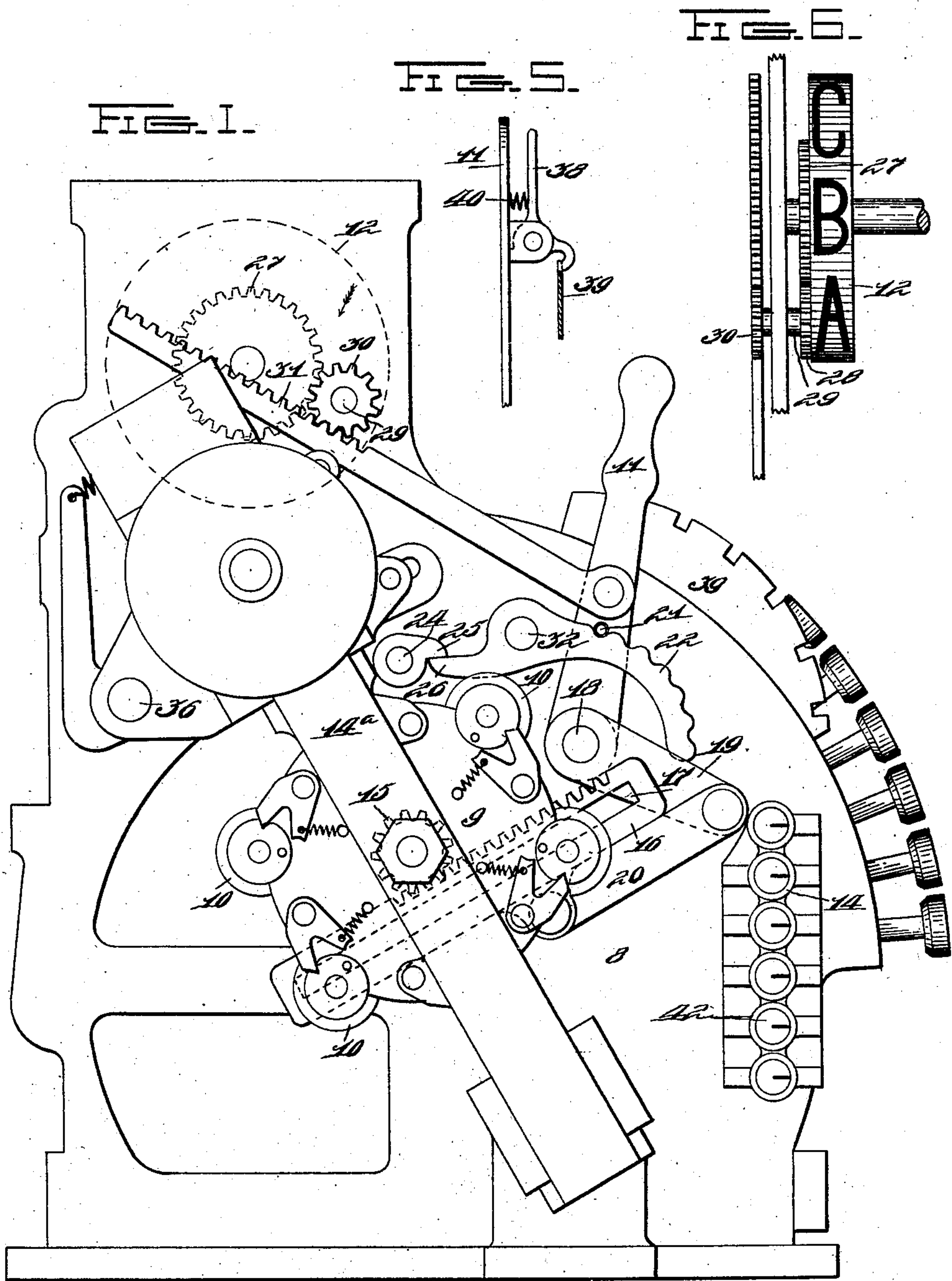


903,172.

T. CARROLL.
CASH REGISTER.
APPLICATION FILED NOV. 18, 1901.

Patented Nov. 10, 1908.
3 SHEETS—SHEET 1.



Witnesses
W. M. McCarthy
H. B. Hugg

Inventor
Thomas Carroll
By Alvan Macasolup
Attorney

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FIG. 7.

