

No. 768,587.

PATENTED AUG. 30, 1904.

J. P. CLEAL.
CASH REGISTER.

APPLICATION FILED OCT. 9, 1899.

NO MODEL.

2 SHEETS—SHEET 1.

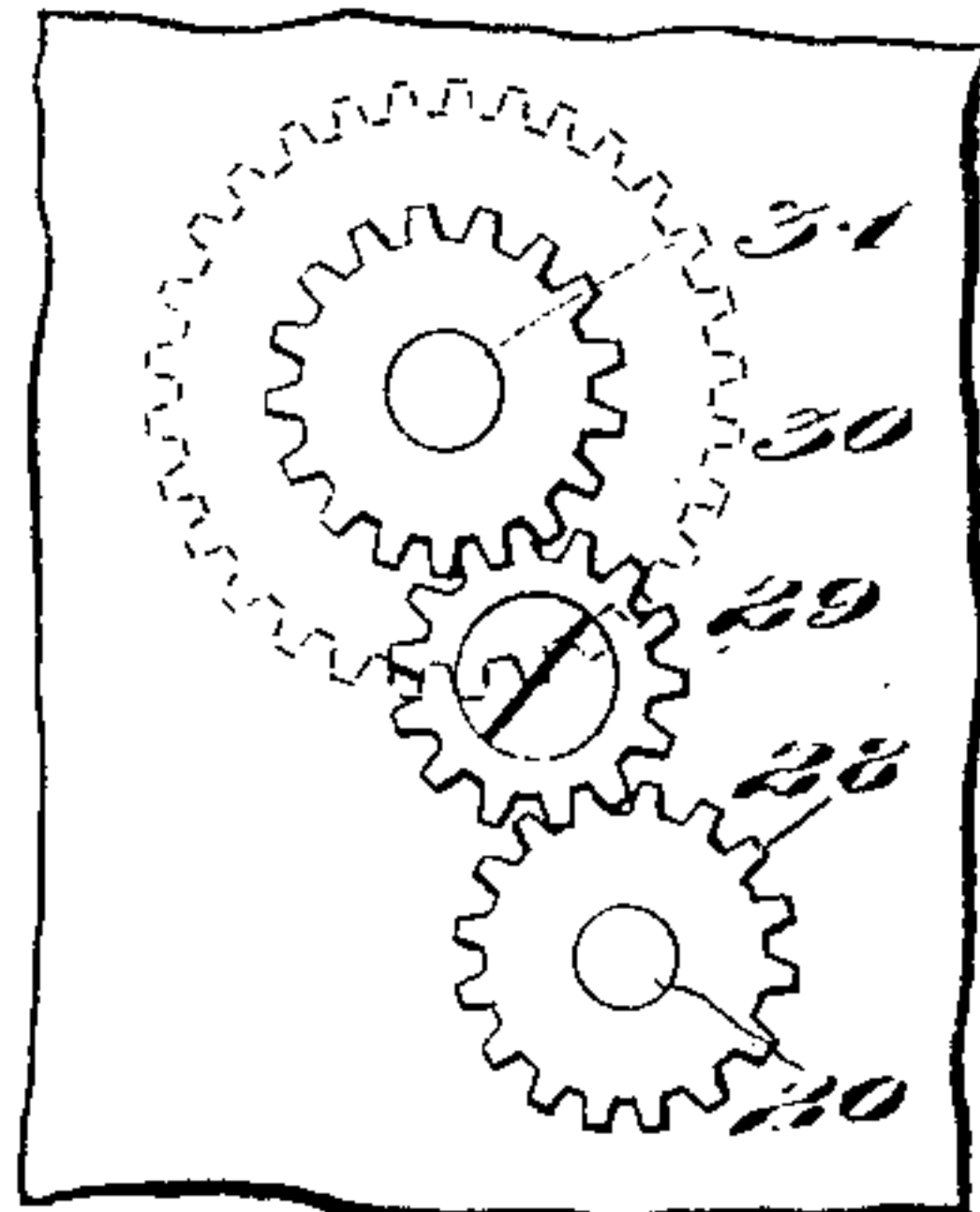
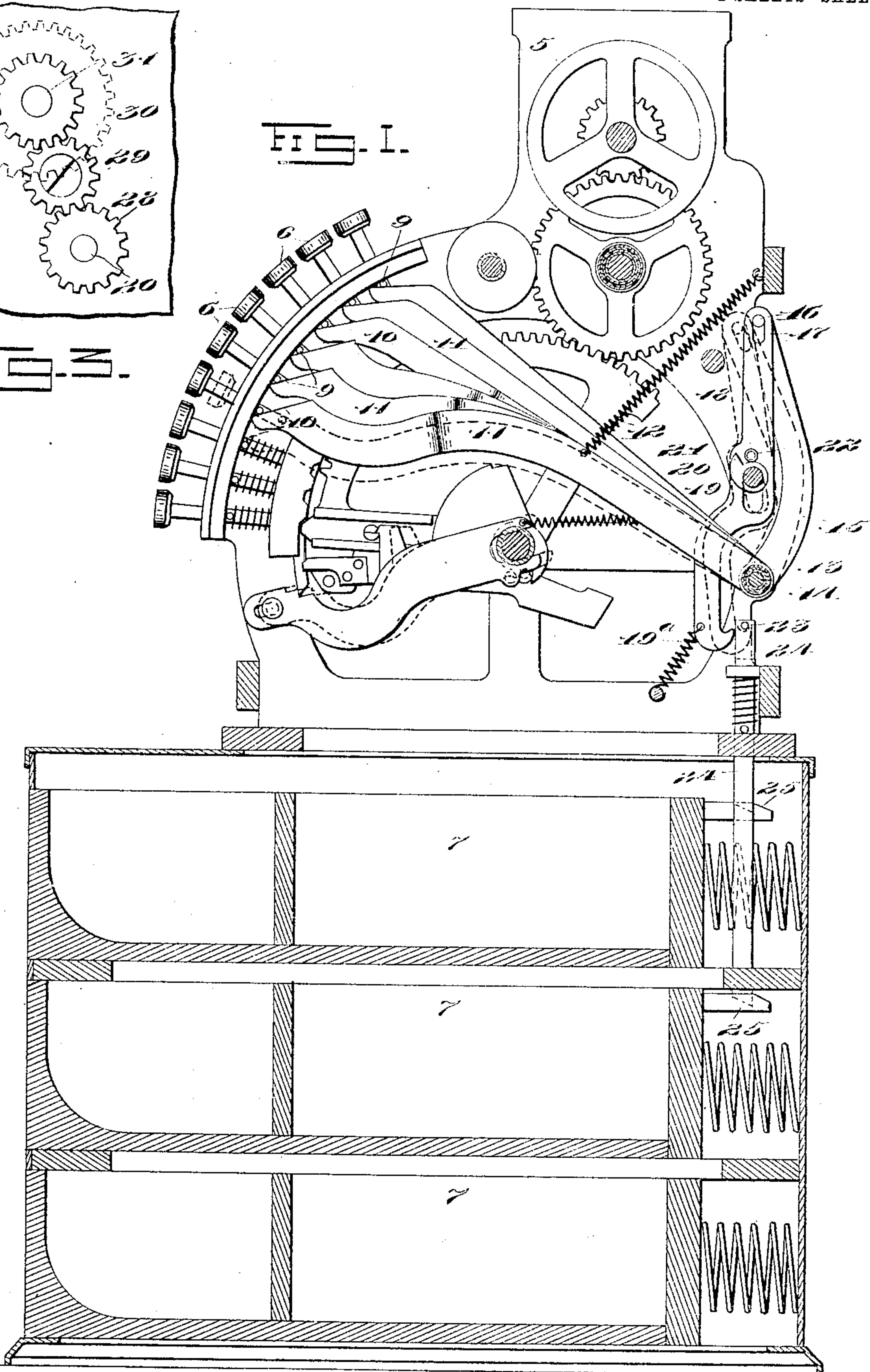


