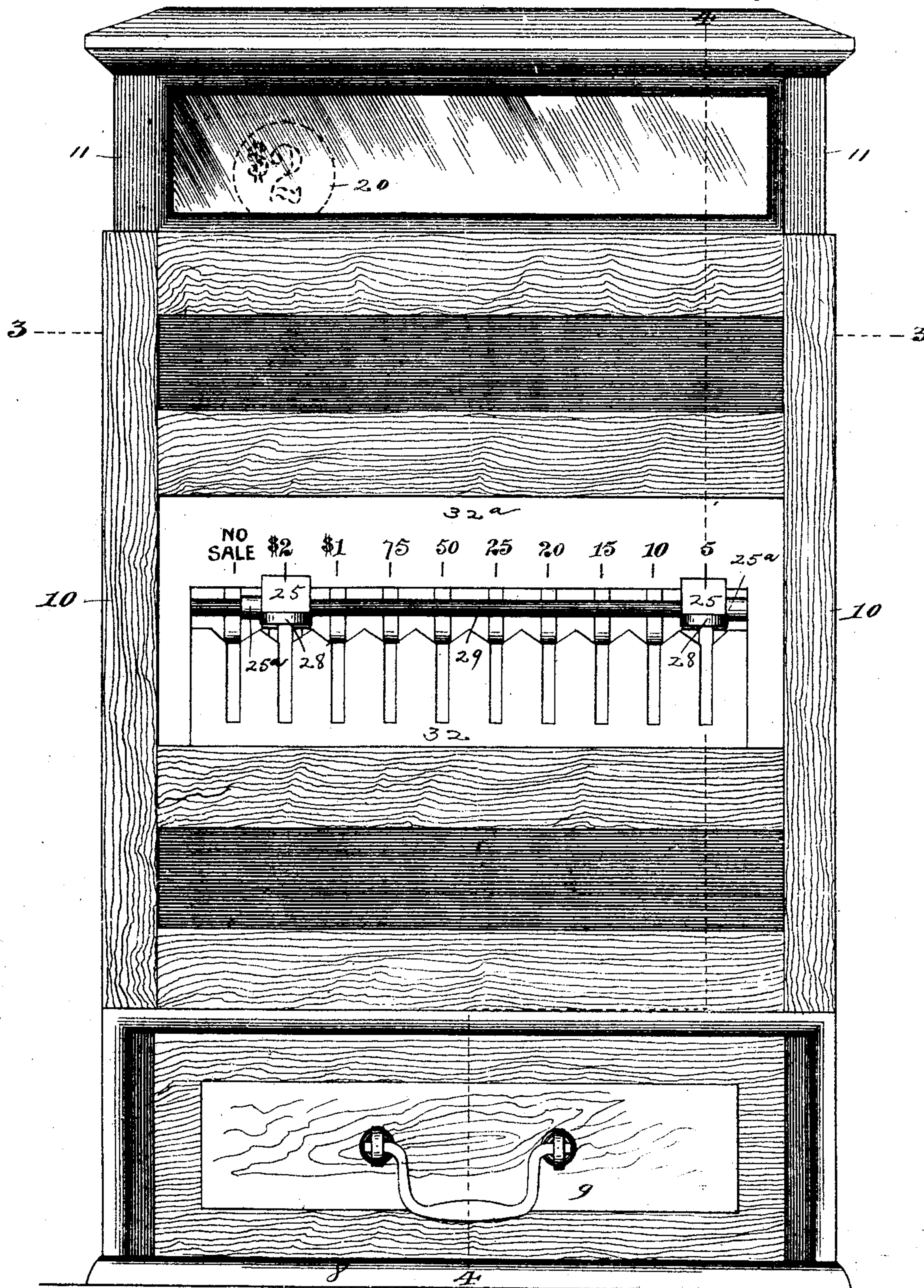
(No Model.)

4 Sheets—Sheet 1.

H. W. HOFFHEIMER.
CASH REGISTER.

No. 500,898.

Patented July 4, 1893.



