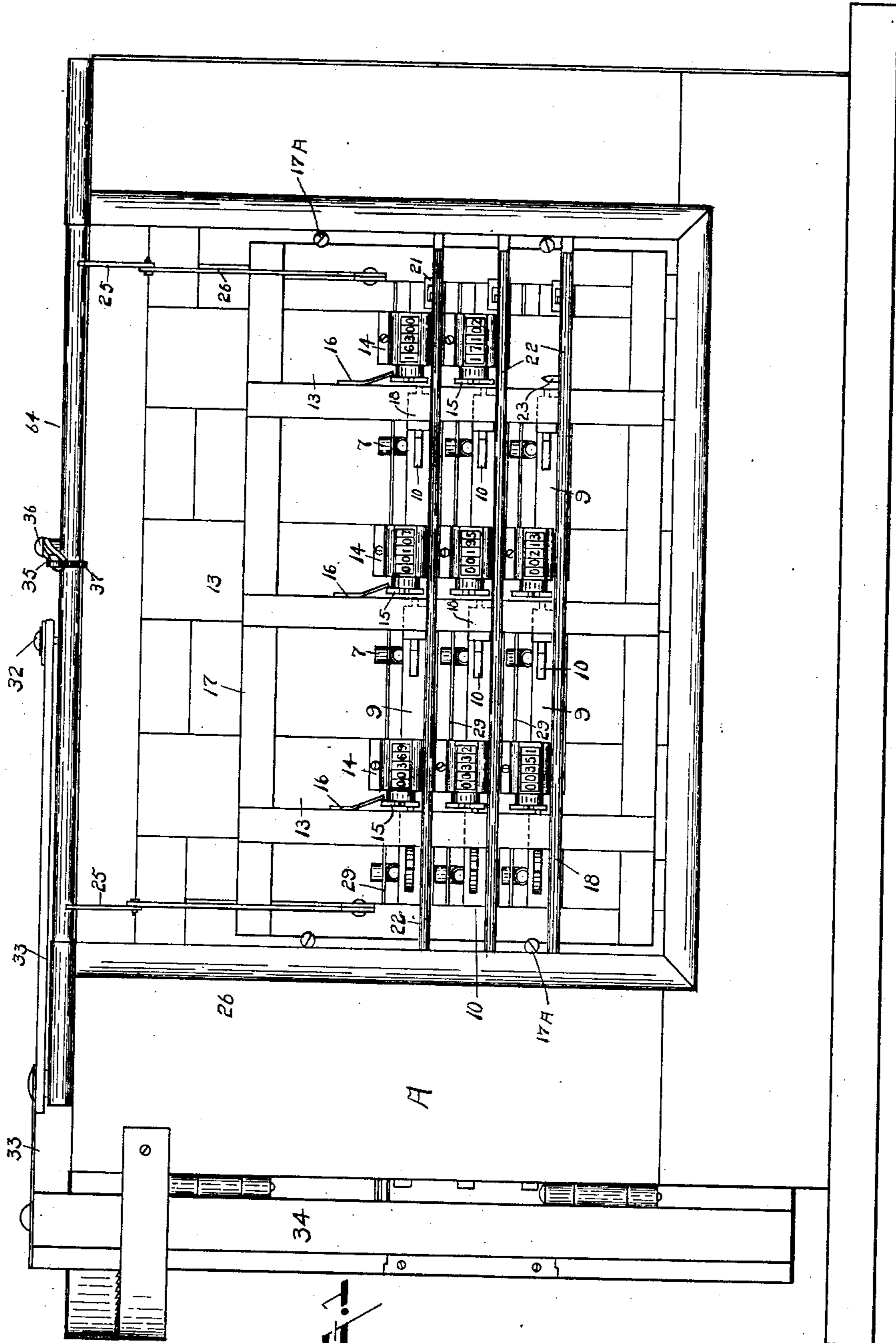


No. 864,173.

PATENTED AUG. 27, 1907.

W. LANGRILL.
REGISTERING MECHANISM.
APPLICATION FILED JUNE 6, 1906.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 2.