FIG. II.

FIG. I.



Witnesses

Wm. McCarthy
Wm. H. Muzzy

Inventor

Joseph P. Cleal.
By Alvan Macaulay.
Attorney

No. 768,587.

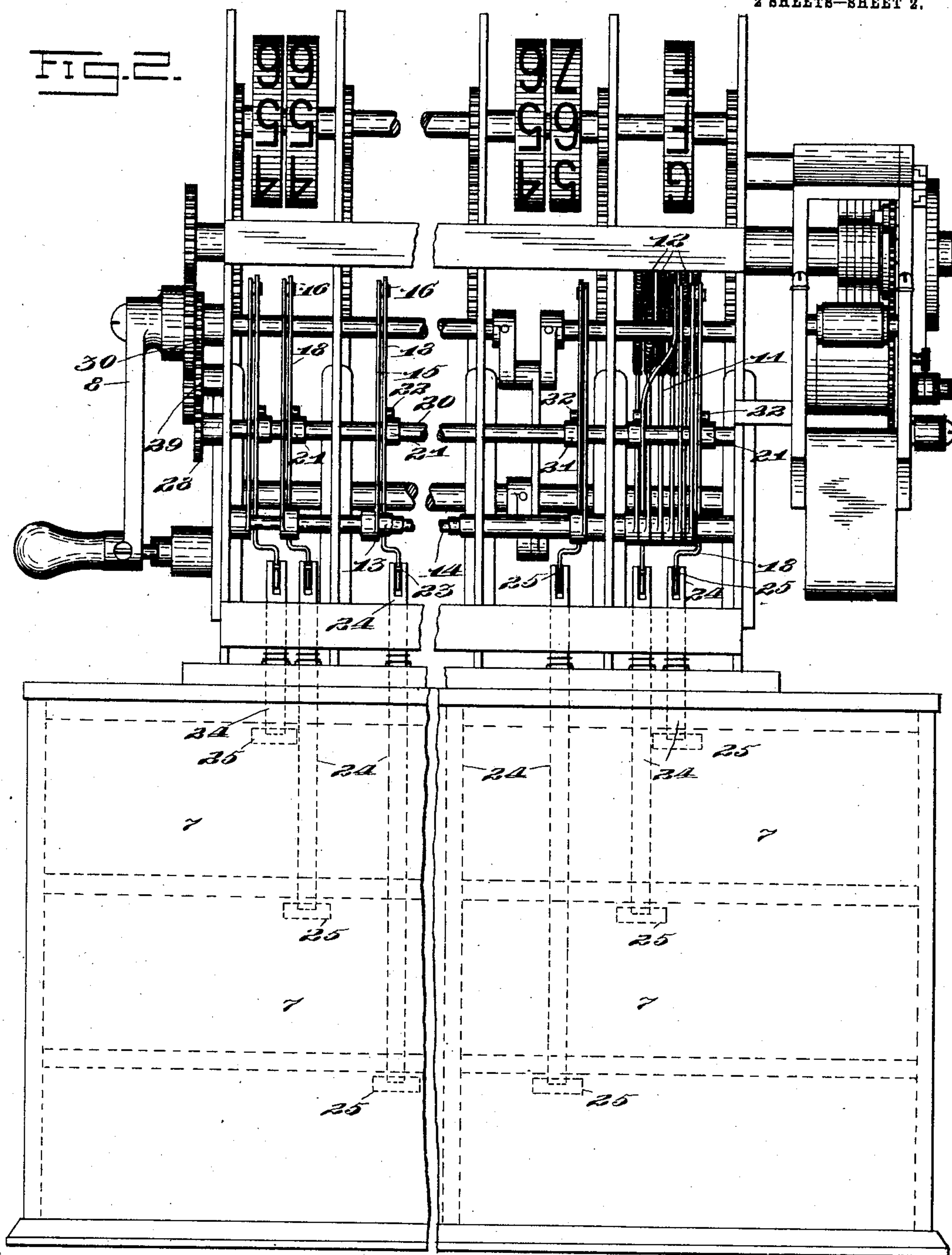
PATENTED AUG. 30, 1904.

J. P. CLEAL.
CASH REGISTER.

APPLICATION FILED OCT. 9, 1899.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses

Wm. McCarthy
Wm. H. Muzzey

Inventor

Joseph P. Cleal
By *Alvan Macaulay*
Attorney

UNITED STATES PATENT OFFICE.

JOSEPH P. CLEAL, OF DAYTON, OHIO, ASSIGNOR TO THE NATIONAL CASH REGISTER COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 768,587, dated August 30, 1904.

Application filed October 9, 1899. Serial No. 733,088. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH P. CLEAL, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Cash-Registers, of which I declare the following to be a full, clear, and exact description.

This invention relates to improvements in cash-registers, and has more particular relation to cash-registers of the multiple-cash-drawer type.