Witnesses,
J. D. Mann
F. C. Goodwin

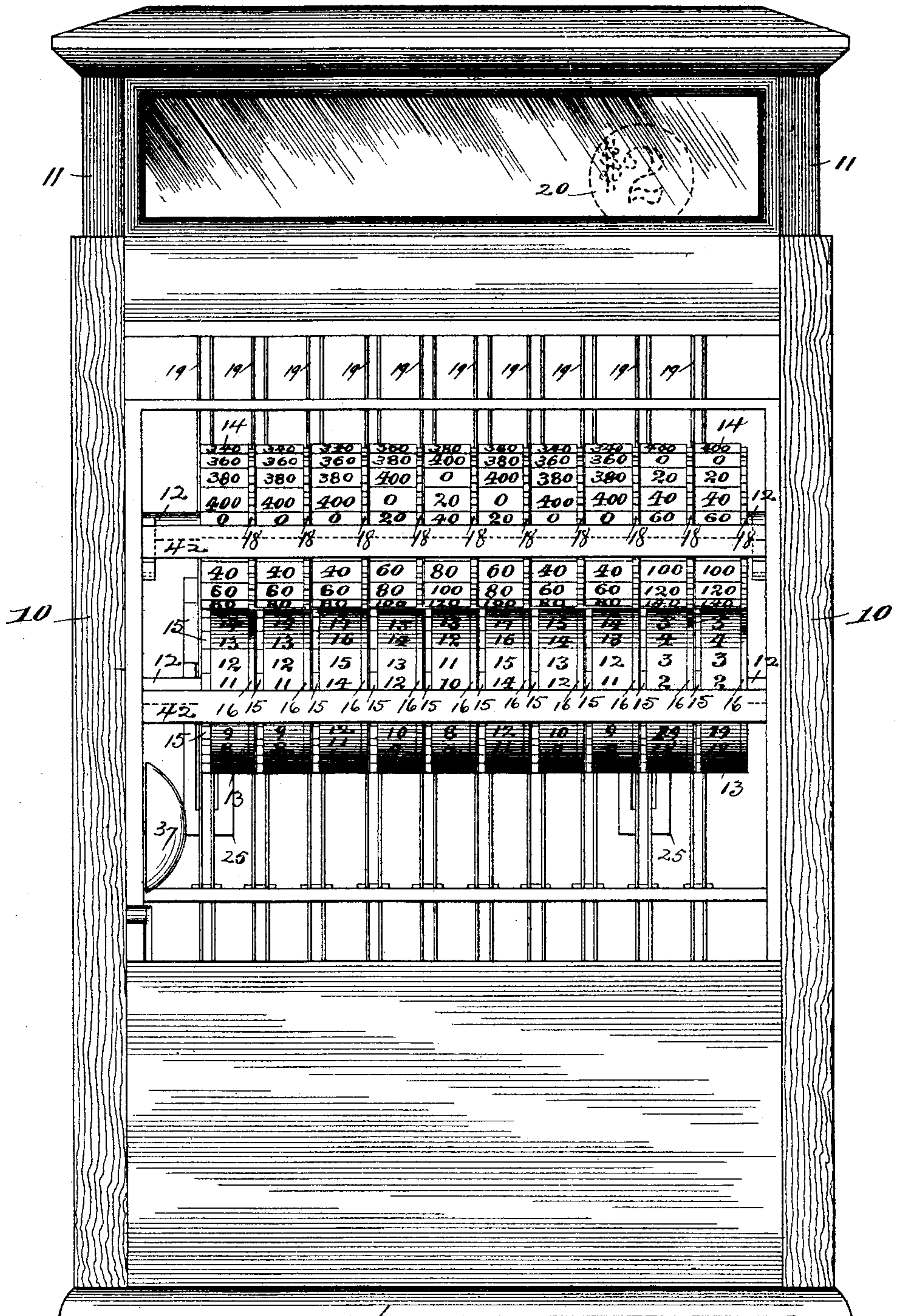
Fig. 1.

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8 Fig. 2.

