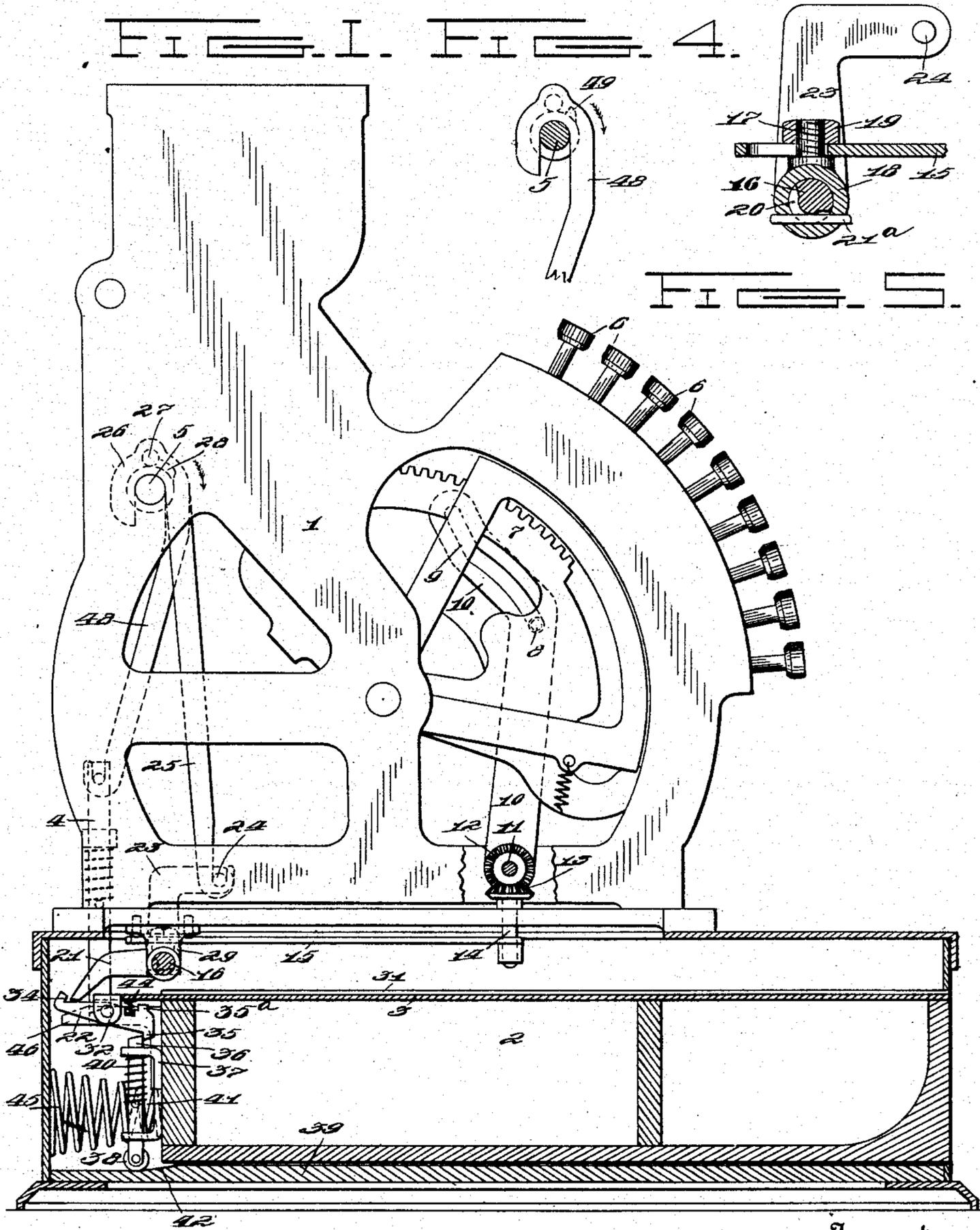


T. CARROLL.
CASH REGISTER.

(Application filed June 26, 1900.)

(No Model.)

3 Sheets—Sheet 1.



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No. 675,126.