One of the several objects of the invention is to provide an improved construction of register having a series of independent cash-drawers, any one of which may be set to be opened by operating its respective key.

In the appended drawings, forming part of this specification, Figure 1 represents a vertical transverse section, partly in elevation, of the devices embodying my invention applied to a machine of the class patented to Cleal and Reinhard, April 13, 1897, and numbered 580,378, the cabinet of the same being removed and the operated position of one of the latch-operating bars being indicated by dotted lines. Fig. 2 represents a rear elevation, partly broken away, of the same; and Fig. 3 represents a detail side elevation of the gears for communicating motion to the latch-operating shaft.

In the aforesaid drawings, 5 represents the frame of the machine; 6, the special keys; 7, the independent cash-drawers, and 8 the operating-handle. The general operation of said machine is substantially as described in the aforesaid patent.

The six upper keys of the special clerk's-keys bank are arranged to have their laterally-projecting pins 9 engage cam-faces 10, formed on the forward ends of a series of independent levers 11, which are drawn, respectively, against said pins by coil-springs 12, which connect them to the main frame. These levers are mounted, respectively, on a series of nested sleeves 13 and a transverse shaft 14, which supports said sleeves.

It will be seen from the above that when

one of the keys 6 is operated its pin 9 will engage the cam-face 10 of its respective lever 11, and thus depress the forward end of said lever and rock the sleeve or shaft upon which it is mounted. Each of said sleeves, as well as the shaft 14, is provided with a rigid upwardly-projecting arm 15, carrying a pin 16, which projects into an elongated slot 17, formed in one of a series of latch-operating bars 18. Each of the bars 18 is slotted, as at 19, and is supported in position by a transverse rotary shaft 20, which passes through all of said slots. This shaft is provided with a series of cams 21, arranged to cooperate with antifriction-rollers 22, mounted upon the bars 18 to elevate said bars upon each operation of the machine. The lower hook end of each bar 18 is normally drawn forward by a coil-spring 19^a; but when its respective arm 15 is rocked forward the bar is rocked on the shaft 20 to bring said hook end into cooperative relation with a pin 23, mounted in the slotted end of one of a series of spring-pressed drawer-latching plungers 24, which are so mounted in the main frame that their lower ends cooperate with a series of latch-plates 25, mounted on the respective cash-drawers 26. These drawers are six in number to correspond with the special clerk's keys and are arranged in three rows, one over the other. The drawers are mounted on suitable rollers in the cabinet or casing and are adapted to be forced out of the same when released by springs 27, mounted in the casing.

The special keys cooperate with a locking-detent in the same manner as described in said patent.

The construction shown also prevents two adjoining keys being operated at the same time, as the forward end of an operated lever 11 projects into the path of the pin 9 of the next lower key, while the pin of the operated key projects into the path of the end of the lever 11 of the key above. Thus if two keys be accidentally operated at the same time they will be arrested after a partial depression and the operator thus made aware that he has made a mistake.

By the above-described devices the bar 18 of the operated key will be swung forward into operative position when the key is depressed, and when the shaft 20 is subsequently rotated the raising of the bar, as before described, will also elevate the proper latch-plunger to release the cash-drawer corresponding to the key operated. The said shaft 20 is provided at one end, as shown in Figs. 2 and 3, with a pinion 28. This pinion meshes with an intermediate pinion 29, which in turn meshes with a pinion 30, fast to the regular rotation-shaft 31 of the machine, which shaft receives motion in substantially the same manner as described in said patent.

This invention provides a separate or independent cash-drawer for each clerk and a series of keys for controlling the same, so that the desired drawer may be opened at will.

When the expression "regular operation of the machine" or the like appears in the claims, it is intended to express such operation of the machine as is necessary between two independent opening movements of the cash-drawers.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a cash-register, the combination with an operating mechanism, of a series of cash-drawers, independent latches for said drawers, separate independent latch-operating devices, a series of independent setting devices each of which is arranged to set its respective latch-operating device without moving any of the other similar devices and means for reciprocating said latch-operating devices after being set and upon the regular operation of the machine.

2. In a cash-register, the combination with an operating mechanism, of a series of cash-drawers, independent latches for the respective drawers, a series of independent lifting devices for the respective latches, a series of independent setting devices for said lifting devices for setting the latter for operation independently of each other, and a movable member common to all of the lifting devices for actuating the same to operate the latches upon the regular movement of the machine.