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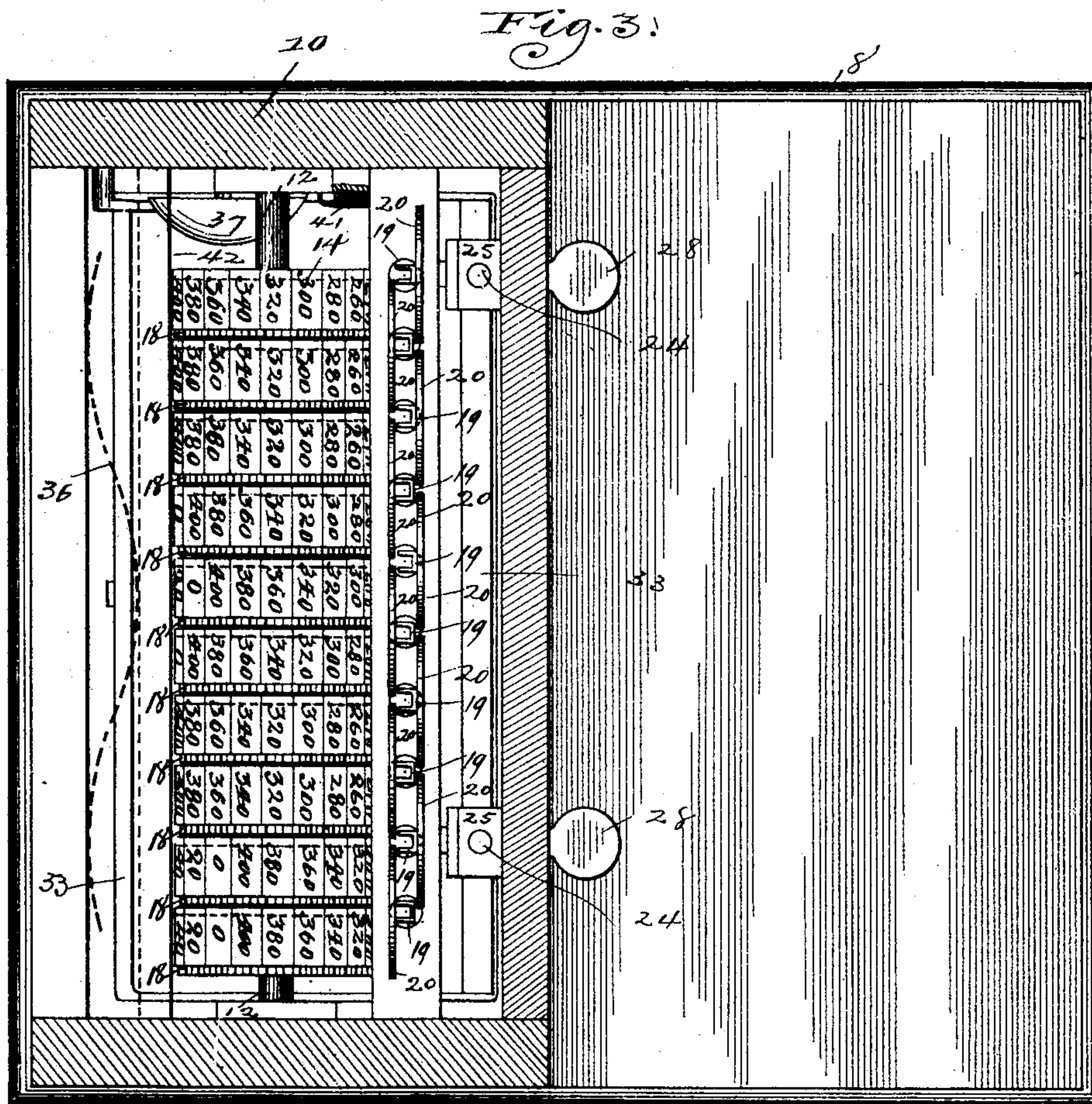
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