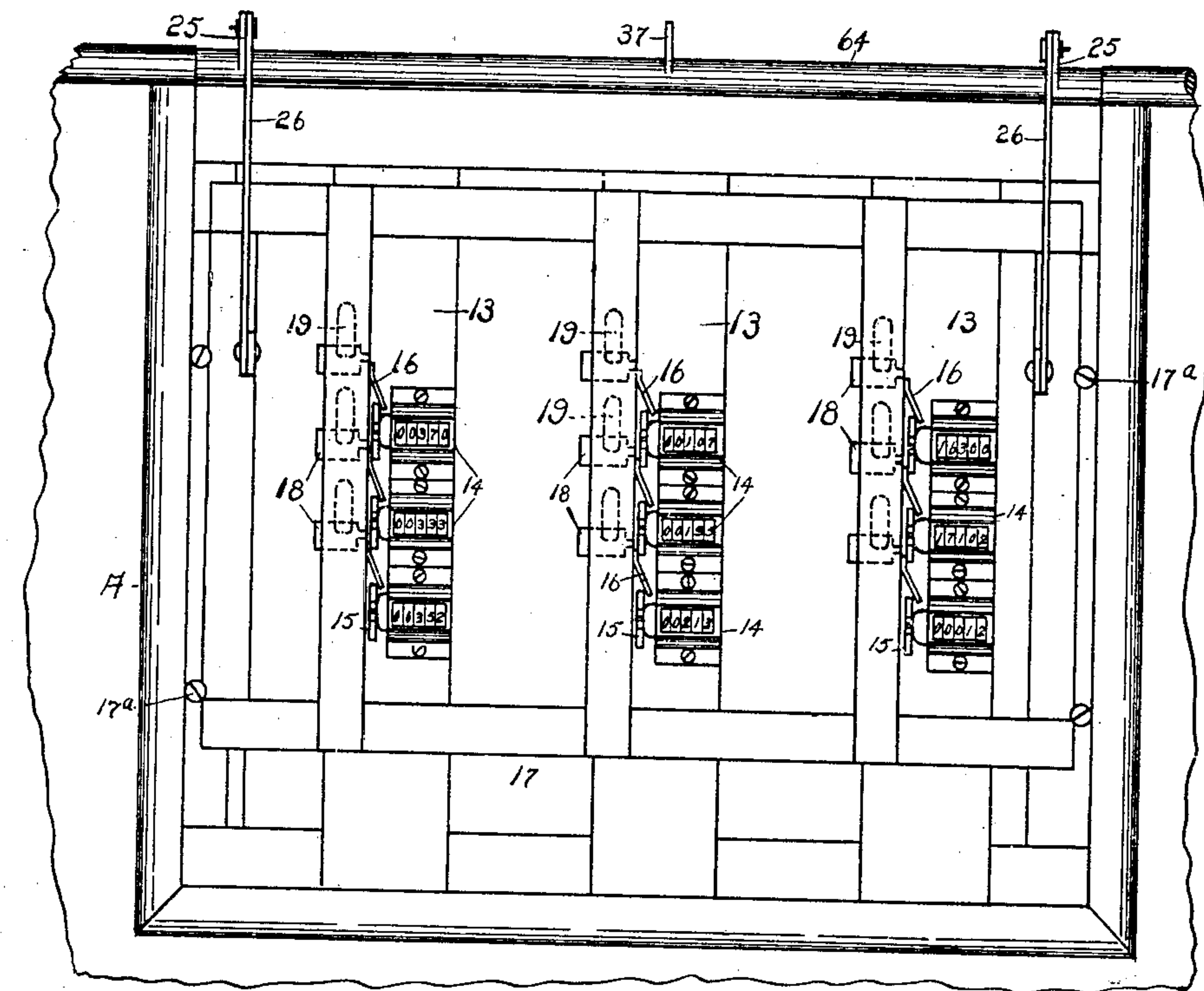


Fig. 2.

Fig. 3.