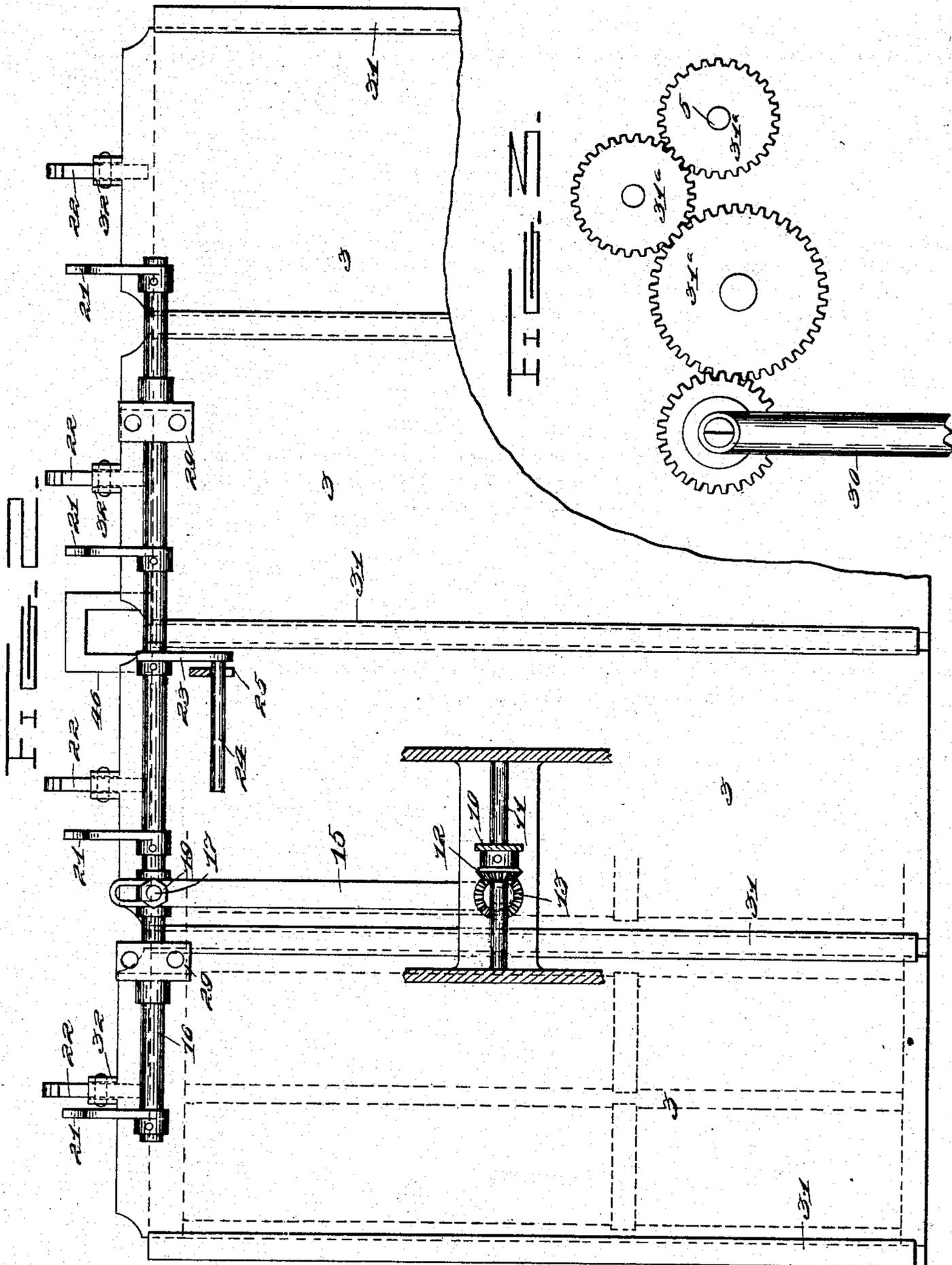
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3 Sheets—Sheet 2.