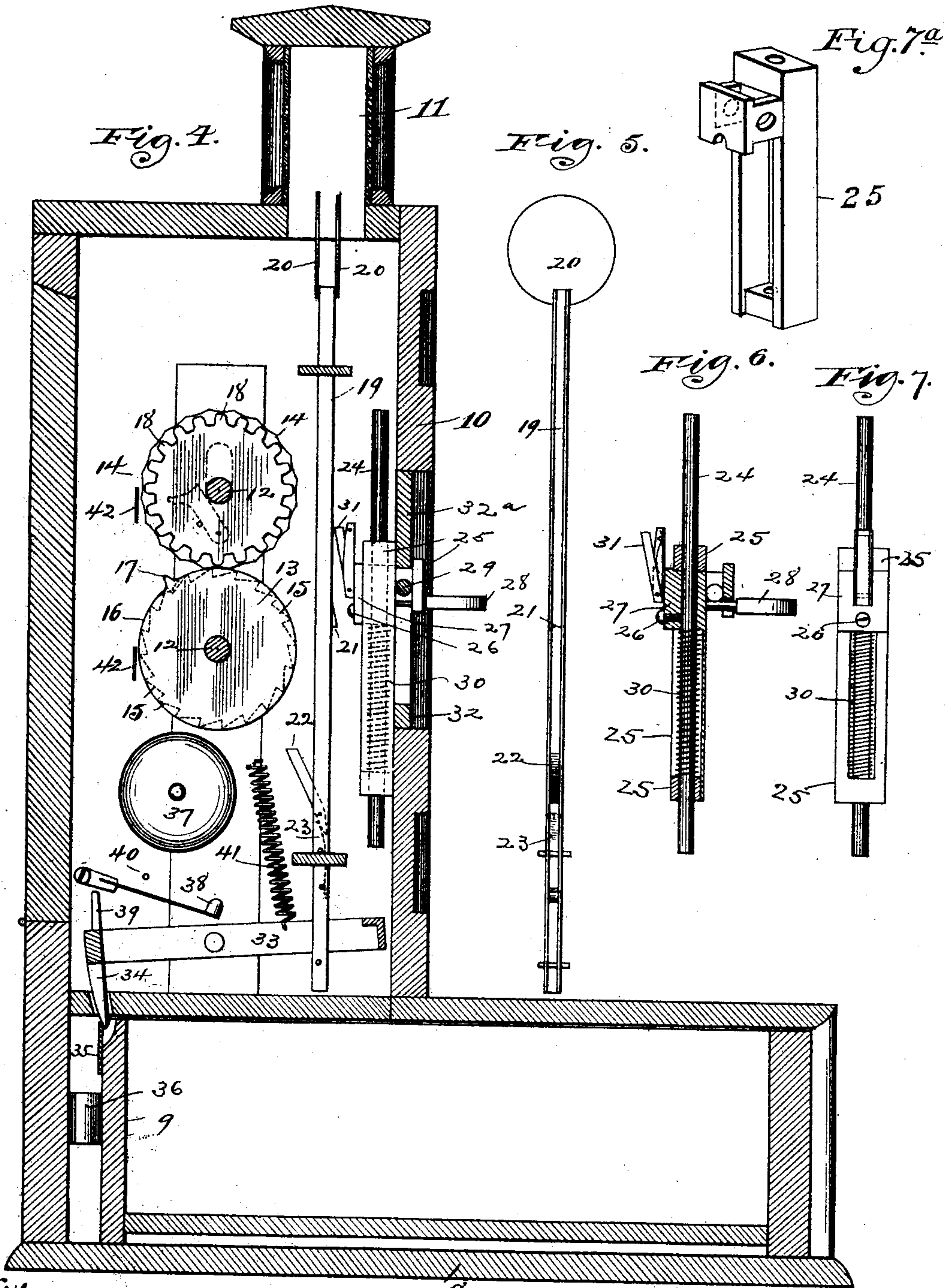
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UNITED STATES PATENT OFFICE.