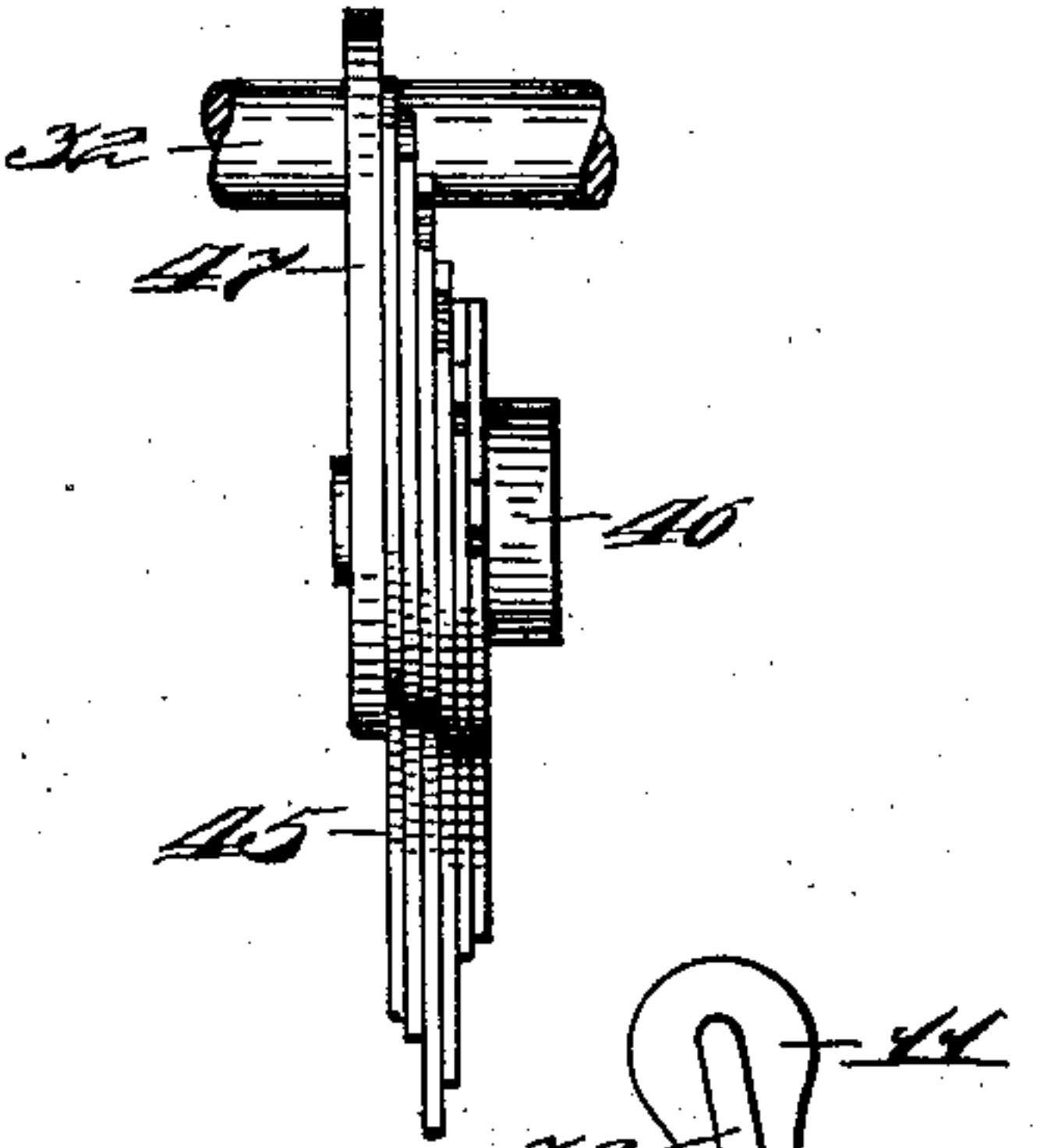
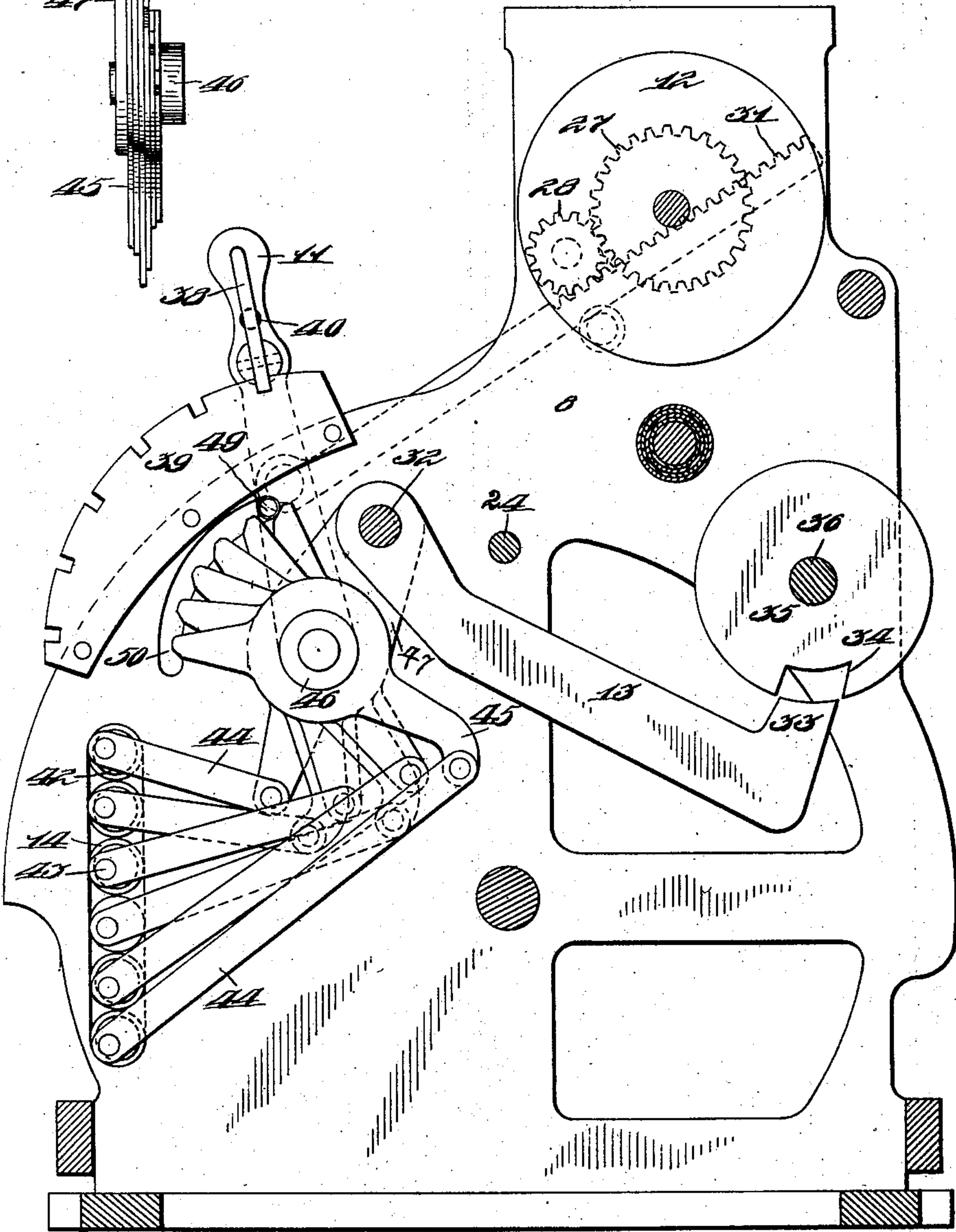