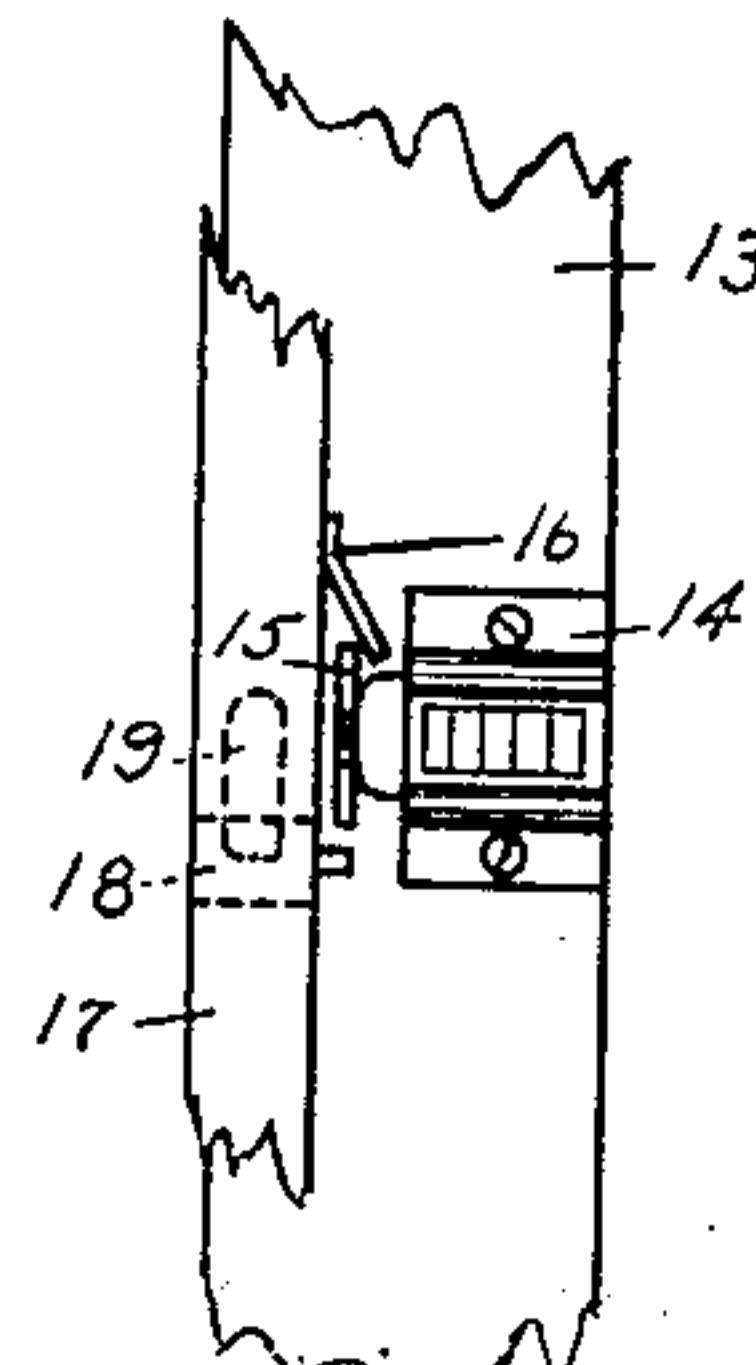
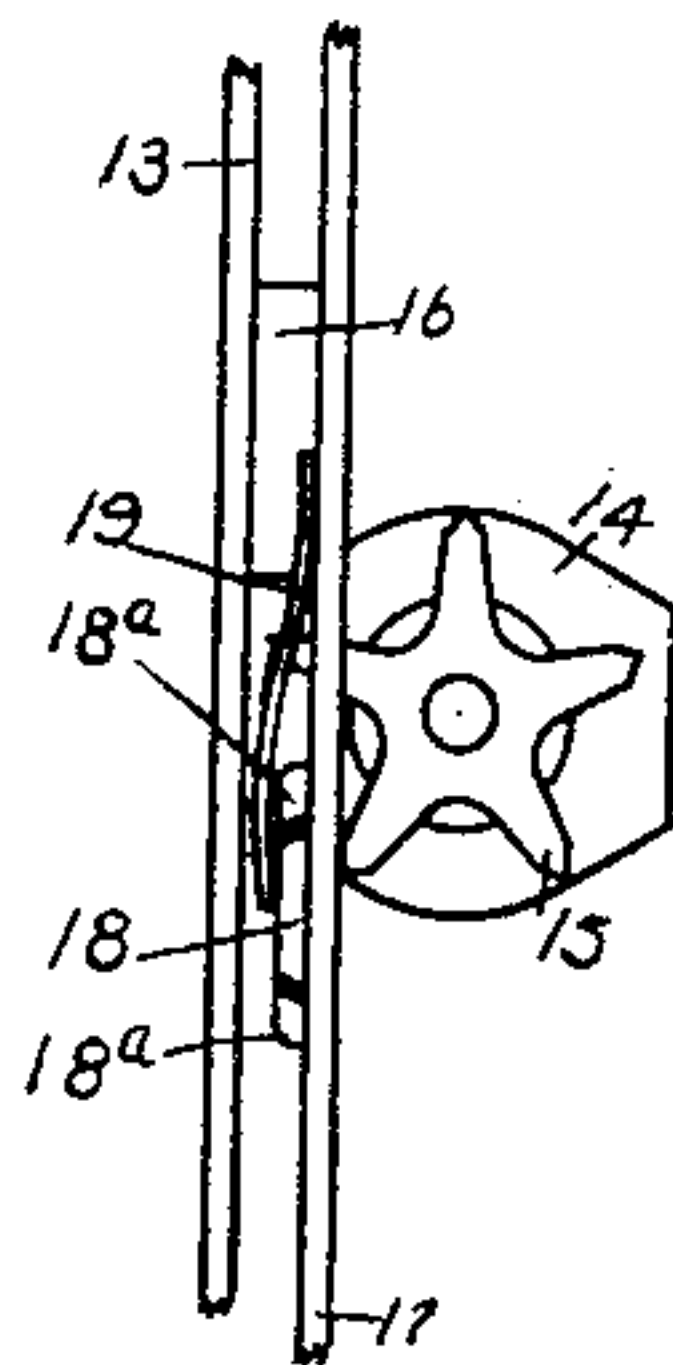