HARRY W. HOFFHEIMER, OF CHICAGO, ILLINOIS.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 500,898, dated July 4, 1893.

Application filed September 5, 1892. Serial No. 445,073. (No model.)

To all whom it may concern:

Be it known that I, HARRY W. HOFFHEIMER, a citizen of the United States, residing at Chicago, Illinois, have invented certain Improvements in Cash-Registers, of which the following is a specification.

My invention has for its object to simplify the construction and to reduce the size and cost of cash registers. To this end I employ in the construction of my improved cash register the following elements: A suitable case having a base containing a money drawer normally closed and locked and an upright portion containing the registering apparatus, said upright portion having an extension provided with a sight opening behind which the tablets appear when the register is actuated; a registering apparatus comprising a pair of shafts each having loosely mounted thereon a series of register disks arranged in pairs, the members of which are arranged on the respective shafts and which disks are so geared that the complete rotation of one will effect a partial rotation of the other; a series of vertical bars each carrying a tablet; a dog carried by each of the vertical bars and adapted during the upward movement of the bar to engage one member of the pair of disks opposite which it stands so as to impart a partial revolution thereto; one or more actuating rods capable of movement both vertically and laterally and normally sustained by a spring and having a spring actuated dog to engage the sliding bars carrying the disk turning dogs; a key carried by the actuating rod and whereby the latter is moved laterally and depressed vertically against the tension of the spring; a locking mechanism for the drawer which is unlocked by the actuating rod when the latter is depressed; an alarm mechanism which is actuated by the locking mechanism; and reading bars and indicators.

In the drawings, Figure 1 is a view in front elevation showing by dotted lines one of the tablets in the elevated position. Fig. 2 is a rear elevation with the door removed. Fig. 3 is a plan view sectional through the case on the line 3—3 of Fig. 1. Fig. 4 is a vertical section through the case on the line 4—4 of Fig. 1. Figs. 5, 6, 7 and 7^a are detail views.

In the drawings 8 represents the base of the case and 9 a money drawer therein.

10 represents the upright portion of the case having the extension 11, the side walls of which are preferably of glass.

12 represents parallel stationary shafts arranged horizontally within the body 10 of the case and upon these are arranged the series of register disks 13, 14. The disks 13 each have secured thereto or formed integrally therewith the ratchet teeth 15 upon the one side and upon the other a disk 16 bearing a finger or tooth 17 which engages the teeth 18 which may be formed upon a disk secured to the disk 14 or be formed integrally with said last mentioned disk.

19 represents a series of vertically sliding bars each of which bears upon its upper end a tablet 20. The bars 19 have upon their front sides the lug 21 and near their lower ends the pivoted dog 22, which is adapted during the reciprocation of the bar to engage the ratchet teeth 15 but which is permitted to yield to pass over said ratchet teeth on the downward movement of the bar by the spring 23. The several bars 19 are arranged respectively in front of the pairs of disks 13, 14 and the tablets carried thereby indicate the denominations in money which are represented upon the indicator bar.

24 represents an actuating rod which is mounted within the guide 25 and having secured thereto by means of the set screw 26 a block 27 to which the actuating key 28 is fixed. The guide 25 is shown separately in Fig. 7^a. It has a sleeve portion 25^a which slides upon the rod 29 fixed in the walls of the case and the block 27 to which the actuating rod is affixed, is seated upon the compression spring 30, arranged within the guide 25.

Mounted upon block 27 is a spring actuated dog 31 which is adapted to engage the lug 21 on the bars 19, upon the release of the actuating rod after it has been depressed by means of the key. A slotted bar 32 is fixed in the front of the case and the stem of the key moves down in the slots of said bar in actuating the device.

The indicator plate 32^a is arranged above the key bar and has on it characters indicating denominations of money corresponding to the pairs of register disks.

The locking mechanism is best shown in Fig. 4 of the drawings. It comprises a pivoted

frame 33 having a locking dog 34 on its rear end adapted to enter a recess in the drawer 9 in front of the locking plate 35. When the key is depressed carrying down with it the actuating rod the lower end of the latter will depress the front end of the pivoted frame 33 thus withdrawing the locking dog 34 and releasing the drawer which will then be thrust out by the spring 36.

The alarm mechanism comprises the bell 37 whose clapper 38 is pivoted in the case below the bell and is raised by a pin 39 on frame 33 and caused to vibrate over the pin 40. The frame 33 is lifted after each depression by the spring 41.

The device as arranged may be made to register amounts from five cents to two dollars in multiples of five by the use of the single key or by using two keys any combination of the sums named; but, of course, the capacity of the register may be varied by increasing or decreasing its size and correspondingly the number of its register disks. I have shown two actuating keys but a single key will be entirely operative and in registers of larger size three keys may be employed advantageously.

The register disks will be subdivided transversely into spaces, each space having a corresponding tooth in its actuating ratchet. Thus, if the register disks have twenty teeth there will be twenty subdivisions on their peripheries and in each subdivision a number will be indicated. As arranged in the drawings the disks at the right hand side are for cents and the numbers on the disk will run from 1 to 19 inclusive, the next pair of disks represent dimes and so on in usual divisions of a dollar. There are also one and two dollar disks and one blank which may be operated for the purpose of unlocking the drawer.