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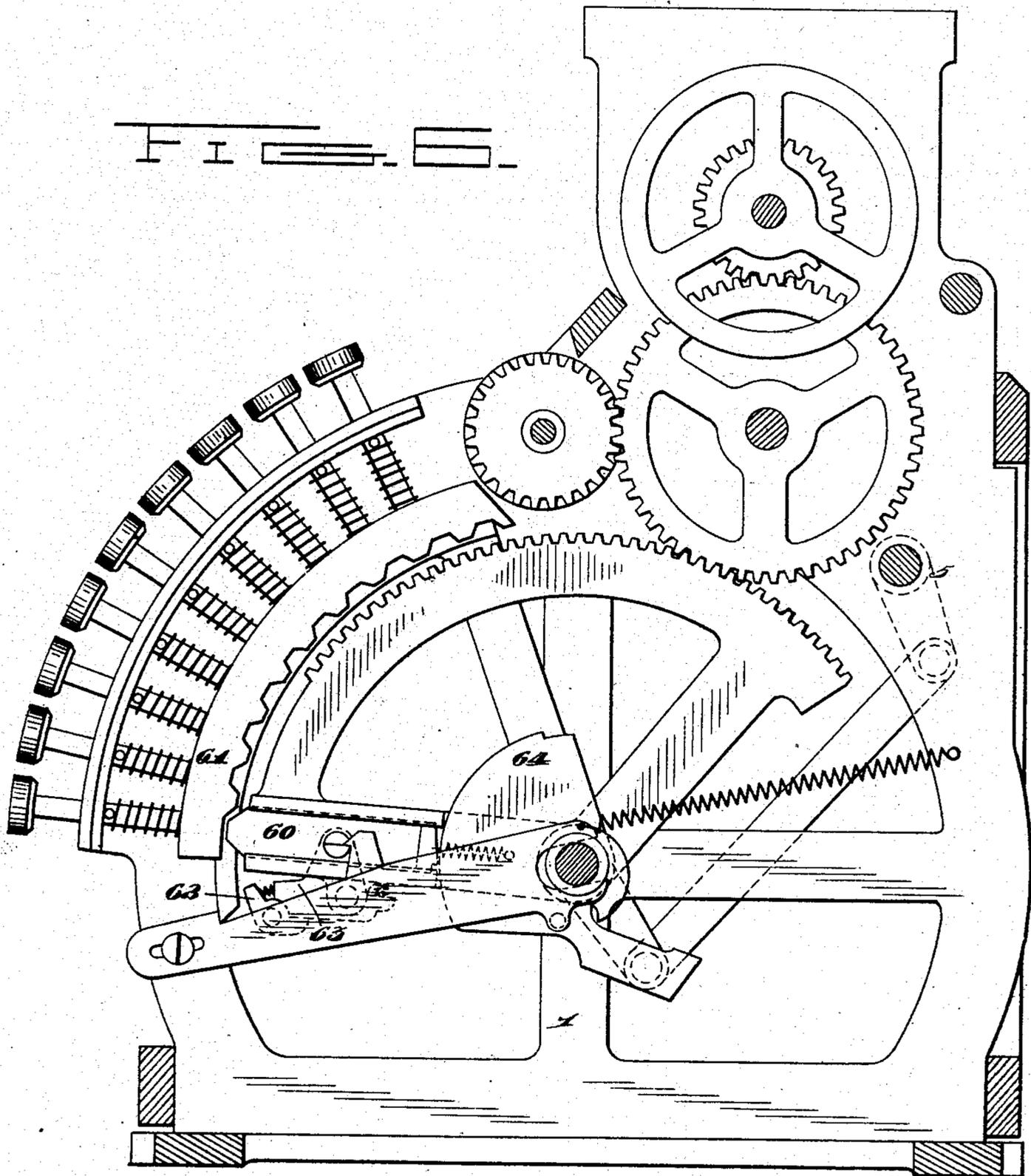
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3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

THOMAS CARROLL, OF DAYTON, OHIO, ASSIGNOR TO THE NATIONAL CASH REGISTER COMPANY, OF JERSEY CITY, NEW JERSEY.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 675,126, dated May 28, 1901.

Application filed June 26, 1900. Serial No. 21,754. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CARROLL, 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 improvements in cash-receptacles for the same.

The principal object of the invention is to provide an improved cash-receptacle which is divided into a plurality of independent compartments, each of which is provided with an independent cover and means for predetermining which compartment will be opened.