Fig. 4.

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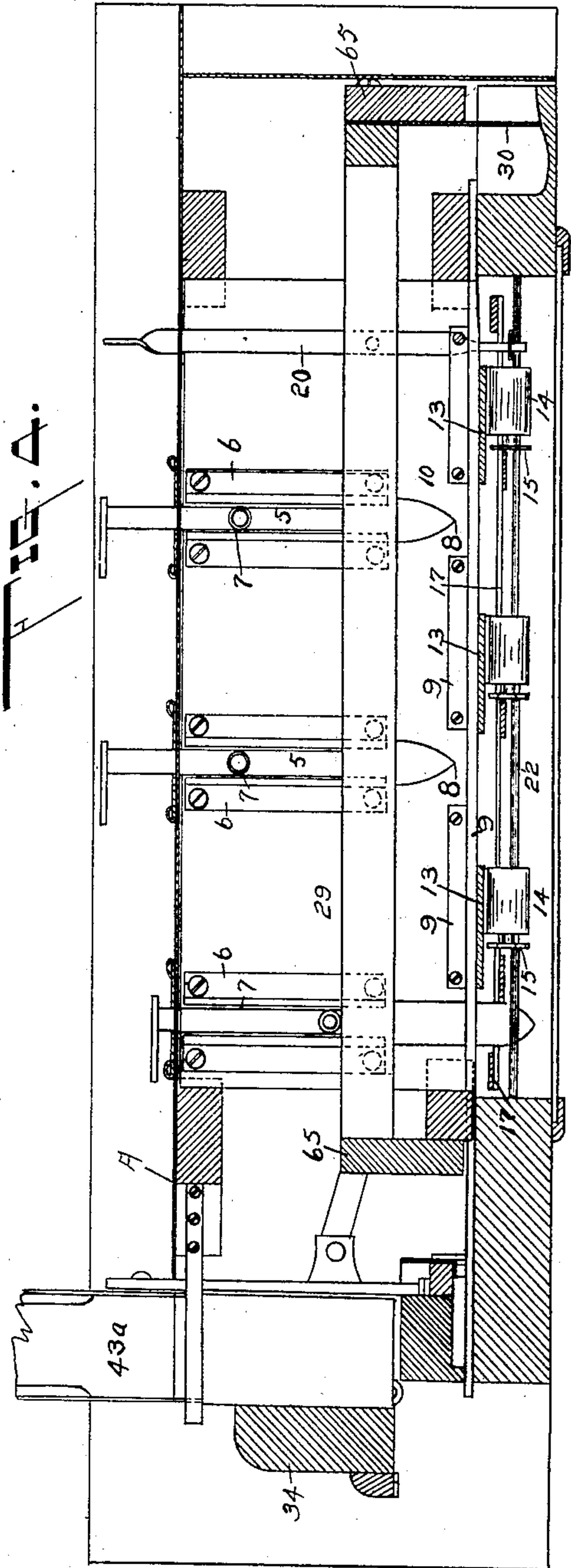
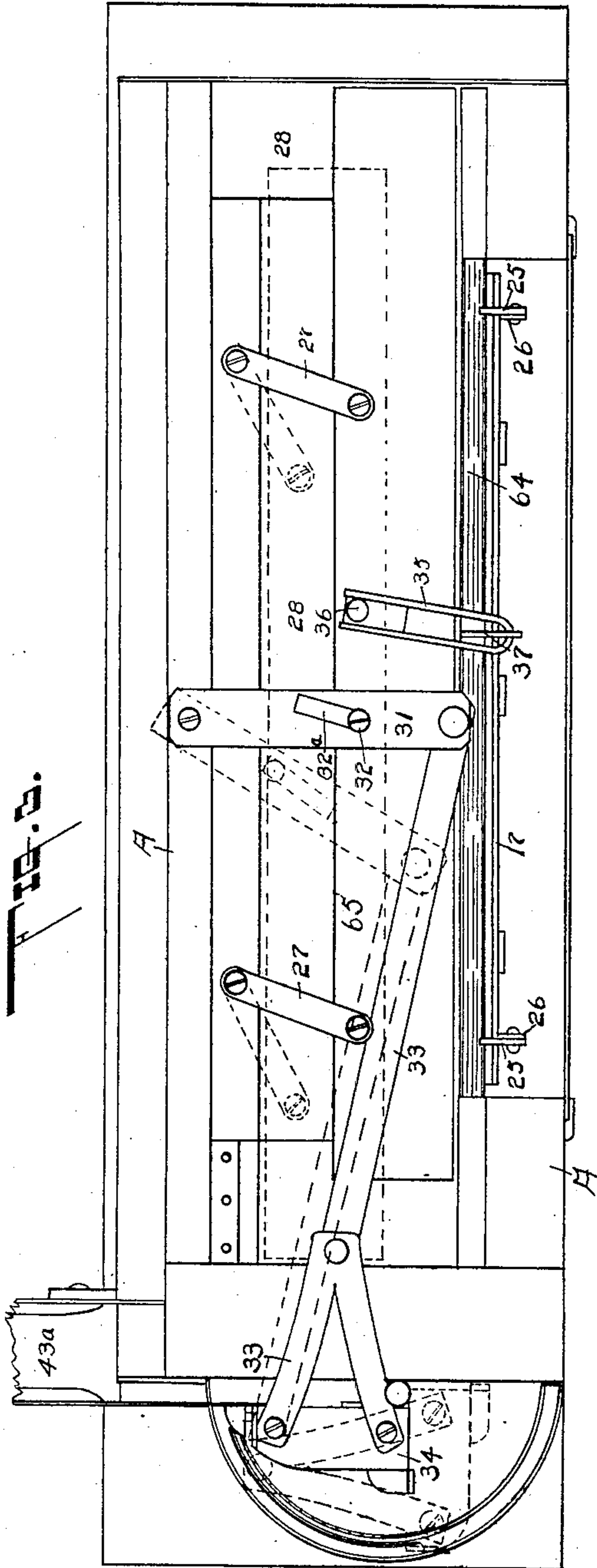
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REGISTERING MECHANISM.