FIG. 2.



Witnesses
W. M. McCarthy
H. H. Haggis

Inventor
Thomas Carroll
By Alan Macaulay
Attorneys

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3 SHEETS—SHEET 3.

903,172.

FIG. 4.

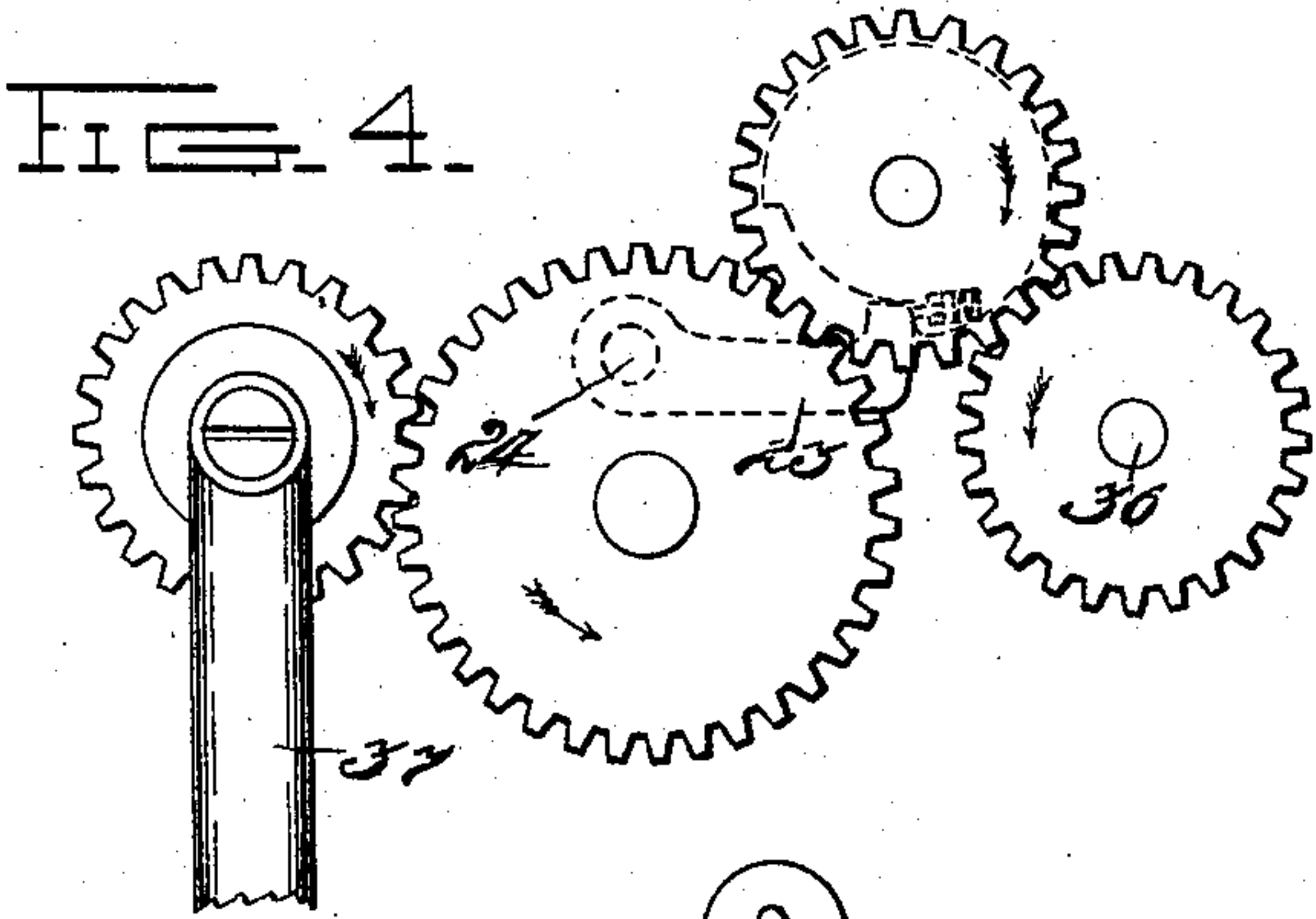
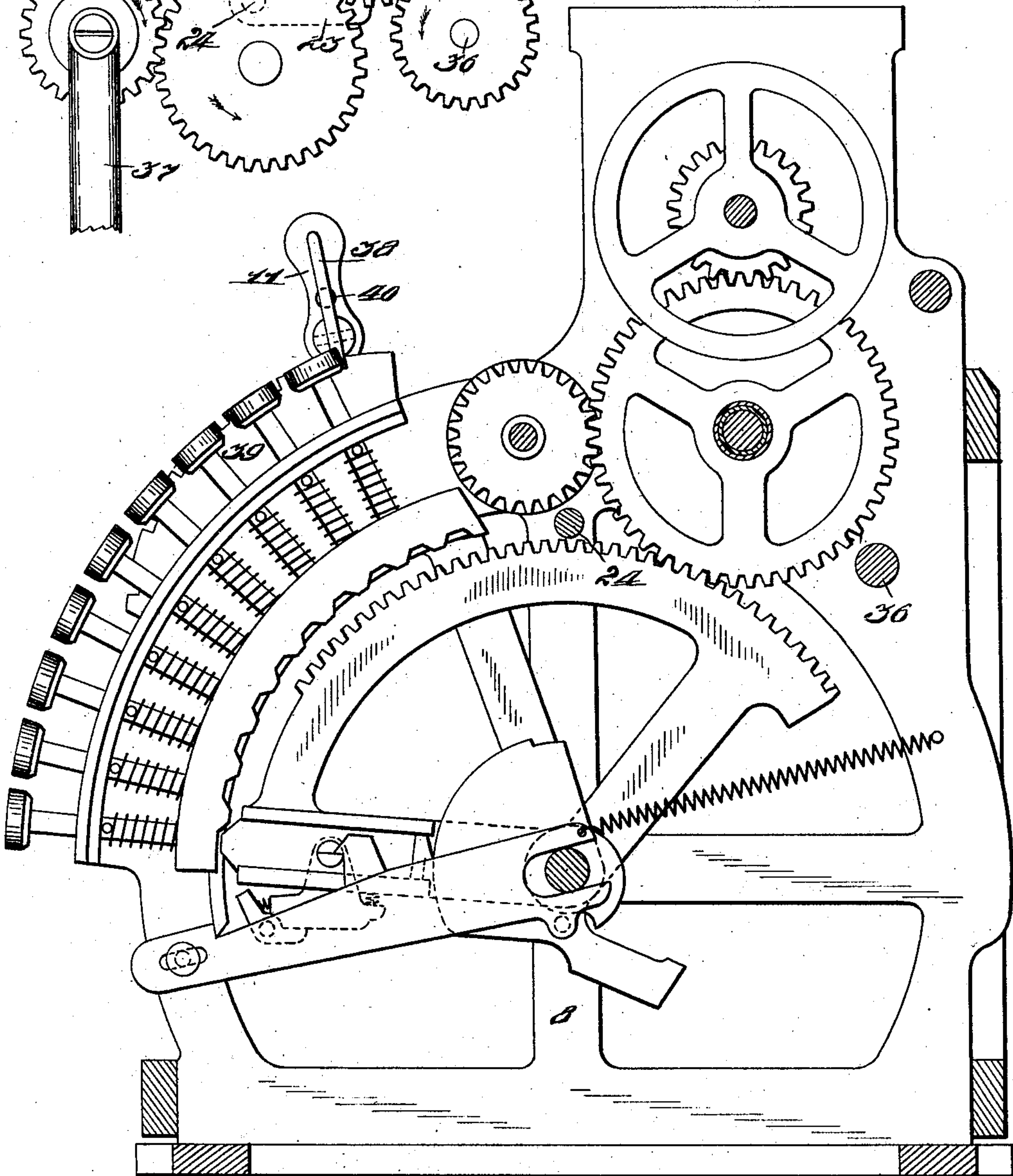


FIG. 3.