In the accompanying drawings, forming part of this specification, Figure 1 represents a vertical transverse section, partly in elevation, through the devices embodying my invention as applied to a machine of the class patented to Messrs. Cleal and Reinhard April 13, 1897, No. 580,378. Fig. 2 represents a top plan view, partly broken away, of the drawer, its slides, and cooperating parts. Fig. 3 represents a detail side elevation, partly broken away, of the crank-handle and operating-gears. Fig. 4 represents a broken detail side elevation of the drawer-plunger-operating link and its cam. Fig. 5 represents a detail vertical section, partly in side elevation, of the plunger-operating shaft and the levers for rocking it and moving it longitudinally; and Fig. 6 represents a central vertical section through a machine of the type mentioned, the cash-drawer being omitted.

In the aforesaid drawings, 1 represents the frame of the machine; 2, the cash-drawer; 3, the independent covers or slides for the drawer; 4, the regular drawer-plunger; 5, the main rotation-shaft, and 6 the special clerk's or department keys.

The machine to which I have shown my invention as applied is substantially of the same construction as that shown in the aforesaid patent, and reference is therefore made to the same for a detail description of the parts.

The operating rack-segment 7 of the left-hand or special key-bank is controlled or limited in its movements by the four special clerks' keys 6 in substantially the same manner as the segment of the different banks shown and described in the said patent and also shown in Fig. 6 of the present application. In general terms these segment-controlling devices may be described as comprising a slidable latch-plate 60, mounted on the segment and arranged to be thrown into locking engagement with a stationary notched segment 61 by the lower end of the depressed key, with which a pawl 62, carried by a plate 63, pivoted on the segment, contacts. When the plate 60 is forced forward into engagement with the segment 61, the rack-segment is arrested; but the actuating-disk 64, mounted on the main rock-shaft 65, continues its full movement, as the slide 60 is disengaged therefrom when moved forward as aforesaid. As this construction is old in the art and is fully described in the aforesaid patent, I will refer to the same for a full detail description of the parts.

It follows from the above that the movements of the segment 7 will be according to the key 6 operated, and as these keys are appropriated to and designate the respective clerks or departments said segment is utilized as a selecting means for predetermining which of the covers 3 will be opened upon the further operation of the machine. To this end the segment 7 is provided with a laterally-projecting pin 8, which extends into a cam-slot 9, formed in an operating-lever 10, so as to rock said lever more or less, according to the key operated. The lower portion of the slot 9 is concentric to the path of movement of the pin 8, so that the initial movement of the latter will not move the lever 10. This lever 10 is pivoted upon a short transverse shaft 11, suitably mounted in the main frame, and carries a beveled pinion 12, as better shown in Fig. 2. The pinion 12 meshes with a similar pinion 13, mounted fast on a short vertical shaft 14, which extends downward through the frame, as shown in Fig. 1. A lever 15 is fast to the lower end of said shaft 14 and extends rearward over a rock-shaft 16,

which is suitably mounted in apertured lugs 29, pendent from the main frame. The rear end of the lever 15 is slotted, as shown in Figs. 2 and 5, to receive a screw 17, formed on a sleeve 18, which is loosely mounted on the shaft 16, a nut 19 holding the lever in place on the screw. The shaft 16 is free to rotate independently of the sleeve 18; but the latter cannot move longitudinally without moving the shaft with it. To accomplish this result, the shaft is formed with a transverse groove 20, into which projects a pin 21^a, mounted fast in the sleeve 18, so as to project partially through the interior of the same.