No. 864,173.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed June 6, 1906. Serial No. 320,419.

To all whom it may concern:

Be it known that I, WILLIAM LANGRILL, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Registering Mechanism; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 This invention relates to registering mechanisms and while it may be employed in a variety of ways, I have preferred to disclose the invention, in the present instance, in connection with a voting machine.

One of the objects of the invention is to provide a simple, neat and highly efficient registering mechanism.

Another object is the provision of such a mechanism which will unfailingly register accurately and correctly.

20 Still another object is the provision of a registering mechanism with a voting machine which will be so arranged that the voter in leaving the booth will operate the mechanism to register the vote.

A still further object is the provision of means for resetting the registering mechanism arranged to be operated as the voter leaves the booth.

25 My invention further consists in certain novel features and combinations of parts together with their equivalents such as will be more fully described hereinafter and particularly set forth in the claims.

In the accompanying drawings wherein is illustrated one embodiment of my invention, Figure 1 is a side view of the mechanism in its set or normal position. Fig. 2 is a similar view showing it in its reset or raised position, parts being removed to better disclose the construction. Fig. 3 is a top plan view of a voting machine equipped with my invention, parts being removed to illustrate the means for operating the registering mechanism. Fig. 4 is a horizontal sectional view through a voting machine disclosing one means for actuating a portion of the registering mechanism. Fig. 5 is an enlarged detail view of the trip, the register and coöperating parts in set position, and Fig. 6 is an edge view showing the trip.

45 A indicates any suitable frame or casing for supporting a voting machine in connection with which my invention is employed, the casing preferably being rectangular in shape and which may contain suitable selective and locking mechanisms, and resetting means for the selective and locking mechanisms, which form no part of the present invention, and hence will be merely indicated.

50 The selective mechanism contained in the frame or casing may consist of the depressible keys (5) (5) projecting from the casing as shown in Fig. 4. These keys are held in ways (6) (6), the inner ends of the keys being

preferably pointed or reduced as shown at (8) and adapted to pass between the guides (9) (9) to actuate the registering mechanism, as hereinafter pointed out.