Witnesses
W. M. McCarthy
H. H. Huggins

Inventor
Thomas Carroll
By Horan Macaulay,
Attorney

UNITED STATES PATENT OFFICE.

THOMAS CARROLL, OF DAYTON, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE NATIONAL CASH REGISTER COMPANY, OF DAYTON, OHIO, A CORPORATION OF OHIO, (INCORPORATED IN 1906.)

CASH-REGISTER.

No. 903,172.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed November 18, 1901. Serial No. 82,652.

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 registers of the type patented to Thomas Carroll, July 1, 1902, No. 703,639.

The object of the invention is to provide means on a machine of the class mentioned, for locking any particular recording device or counter against operation without interfering with the usual operation of the remaining recording devices or counters.

In the accompanying drawings forming part of this specification; Figure 1 represents an end elevation of a machine of the type mentioned with my present improvements applied thereto, the cabinet and multiple cash drawers being omitted; Fig. 2, represents a vertical, transverse section through the same taken to the right of the counter adjusting lever; Fig. 3, represents a similar section taken between two of the amount key banks; Fig. 4 represents an enlarged detail end elevation, partially broken away, of the operating gear and handle, and the locking arm; Fig. 5 represents an enlarged detail front elevation of the counter adjusting lever and its spring latch. Fig. 6 represents an enlarged detail front elevation of the special indicator and its operating gearing. Fig. 7 represents an enlarged detail front elevation of the pivoted, lock controlled arms or levers and their supporting journal pin.

In the aforesaid drawings, 8 represents the frame of the machine, 9 the multiple counter drum, 10 the multiple counters mounted thereon, 11 the multiple counter adjusting lever, 12 the special indicator, 13 the locking lever and 14 the key locks.

The general construction and operation of this machine is substantially as described in the aforesaid patent, and includes a drum provided with a series of counters which may be brought successively into coöperative relation with a series of rack segments which are mounted on nested sleeves.

The multiple counter drum 9, which is

adjusted by the movements of the lever 11, to bring the desired counter into operative position, is journaled upon the reciprocating slide 14^a, which moves towards and away from the rack segments to bring the counter pinions into mesh therewith or disengage them therefrom. The said drum 9 is provided with an operating pinion 15, which is engaged by a sliding rack bar 16. This bar, 16, is slidably mounted upon the main frame by suitable bolts which project through an elongated slot 17, formed therein, whereby it may be moved back and forth to impart the necessary rotary movements to the pinion and drum. The reciprocation of the slide is effected by the lever 11 which is mounted on a short shaft 18. This shaft carries a crank arm 19 which is connected with the slide 16 by a pivoted link bar 20. The lever 11 is provided with an anti-friction roller 21 which engages the scalloped periphery of a segmental lever 22, which acts as an alining device for the lever 11. The movement of the lever 22 also effects the release of the machine by tripping the usual latch 23 which is mounted on a transverse shaft 24. This shaft is provided with a short trip arm 25 which is engaged by a rearwardly projecting nose on the lever 22, all of which is fully described in the aforesaid patent.

The special indicator 12, for indicating which of the respective counters is being used for recording a transaction, is provided with suitable letters or characters indicating the departments or clerks to which the respective counters belong. This indicator is provided with a gear wheel 27 which meshes with a pinion 28, fast on the short shaft 29 which is journaled on the frame and is provided with a companion pinion 30, this latter pinion meshes with the rack bar 31 which is pivotally connected to the adjusting lever 11. By these means, the movements of the lever 11 bring the proper indications into view and simultaneously adjust the drum 9 to bring the corresponding counter into operative position. The aforesaid lever 22 is fast upon a short shaft 32, which is journaled in the main frame and is provided with the locking arm 13. This arm 13 is formed with the locking nose 33 which, when the shaft 32 is rocked is projected into a locking notch 34 formed in a disk 35, fast to the main rotation shaft 36 which receives its movements from the crank handle 37 as clearly shown

in Fig. 4 and also on the aforesaid patent, and will need no further description here.