It will be seen from the above that when the lever 15 is rocked by the movement of the segment 7 it will move the shaft 16 longitudinally, according to the degree of movement of the segment. This longitudinal movement of the shaft is utilized to bring one of several arms 21, rigidly mounted thereon, into alinement with its respective cover-latch 22, so that when the shaft is subsequently rocked said latch will be operated. This rocking of the shaft 16 is effected upon each operation of the machine by a crank-arm 23, fast on said shaft and carrying a laterally-projecting rod 24. This rod, as better shown in Fig. 1, engages the lower hook end of a link-bar 25, which is formed at its upper end with a hook 26, which passes over the main rotation-shaft 5, so as to bring a pin 27, mounted thereon, into coöperative relation with a cam 28, fast to said shaft. It will thus be seen that upon each rotation of said shaft 5 the link-bar 25 will be raised, and will thus rock the shaft 16, as aforesaid. The shaft 5 is rotated by the operating-handle 30 through suitable intermediate gears 31^a, as shown in Fig. 3 and also in the aforesaid patent. The relative locations of the respective arms 21 and the latches 22 are such that a different degree of longitudinal movement of the shaft 16 is necessary to bring an arm into alinement with its respective latch, so as to operate the latter when the shaft is rocked.

The cash-drawer 2 is suitably mounted in the main frame and is divided by suitable partitions into four independent groups of money-compartments. Each of these groups of compartments is provided with one of the slidable covers 3, said covers being held in position and guided when operated by strips or guides 31, applied over the edges of the same and secured to the drawer-partitions. Each of the slidable covers is provided at its rear with spaced pendent lugs 32, between which is pivoted its respective latch-pawl 22. Each of the said pawls is provided at its rear end with an upwardly-turned nose 34 and at its front end with a downwardly-turned nose 35 and an upwardly-projecting stop 35^a. The nose 35 in each case is normally forced downward into engagement with one of a series of latch-plungers 36, which are mounted in suitable apertured brackets 37, secured to the

rear of the cash-drawer by a coiled spring 44, interposed between said pawl and its cover 3. Each of the plungers is provided at its lower end with an antifriction-wheel 38, which is forced downward upon one of a series of rails 39, mounted in the bottom of the register, by a coiled spring 40, which surrounds it and bears with its opposite ends against one arm of its bracket 37 and a pin 41, mounted in the plunger. Each rail 39 is formed with an inclined portion 42, so that when the cash-drawer is forced open the antifriction-roller will ride up the incline, and thus force the plunger upward against the tension of its spring. As the plunger moves upward it forces the forward end of its pawl 22 upward until the projection 35^a contacts with the respective slide 3, which prevents any disengagement of the pawl-latch from the plunger as long as the drawer remains open. Before the drawer is opened, however, there is sufficient space between the upper end of the plunger and the cover 3 for the pawl-latch, with its nose 35 and projection 35^a, to pass freely over the same, when the pawl is rocked by its respective arm 21^a and the drawer 2 is opened. When one of the pawls 22 is rocked by its arm 21, it, with the cover to which it is attached, is held stationary upon the opening of the cash-drawer because of the engagement of said pawl with the nose 34, and thus the particular group of compartments which said cover normally closes is left exposed. When released, the drawer 2 is forced from the casing by a coil-spring 45, interposed between it and the back of the casing in a manner well known in the art. The drawer is provided at its rear with an apertured latch-plate 46, which is engaged by a spring-pressed drawer-latch plunger 4, mounted in the casing or frame to normally hold the drawer closed. This plunger is suitably connected at its upper end to a link-bar 48, which is constructed and operated by a cam 49 in substantially the same manner as the bar 25. (See Fig. 4.) The relative arrangement of the cams 28 and 49 is such that a cover latch-pawl is operated to release the cover before the drawer-latch is operated, so that when the drawer is released and forced out of the casing the proper cover will be retained, and thus leave the compartments normally covered by said cover exposed.

I preferably employ my improved cash-drawer in connection with a multiple-counter or detail-strip-printing machine, so that the amounts in the different compartments of the drawer must correspond with the amounts indicated by the respective counters or the individual accounts of the detail strip.

By the term "dependent upon the regular operation of the machine" or like expressions employed in the claims is intended to be expressed such an operation of the machine as is necessary between successive opening movements of the drawer.