65 65 indicates a portion of the frame of a resetting device adapted to carry the plate (30) and provided with the bars (29) adapted to engage pins (7) on the keys to reset the latter. The upper horizontal portion of the frame is shown in Fig. 3. An auxiliary resetting mechanism comprising the rods (22) and lever (20) is also illustrated, but forms no part of this invention.

65 Preferably secured to the rear face of the voting machine are the vertical strips (13) (13) located adjacent the pointed ends of the keys.

14, 14 indicate suitable registers, as cyclometers for instance, provided with the vanes or skeleton wheels (15) (15), the registers being secured to the strips (13) (13).

16, 16 are curved wings or wipers located on the strips just above the registers.

75 17 is a vertically movable sash provided with a plurality of vertical slats, which are superposed upon the strips (13) (13) and intermediate the protruding ends of the depressed keys and the registers respectively, the slats being arranged parallel with the strips. Slidably supported in ways (18^a) on the inner faces of the slats are the trips (18) (18) held against accidental movement by the leaf springs (19) (19) carried by the vertical slats. These trips are movable transversely of the slats and normally lie approximately in the paths of movement of the pointed ends of the slides or keys so that as one of the slides is pushed in, its pointed end, after passing through the slot (10) of the guide (9), engages the projecting edge of the trip and shoves or crowds it laterally of the slat so that the opposite end of the trip projects past that edge of the slat nearest the registers and into alinement with the skeleton wheel (15) thereof.

When the sash is raised by means of suitable mechanism hereinafter detailed, the projecting end of the trip is brought into contact with the skeleton wheel and rotates the same to register the voter's choice. The further ascension of the sash brings such projecting end of the trip into engagement with the stationary curved wiper (16) on the strip above the register by means of which wiper, the trip is crowded back to its normal position, it being frictionally held at all times by the leaf spring (19). The sash is then lowered to its normal position, it being guided in its vertical reciprocating movement in any suitable manner, as by means of the headed studs (17^a) located at the sides of the sash.

105 A shaft (64) extending lengthwise of the machine is preferably journaled at its ends on top of the casing and intermediate its ends, is provided with radial

arms (25) (25), the free ends of which are connected by means of links (26) (26), with the vertical sash (17). Oscillation of the shaft will rock the arms (25) (25) and raise or lower the sash. When the sash is raised
 5 the trips (18) (18) carried thereby and which have been crowded over by the slides, first engage the vanes (15) of the respective registering devices and then contact with the stationary curved wings (16) which push the trips back to their former positions. The wings
 10 also serve as guides to retain the sash true and prevent it from wedging, the sash being suitably held against lateral movement in any direction by the wipers 16 and the headed studs (17^a).

Extending parallel with the sash (17) and inclosed
 15 between the longitudinal walls of the casing is a frame (65) movable in a diagonal direction between the longitudinal walls of the casing, or in other words, capable of a parallel displacement forward and backward, the frame being connected to the casing above and
 20 below by the parallel links (27) (27) and supported on a cross brace (28) extending between and connected to the longitudinal walls of the casing.

As one means for operating the resetting frame, I have provided the following mechanism. A slotted
 25 lever (31) is pivotally secured at one end to the wall of the casing intermediate its ends, a headed stud (32) being carried by the movable frame and passing through the slot (32^a) in the lever, the slot being somewhat aslant. The opposite end of the lever is pivot-
 30 ally secured to one end of a double link (33), the opposite end of which is secured to a gate (34) hinged and adapted to swing relative to the casing. Thus it will be seen that as the gate is swung out from the casing, the double link will rock the slotted lever and cause
 35 the frame to move forwardly in a diagonal direction, the closing of the gate operating to return the frame to its normal rearward position.

The gate is provided with a protruding handle or bar (43^a) which extends across the door of the booth of
 40 which booth the voting machine may constitute one wall. When the booth is empty the gate stands open, but when a voter enters the booth, the inspector closes the gate so that the handle (43^a) extends across the entrance indicating that the booth is occupied. Also
 45 by closing the gate, the sash and its connected parts is lowered so that the trips are brought into the path of movement of the keys and the machine rendered operative. When the voter has made his selection, he leaves the booth and in passing out of the entrance
 50 thereto he pushes against the handle (43^a) to open the gate and thus registers his choice.

The vertically moving sash (17) is connected to the frame (65) by means of a link (35) pivotally connected to a stud (36) on the frame and a projecting crank (37)
 55 on the shaft (24) respectively, so that as the frame moves forward, stress will be brought to bear on the crank which will rotate the shaft in one direction to raise the sash, the returning movement of the frame operating to positively lower the sash. The frame is
 60 preferably provided on its lower face with the same mechanism as shown on its upper face in Fig. 3.