It will be seen from the above description that while the anti-friction roller is passing over any one of the projections of the lever 22, the machine will be locked and will only be unlocked when the roller becomes seated in the hollow between two of the projections of the lever. This locking operation prevents any operation of the machine until the counter is brought to the proper registering position and will not permit any such operation when any of the counters are in an intermediate position. Further, after the operation of the machine has commenced, the lever 11 becomes locked, as the notch 34 is moved out of alinement with the nose 33 and the lever 13 and the lever 22 are thereby locked.

In order to temporarily lock the lever 11 when set to a desired position, I provide the same with a pivoted bell crank latch 38, which is normally forced against the side of the notched lock plate 39 or into one of the notches of the same by a coil spring 40 interposed between the said latch and the adjusting lever. When it is desired to operate the adjusting lever, the latch 38 is simply operated against the tension of the spring by the thumb and finger and is thus disengaged from the notch in the plate 39 in which it has been resting.

In machines of this class in which the different multiple counters usually represent different clerks, whose accounts are being kept separately, it is very desirable that when certain clerks absent themselves from the store, they may lock their respective counters against any operation during their absence. This I accomplish by a series of suitable key locks 14 equal in number to the multiple counters and provided with any suitable mechanism including a rotary barrel 42 which may be unlocked and receive motion from a certain key. These locks may be of the well-known Yale pattern or any other construction of a similar nature.

The locks are all accessible from the exterior of the machine, but are so mounted in the frame that the inner ends of their barrels project into the interior of the machine, where they are provided with crank pins 43. Each of these crank pins is connected by a pivoted link 44 with one of a series of pivoted levers 45. These levers, as best shown in Figs. 2 and 7, are journaled upon a headed bolt 46, which is supported by an arm 47 fast on shaft 32. The upper ends of the levers 45, as shown in Fig. 2, are beveled and their relative arrangement is such as to give in effect a scalloped edge similar to that of lever 22. These upper ends of the levers are engaged by an anti-friction roller 49 mounted on the lever 11 and projecting through a slot 50 formed in the side frame. When

the lever 11 is operated, the roller 49 will pass over the ends of the levers 45 and become set in the successive notches formed between the ends of the levers. The devices are shown in Fig. 2 in their normal positions with all of the counters free to be operated. Should one of the locks 41 be operated, its respective lever 45 will be moved in relation to its adjoining lever so as to destroy the notch effect between them. Should the lever 11 be so adjusted as to bring its friction roller into the position occupied by the upper end of the adjusted lever 45, the lever together with the arm 47 will be depressed and the shaft 32 rocked to lock the machine through the medium of the lever 13 in the manner before described.

During the normal operation of the machine the roller 49, in passing over the ends of the levers 45, will assist the lever 22 in rocking shaft 32, to lock the machine when the lever is in one of its intermediate positions. Any number of the locks 14 may be operated and their levers 45 adjusted into position to be engaged by the roller 49 without interfering with the relative positions and operations of the remaining levers 45.

This machine is particularly useful in stores where the numerous clerks are arranged in watches, one half being on duty at one time and one half at another time, as the counters of those off duty can always be locked against any accidental or malicious operation by those on duty.

The application of this improvement is not to be limited to the multiple counter machine as the same may be applied with equal facilities to machines having multiple detail strips or multiple cash receptacles or any similar machines without departing from the spirit of this invention.

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 an adjusting member arranged to be moved to a number of different positions, a lock for the operating mechanism and adjustable means engaged by said member and set to be operated thereby, to lock the machine or not, as desired.

2. In a cash register, the combination with an operating mechanism, of an adjustable member arranged to be moved to a number of different set positions, a lock for the operating mechanism, and a series of independently adjustable devices engaged by said member and set to be operated thereby to lock the machine or not, as desired.

3. In a cash register the combination with an operating mechanism, of a movable lever, a lock for the operating mechanism and a series of lock-controlled devices adapted for adjustment in relation to the lever so

that any one may be operated thereby and means connecting said devices to the lock to operate the same.

4. In a cash register the combination with an operating mechanism, of a series of independent counters, a member for adjusting said counters for operation, a lock for the operating mechanism and adjustable means for operating the lock when the lever is moved to certain predetermined positions.

5. In a cash register the combination with an operating mechanism, of a series of registering elements arranged to be brought successively into coöperative relation with said mechanism, a movable member for adjusting said registering elements and a series of locks and connections for preventing the operation of the machine when said lever is adjusted to bring a certain predetermined element to an operative position.

6. In a cash register the combination with an operating mechanism, of a series of accounting devices, a movable member for adjusting said accounting devices for operation, a lock for the operating mechanism, and adjustable means for operating the lock when the lever is moved to certain predetermined positions.

7. In a cash register, the combination with an operating mechanism, of a series of counters, a movable member arranged to adjust any one of the counters to coöperate with the operating mechanism and a series of locks and connections for locking the operating mechanism when the movable member is adjusted to any predetermined position.