3. In a cash-register the combination with an operating mechanism, of a series of cash-drawers, a series of independent latches for said drawers, a series of independently-movable latch-operating bars, means connecting said bars to the operating mechanism whereby they are reciprocated by the same during its regular operation and a series of keys and connecting devices arranged to bring any desired one of said bars into coöperative relation with its latch without moving the remainder of said bars.

4. In a cash-register the combination with an operating mechanism, of a series of cash-receptacles, a series of independent latches for said receptacles, a series of independently-

movable latch-operating bars, means connecting said bars to the operating mechanism whereby they are reciprocated by the same during its regular operation, and a series of keys and connecting devices arranged to bring any desired one of said bars into coöperative relation with its latch without disturbing the remaining bars.

5. In a cash-register the combination with an operating mechanism, of a series of cash-drawers, a series of latches for said drawers, a series of latch-operating devices, a series of special keys, and a series of levers one for each key and connected to the operating devices and each of the same so arranged as to be actuated by its respective key to lock an adjoining key against operation.

6. In a cash-register the combination with an operating mechanism, of a series of cash-receptacles, a series of independent latches for said receptacles, a series of latch-operating bars, means connecting said bars to the operating mechanism whereby they are reciprocated by the same during its regular operation, a series of setting elements, and independent connections between the respective setting elements and the operating-bars.

7. In a cash-register the combination with an operating mechanism, of a series of cash-drawers, a series of latch-plungers for said drawers, a series of pivoted bars for operating said plungers, normally out of connection therewith, a series of levers formed with cam ends and arranged to move the bars into connection with the plungers, and a series of keys having projections arranged to engage the cam ends of said levers.

8. In a cash-register, the combination with an operating mechanism, of a series of cash-drawers, a series of latch-plungers for said drawers, a series of pivoted bars for operating said plungers, a shaft carrying a series of cams for causing the bars to operate the plungers, a series of keys, and means connected with each key for adjusting only its own respective bar into operative position without moving the remaining bars.

9. In a cash-register the combination with an operating mechanism, of a series of cash-drawers, plunger-latches for said drawers, a series of pivoted hook-bars, spring for normally holding the same out of engagement with the plungers, means for reciprocating the bars, a series of nested sleeves carrying arms for rocking said bars, and a series of keys and connecting means for operating said sleeves.

10. In a cash-register the combination with an operating mechanism, of a series of latched cash-drawers, a series of independent latch-operating devices, and a series of keys for independently setting the respective latch-operating devices for movement in connection with the operating mechanism.

11. In a cash-register the combination with

an operating mechanism, of a series of independent cash-drawers, latches for said drawers, a series of pivoted bars for operating said latches, a shaft connected to the operating mechanism and carrying cams for operating said bars, a series of pivoted cam-levers, a series of keys for operating the same, and means connecting the pivoted bars and said cam-levers.

10 12. In a cash-register the combination with an operating mechanism, of a series of independent cash-drawers, latches for said drawers, a series of pivoted bars having hook ends for operating said latches, springs for normally drawing the hooks away from the latches, a series of cams for reciprocating said bars, a series of pivoted arms for rocking said bars, and a series of special keys and connections for operating said arms.

20 13. In a cash-register the combination with an operating mechanism, of a series of latched cash-receptacles, a series of independent latch-operating devices, and a series of keys, and independently-adjustable devices between the keys and said latch-operating devices for separately positioning the latter devices for sub-

sequent operation by said operating mechanism.

14. In a cash-register the combination with an operating mechanism, of a series of cash-receptacles, latches for said receptacles, a series of pivoted reciprocating latch-operating devices, and a series of keys and connections arranged to independently set the latch-operating devices.

15. In a cash-register, the combination with an operating mechanism, of a series of cash-receptacles, latches therefor, a series of keys, mutually-independent and separately-adjustable devices between the keys and their respective latches for preparing the proper latch for operation upon the depression of its corresponding key, and means controlled by the operating mechanism for subsequently operating the latch.

In testimony whereof I affix my signature in the presence of two witnesses.

JOSEPH P. CLEAL.

Witnesses:

IRA BERKSTRESSER,
ALVAN MACAULEY.