From the foregoing it will be seen that I have devised a very simple, yet highly efficient machine which will quickly and accurately register the voter's
 65 choice and which saves considerable time over the old

manner of voting besides preventing the many subterfuges hitherto resorted to by unprincipled politicians to "stuff" the ballot.

Having thus fully disclosed my invention, what I claim as new, is—

1. A voting machine comprising a stationary frame selective mechanism mounted on the frame, a registering member, a sash movable relative to the selective mechanism and to the registering member, a trip movably supported on the sash, the trip normally lying in the path of
 75 the selective mechanism and movable thereby into the plane of the registering member; means for releasably retaining the trip in its adjusted positions, means for raising the sash to bring the trip and registering member into direct engagement and means engaged by the trip subsequent to its engagement with the registering member for returning the trip to its normal position.

2. A voting machine comprising a stationary frame, selective mechanism carried thereby, registering members, means separate from and set by the selective mechanism
 85 for actuating the registering members, mechanism for bringing said means into direct engagement with and past the registering members and stationary resetting means against which the register-actuating means contacts subsequent to its engagement with the registering members.

3. A voting machine comprising a stationary frame, a selective mechanism mounted on the frame, trips independent of and set by said mechanism, registering members, a sliding sash carrying the trips, a shaft, links connecting the sash and shaft, a member adapted to have a
 95 parallel reciprocating movement, means for imparting such movement thereto, a lever pivoted to the member, and an arm on the shaft to which the opposite end of the lever is connected.

4. The combination with a voting machine provided with a stationary frame, and selective mechanism mounted thereon, of a vertically movable sash comprising a series of slats, guides for maintaining the sash against lateral movement, registers mounted on the machine adjacent the
 100 vertical slats, ways carried by and extending transversely of the slats, trips independent of the selective mechanism and slidably received in the ways, leaf-springs carried by the slats, the free ends of the springs engaging the trips to yieldingly retain them in their adjusted positions, the trips normally projecting from the sides of the slats opposite the registers and adapted to be engaged by the selective mechanism and crowded over into alinement with the registers, the trips occupying positions on the slats just
 105 beneath the registers when the sash is at one limit of its movement, means for actuating the sash to bring the trips into direct engagement with the registers and wipers located on the machine above the registers, the trips engaging the wipers subsequently to their engagement with the registers and being crowded back to normal position.

5. The combination with a stationary frame, and depressible keys mounted thereon, of a movable sash comprising a series of vertical slats, guides for maintaining the sash against lateral movement, stationary registers located adjacent the slats, trips independent of the keys, the trips being slidably mounted on the vertical slats and normally
 120 projecting past the sides thereof in position to be engaged by the keys when the latter are depressed, and crowded over into alinement with the registers, means for reciprocating the sash and resetting means engaged by the trips subsequent to their engagement with the registers.

6. The combination in a voting machine, with a stationary frame and depressible keys mounted thereon, of a movable sash comprising a plurality of vertical slats, registers mounted on the frame, the slats lying between the
 135 keys and registers, tripping means independent of the keys and carried by the slats, the tripping means normally lying in the paths of movement of the keys and adapted to be crowded over into alinement with the registers, means for reciprocating the sash and means for resetting the tripping means subsequent to their engagement with the registers.

7. The combination with a voting machine provided with a stationary frame and depressible keys mounted thereon, of registers carried by the frame, a movable sash comprising a plurality of vertical slats, ways extending trans-

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versely of the slats, trips independent of the keys and sliding in the ways, the slats lying between the keys and the registers, the trips normally projecting into the paths of movement of the keys, the engagement of the depressed keys and trips adapted to move the latter into alinement with the registers, means for reciprocating the sash and means for resetting the trips subsequent to their engagement with the registers.

8. The combination with a voting machine provided with a stationary frame and a plurality of depressible keys mounted thereon, of registers stationarily mounted on the frame, a movable sash comprising a plurality of vertical slats located between the keys when depressed and the registers, tripping means independent of the keys and movably mounted on the slats, said tripping means normally projecting into the paths of movement of the keys, and adapted to be crowded over into alinement with the registers, resilient members carried by the sash and frictionally engaging the tripping means to yieldingly retain it in adjusted position, means for reciprocating the sash and means for resetting the tripping means subsequent to its engagement with the registers.