8. In a cash register the combination with a series of counters and an indicator, of an adjusting lever connected to said counters and the indicator and a series of locks and connections which may be adjusted to prevent the operation of the machine when the lever is moved to bring certain predetermined counters into coöperative relation with the operating mechanism.

9. In a cash register, the combination with an operating mechanism, of a series of accounting devices, an adjusting lever for controlling the same, and a series of locks and connections which may be adjusted to prevent the operation of the machine when the adjusting lever is moved to certain predetermined positions.

10. In a cash register, the combination with an operating mechanism of a series of counters, any one of which may be brought into coöperative relation therewith, a lever for adjusting said counters, a series of locks, a series of levers controlled by said locks and arranged to be engaged by the adjusting lever and a lock for the operating mechanism, arranged to be operated by any one of the series of levers.

11. In a cash register, the combination with an operating mechanism, of a series of

counters, a lever for adjusting the counters to bring any one of the same into coöperative relation with said mechanism, a series of locks and connections, any one of which may be adjusted to be engaged by the lever and a lock for the operating mechanism arranged to be operated by any one of said lock connections which is engaged by said lever.

12. In a cash register, the combination with an operating mechanism, of means for normally locking the same, an adjusting lever, lock-controlled means operated by said lever to unlock the machine and arranged to be adjusted so that when engaged by said lever, they will lock the machine.

13. In a cash register, the combination of an operating mechanism, and a series of counters, of an adjusting lever for bringing the desired counter to an operative position, a series of locks, a series of movable members controlled by said locks and adapted to be engaged by said lever, a movable support connected to all of said members and a lock for the machine arranged to be operated by said movable support.

14. In a cash register, the combination with an operating mechanism, of a series of counters and adjusting levers for said counters, a series of locks, a series of pivoted levers connected to said locks and arranged to be adjusted thereby into the path of said adjusting lever, a movable support for said levers and a lock for the operating mechanism connected to said movable support.

15. In a cash register the combination with an operating mechanism, of a series of accounting devices, an adjusting lever for the same, a lock for the operating mechanism, and means under lock and key and arranged to be adjusted in relation to the operating lever so as to cause a movement of the same to operate the lock for the operating mechanism.

16. In a cash register the combination with a series of accounting devices, of an indicator, a movable member for adjusting the accounting devices and the indicator to the desired position, and a series of locks and connections arranged to prevent the operation of the machine when the movable member is adjusted to bring any predetermined accounting device or indicator into view.

17. In a cash register the combination with a series of registering mechanisms, of an adjusting lever for controlling the same, and a series of locks and connections which may be adjusted to prevent the operation of the machine when the adjusting lever is moved to certain predetermined positions.

18. In a cash register the combination with an operating mechanism, of an adjusting element arranged to be moved to different positions, a lock for the operating mechanism, and independently movable devices

under the control of locks and keys and arranged to be adjusted at will in relation to the adjusting element, so as to be engaged and operated by the same to operate the lock.

19. In a cash register, the combination with an adjustable member, an operating mechanism, and a lock for said operating mechanism, of adjustable means mounted and adjustable independently of said adjustable member and lock and capable of movement relative thereto for controlling the locking effectiveness of said member on said lock.

20. In a cash register, the combination with an adjustable member, an operating mechanism, and a lock for the latter, of adjustable means mounted and adjustable independently of the adjustable member and engaged and moved by said adjustable member for controlling the lock.

21. In a cash register, the combination with an adjustable member having a plurality of different setting positions, of a series of manipulative devices mounted independently of said adjustable member and corresponding to said different setting positions thereof, an operating mechanism and a lock therefor, of means associated with said manipulative devices for controlling said lock to obstruct or allow movement of the same according to the relative adjustments of said member and said manipulative devices.

22. In a cash register, the combination with an adjustable member arranged to be moved to different positions for different transactions, an operating mechanism and a lock therefor, of a series of lock devices mounted independently of said adjustable member and having connections with the lock for the operating mechanism such that the operating mechanism may be locked when desired, when the setting member is in any one of its adjusted positions.

23. In a cash register, the combination with an adjustable member arranged to be moved to different positions, an operating mechanism and a lock therefor, of means under lock and key having adjustable provisions cooperating with said adjustable member such that the movement of the latter will operate the lock for the operating mechanism when desired.

24. In a cash register, the combination with an adjustable member, an indicator controlled thereby, and an operating mechanism; of a series of adjustable devices and connections movable relatively to said adjustable member for preventing the operation of said operating mechanism when said adjustable member is moved to bring a predetermined indication into view.

25. In a cash register, the combination with an adjustable member, of a series of locks and connections mounted for move-

ment relative to said adjustable member which locks may be adjusted to prevent the operation of the machine when said adjustable member is moved to certain predetermined positions.