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

1. A cash-register including a cash-drawer, a plurality of independent covers for the same, independent latches for said covers, means for tripping said latches and means for locking all the untripped latches against operation as long as the drawer remains open.
2. A cash-register including a movable cash-receptacle, a plurality of independent covers for the same, latches for said covers, means for tripping said latches, and means for locking the untripped latches against operation as long as the receptacle remains in its open position.
3. A cash-register including a cash-drawer, a series of independent covers for the same, latches for said covers, latch-tripping devices dependent for operation upon the regular movement of the machine, keys for setting said devices for operation and means independent of the keys for actuating the machine to cause the tripping devices to engage and operate the latches independently of the movement of the cash-drawer.
4. A cash-register including a cash-drawer, a series of independent covers for the same, latches for said covers, tripping devices for said latches, means dependent upon the regular operation of the machine for both setting and operating said tripping devices and means for controlling the setting of the tripping devices.
5. A cash-register including a movable cash-receptacle, a plurality of independent covers for the same, latches for said covers, means for tripping said latches and means operated by the movement of the receptacle for locking the untripped latches against operation as long as the receptacle remains in its open position.
6. A cash-register including a drawer-casing, a cash-drawer mounted therein, a plurality of independent covers for said drawer, latches for said covers, means for tripping said latches and movable means mounted on the drawer and engaging the casing whereby upon the movement of the drawer all the untripped latches are locked against operation.
7. A cash-register including a drawer-casing, a cash-drawer mounted therein, a plurality of independent covers for said drawer, latches for said covers, means for tripping said latches, and spring-pressed plungers mounted on said drawer and arranged to engage the casing when the drawer is opened and thus be moved to lock the untripped latches as long as the drawer remains open.
8. A cash-register including a drawer-casing, a cash-drawer mounted therein, a plurality of independent covers for said drawer, latches for said covers, means for tripping said latches, spring-pressed plungers mounted on said drawer, and incline projections

mounted in the casing and engaged by the plungers when the drawer is opened to force said plungers into position to lock the untripped latches.

9. A cash-register including a drawer-casing, a cash-drawer mounted therein, a plurality of independent covers for said drawer, latches for said covers, means for tripping any desired latch, spring-pressed plungers mounted on the cash-drawer and arranged to be operated to lock the untripped latches when the drawer is opened.

10. A cash-register including a drawer-casing, a cash-drawer mounted therein, a plurality of independent covers for said drawer, latches for said covers, means for tripping any desired latch, keys for controlling said tripping means, and movable devices mounted on the cash-drawer and operated by the movement of the same to lock the untripped latches.

11. A cash-register including a cash-drawer, a series of independent covers for the same, latches for said covers, latch-tripping devices dependent for operation upon the regular movement of the machine, means for adjusting said devices for operation and a crank-handle for actuating the machine to operate the tripping devices and cause them to positively trip the desired latch.

12. A cash-register including a cash-drawer, a series of independent covers for the same, latches for said covers, a rock-shaft carrying tripping-arms for said latches, means dependent upon the regular operation of the machine for moving the shaft longitudinally and rocking it and keys for controlling the longitudinal movement of the shaft.

13. In a cash-register, the combination with a series of keys, of a movable member controlled thereby and moved different distances according to the key operated, a cash-drawer, a plurality of independent covers for said drawer, latches for said covers, a latch-operating device and means connecting the movable member and latch-operating device so that the latter is adjusted to operate the proper latch according to the key operated.

14. In a cash-register, the combination with a series of keys, of a movable member controlled thereby and moved different distances according to the key operated, a cash-drawer, a plurality of independent covers for said drawer, latches for securing the covers to the drawer, a common latch-operating device and means connecting the same and said movable member whereby said device is set according to the key operated.

15. In a cash-register, the combination with a series of keys, of a movable member controlled thereby and moved different distances according to the key operated, a cash-drawer, a plurality of independent covers for said drawer, independent latches for securing the covers to the drawer, a rock-shaft carrying a

plurality of latch-operating arms and means connecting the movable member and said rock-shaft.

16. In a cash-register, the combination with
5 a series of keys, of a movable member controlled by the same and moved different distances according to the key operated, a cash-drawer, a series of independent covers for
10 said drawer, independent latches for said covers, a rock-shaft having a series of latch-op-

erating arms, means connecting said shaft to the movable member whereby the shaft is moved longitudinally and independent means for rocking the shaft.

In testimony whereof I affix my signature 15
in the presence of two witnesses.

THOMAS CARROLL.

Witnesses:

JOHN C. LOCKYER,
CHAS. E. CRUSOE.