9. The combination with a voting machine provided with a stationary frame and a plurality of depressible keys mounted thereon, of registers stationarily mounted on the frame, a movable sash comprising a plurality of vertical slats located between the keys when depressed and the registers, tripping means independent of the keys and movably mounted on the slats, said tripping means normally projecting into the paths of movement of the keys, and adapted to be crowded over into alinement with the registers, means for reciprocating the sash to bring the tripping means into engagement with the registers and wipers stationarily located on the machine and adapted to be engaged by the tripping means to reset the latter subsequent to the operation of the register.

10. A voting machine provided with a stationary frame, a plurality of depressible keys mounted on the frame, registers stationarily mounted on the frame, a movable sash, tripping means independent of the keys and carried by the sash, said tripping means normally projecting into the paths of movement of the keys and adapted to be crowded over into alinement with the registers, a suitably journaled shaft, links connecting the shaft and sash, means for oscillating the shaft to reciprocate the sash and means for resetting the tripping means subsequent to its engagement with the registers.

11. A voting machine provided with a stationary frame, a plurality of depressible keys mounted on the frame, registers stationarily mounted on the frame, a movable sash, tripping means independent of the keys and carried by the sash, said tripping means normally projecting into the paths of movement of the keys and adapted to be crowded over into alinement with the registers, a suitably journaled shaft, means connecting the shaft and sash, a member having a parallel movement, a link connecting the shaft and member, means for reciprocating the member to actuate the sash, and means with which the tripping means contacts subsequent to its engagement with the registers for resetting the tripping means.

12. A voting machine provided with a stationary frame, a plurality of depressible keys mounted on the frame, registers stationarily mounted on the frame, a movable sash, tripping means independent of the keys and carried by the sash, said tripping means normally projecting into the paths of movement of the keys and adapted to be crowded over into alinement with the registers, a suitably journaled shaft, means connecting the sash and shaft, a movable member, links connecting the member to the machine and to the shaft, a swinging element and a link connection between the member and element.

13. A voting machine provided with a stationary frame,

a plurality of keys mounted on the frame, registers stationarily mounted on the frame, a movable sash, tripping means independent of the keys and carried by the sash, said tripping means normally projecting into the paths of movement of the keys and adapted to be crowded over into alinement with the registers, a suitably journaled shaft, means connecting the sash and shaft, a member having a parallel movement connected to the shaft, a pivotally mounted swinging gate connected to the member, and means connected with the gate and engaged by the voter as he leaves the booth to actuate the gate.

14. A voting machine provided with a stationary frame, a plurality of keys mounted on the frame, registers stationarily mounted on the frame, a movable sash, tripping means independent of the keys and carried by the sash, said tripping means normally projecting into the paths of movement of the keys and adapted to be crowded over into alinement with the registers, a swinging gate, mechanism connecting the gate and sash and means for releasably locking the gate.

15. A voting machine comprising a stationary frame, keys mounted on the frame, tripping means independent of the keys and normally lying in the paths of movement of the keys, said means adapted to be set by the depression of the keys, registers adapted to be directly engaged by the tripping means when in set position, means for bringing the tripping means into engagement with the registers and wipers engaged by the tripping means subsequent to the actuation of the registers to reset the tripping means.

16. A voting machine comprising keys, stationary registers, a movable trip-carrying member, trips movably supported on the member, the trips normally projecting into the paths of movement of the keys and adapted to be crowded thereby into alinement with their respective registers, means for reciprocating the member and stationary resetting wipers engaged by the trips subsequent to their engagement with the registers.

17. A voting machine comprising a stationary frame, keys mounted thereon, stationarily located registers, a movable trip-carrying member, the member consisting of a series of spaced slats, trips movably supported on the slats and normally projecting into the paths of movement of the keys, the keys adapted to crowd the trips over into alinement with their respective registers, springs frictionally engaging the trips to releasably hold them in their adjusted positions, and means for reciprocating the trip-carrying member.

18. A voting machine comprising a stationary frame, keys carried thereby, stationarily located registers, a movable trip-carrying member, ways on the member, trips slidably supported in the ways, means for yieldingly retaining the trips in adjusted positions, and means for reciprocating the sash.

19. A voting machine comprising a stationary frame, keys carried thereby, stationarily located registers, a movable trip-carrying member, ways on the member, trips slidably supported in the ways, and means for reciprocating the sash.

20. A voting machine comprising a stationary frame, keys carried thereby, stationarily located registers, a movable trip-carrying member, trips carried by the member at all times and movably supported thereon, means for reciprocating the trip-carrying member, and resetting means engaged by the trips subsequent to their engagement with the registers.

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

WILLIAM LANGRILL.

Witnesses:

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RALPH S. WARFIELD.