26. In a cash register, the combination with an operating mechanism, of an adjustable member representing different clerks or departments and arranged to be moved to different positions, and a series of locks and connections mounted for movement relative to said adjustable lever and arranged when operated to lock the machine when the adjustable member is moved to certain positions representing absent clerks.

27. In a cash register, the combination with a setting lever movable to a plurality of different positions, and an operating mechanism, of a locking element movable to engage the operating mechanism to lock the same, a series of individual levers carried upon said element and movable therewith, a projection carried by said setting lever and cooperating with said individual levers to move the latter and thereby move said locking element, and a series of key-controlled devices for said individual levers for positioning the latter to be engaged by said projection at certain desired points.

28. In a cash register, the combination with an adjustable setting lever having an operating projection formed thereon, and an operating mechanism, of a locking lever for engaging said operating mechanism to lock the same, an arm connected with said locking lever and carrying a series of individual levers having operating extensions projecting into cooperative position with said operating projection, a series of individual keylocks corresponding to the different adjustable positions of said setting lever, and connections between said key locks and said individual levers for positioning the latter by the movement of the former to cause said operating projection to act against a selected individual lever at a certain point to operate said locking lever.

29. In a cash register, the combination with an operating mechanism and means for normally locking the same, of an adjusting lever, movement of which unlocks the locking means, a second locking device for the operating mechanism arranged to be operated by the adjusting lever when desired, and a plurality of devices under locks and keys for connecting the lever operatively to the second locking device.

30. In a cash register, the combination with an operating mechanism, and a normally inoperative locking device for same, of an adjustable lever, and a plurality of means under locks and keys operated by said lever when desired to connect said locking device to said lever for operation thereby.

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31. In a cash register, the combination with a movable device for controlling characteristics of entries of transactions in the machine, of means operated by said device to lock the machine when desired, and a plurality of manipulative elements each of under a lock and key for connecting said locking means to the movable device.

32. In a cash register, the combination with an operating mechanism and a locking device for same, of an adjustable element for moving said device to locking position, and a plurality of connecting devices each under a lock and key for connecting said adjustable element to said locking device.

33. In a cash register, the combination with a series of stops, of revoluble key-controlled members one for each of said stops; and connecting means between each of said stops and its corresponding key-controlled member whereby revoluble movement of the latter will position its corresponding stop.

34. In a cash register, the combination with a series of stops, of a series of rotary key-barrels corresponding to said stops and adapted to be rotated by detachable keys; and connections intervening between each key-barrel and its corresponding stop whereby the rotary movement of said barrel by its key will move its corresponding stop into operative or non-operative position.

35. In a cash register, the combination with an operating mechanism, of a differentially adjustable positioning device, a lock for said operating mechanism, a plurality of separate controlling means for said lock for obstructing or allowing the release thereof, and a device moved by said positioning device for operating said lock.

36. In a cash register, the combination with an operating mechanism, of a differentially adjustable positioning device, a lock for said operating mechanism normally in releasing position, a plurality of separate controlling means for said locking device for obstructing or allowing the release thereof, and means operated by movement of said positioning device for moving said locking device to locking position.

37. In a cash register, the combination with an operating mechanism, of a differentially adjustable positioning device, locking means for said operating mechanism con-

trolled by said positioning device, a plurality of separate devices for obstructing or allowing release of said locking means, and key controlled locks for actuating said separate devices.

38. In a cash register, the combination with an operating mechanism, of a differentially adjustable positioning device, locking means for said operating mechanism controlled by said positioning device from any position of the same, and a plurality of separate means for preventing or allowing release of said locking means, in desired positions of said positioning device.

39. In a cash register, the combination with an operating mechanism and means for locking same, of a differentially adjustable positioning device for operating said locking device by any movement of said device, and a plurality of separate key controlled devices for preventing operation of said locking means in desired positions of said positioning device.

40. In a cash register, the combination with an operating mechanism, of locking means for same, a differentially adjustable positioning device for moving said locking means to locking position, and separate key controlled devices for preventing or allowing release of said locking means.

41. In a cash register, the combination with an operating mechanism, of means for locking same, a differentially adjustable positioning device for operating said locking means, and separate key controlled devices for obstructing or allowing release of said locking means.

42. In a cash register, the combination with an operating mechanism, of means for locking same, a differentially adjustable positioning device adapted to operate said locking means when moved from one position to another, and a plurality of separate key controlled devices for preventing release of said locking means when said positioning device reaches a determined position.

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

THOMAS CARROLL.

Witnesses:

C. L. COLEMAN,
WM. H. MUZZY.

It is hereby certified that in Letters Patent No. 903,172, granted November 10, 1908, upon the application of Thomas Carroll, of Dayton, Ohio, for an improvement in "Cash-Registers," an error appears in the printed specification requiring correction, as follows: Page 5, line 7, consisting of the words "under a lock for connecting said ad-" should be stricken out and the following inserted instead: *which when moved operatively connects the*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 8th day of December, A. D., 1908.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.