In operation when a sale is made the sliding key is brought opposite the place on the indicator plate behind which are the register disks representing the amount of the sale. The key is then depressed compressing the spring and the lower end of the actuating bar engages the front end of the pivoted frame carrying the locking dog, tilting said frame on its pivot and releasing the drawer. During this downward movement of the actuating bar its dog 31 will have passed below the lug 21 on the bar 19. Upon the release of the key the spring will return the actuating bar to its normal position carrying with it the bar 19 and raising the tablet to view. During the latter part of its movement the dog 22 will engage the ratchet of the disk 13 turning said disk one step, thus registering one sale of the amount to which the disk corresponds. The tablet will remain exposed and the dog in engagement with the ratchet until the key is moved out of the way to release the tablet bar. This is done when a subsequent sale is to be registered by simply sliding the key along its bar, moving the

point of the dog 31 out of engagement with the lug 21 whereupon the tablet bar will drop carrying its actuating dog with it. When one of the lower disks has performed a complete revolution it will cause the upper disk to advance one step by means of the engagement of the tooth 17 with the teeth 18 and thus the number of sales represented by the disk 13 will be recorded upon the disk 14. Thus, if the disk 13 have twenty spaces thereon, nineteen sales will be registered thereon and the twentieth sale will be recorded upon the upper disk. If this upper disk have twenty numbers indicated thereon, then four hundred sales may be recorded upon the upper disk in any one denomination and the sum of the several disks may be added periodically thus enabling the total number of sales and the value thereof to be readily ascertained. To facilitate this the reading bars 42 may be employed.

It is obvious that changes may be made in the details of construction. For example, the tablet bars may be dispensed with and the disks operated directly from the dog on the actuating rods. In cases where a limited number of sales only are to be recorded a single series of register disks may be employed, and other details of construction and arrangement may be varied, as for instance an extension spring may be used with the actuating rod instead of the compression spring shown.

I claim—

1. In a cash register the combination with two series of register disks, one of which is actuated by the other, of a series of vertically sliding bars, one for each pair of disks, each bar having a dog to engage its disk, a spring controlled actuating rod adapted to be moved laterally and vertically and having a dog to engage the sliding bars and provided with an operating key whereby it may be moved to tension its spring, which upon the release of the key returns the actuating rod to its normal position and effects the partial rotation of the actuating register disk, substantially as described.

2. In a cash register the combination with two series of register disks arranged on shafts parallel to each other, the members of one series being adapted to intermittently move the corresponding members of the other series, of a series of vertically sliding bars each carrying a tablet and having a dog to engage its corresponding disk, a spring controlled actuating rod adapted to be moved laterally and vertically and having a dog to engage the tablet bars and a key whereby it may be moved opposite any of said bars and depressed to tension its spring which upon the release of the key returns the actuating rod to its normal position and effects a partial rotation of the register disk, substantially as described.

3. In a cash register the combination with a series of register disks, of a series of vertically sliding bars, one for each disk, a spring controlled actuating rod adapted to be moved

laterally in position to engage any bar of the series and also to be depressed whereby to tension its spring and which rod is adapted when returned to its normal position by its
5 spring to engage the vertically sliding bar and thereby effect a partial rotation of the register disk, and when moved laterally to disengage the sliding bar and permit it to drop substantially as described.
10 4. In a cash register, the combination with a series of register disks, of a series of vertically sliding bars, one for each disk, a spring controlled actuating rod adapted to be moved laterally in position to engage any bar of the
15 series and also to be depressed whereby to tension its spring and which rod is adapted when returned to its normal position by its

spring to engage the vertical sliding bar and thereby effect a partial rotation of the register disk, and when moved laterally to disengage the sliding bar and permit it to be dropped, a money drawer and a locking mechanism therefor comprising a pivoted frame having a locking dog and said frame arranged in the path of the actuating rod whereby when the
20 latter is depressed opposite the end of the disks of the series the frame is rocked and its dog withdrawn to release the drawer and a spring whereby said drawer is projected when unlocked, substantially as described.

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