

(No Model.)

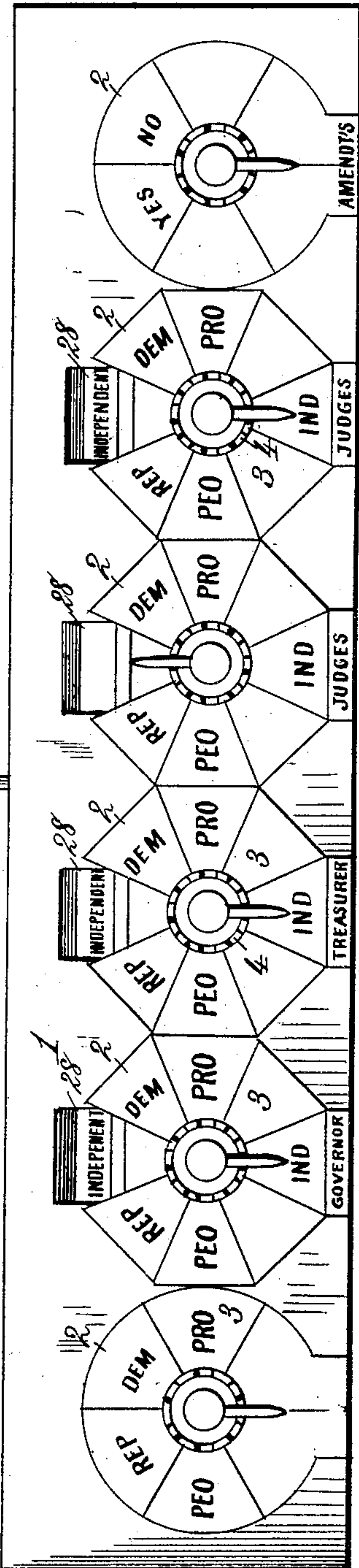
3 Sheets—Sheet 1.

J. A. MARKOE.
VOTING MACHINE.

No. 596,894.

Patented Jan. 4, 1898.

Fig. 1



Witnesses.
Wm. Smith.
Vinton Coombs

Fig. 10

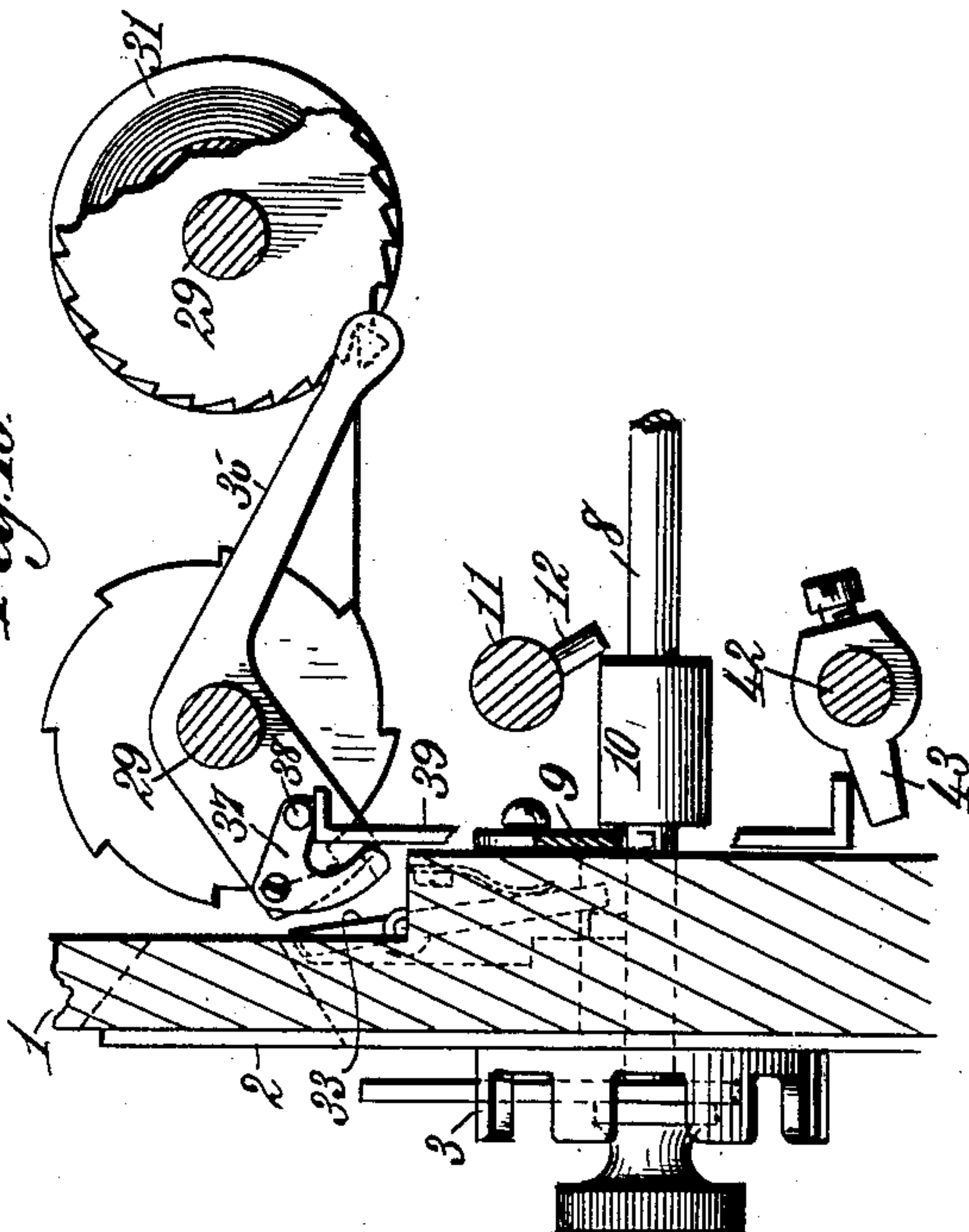
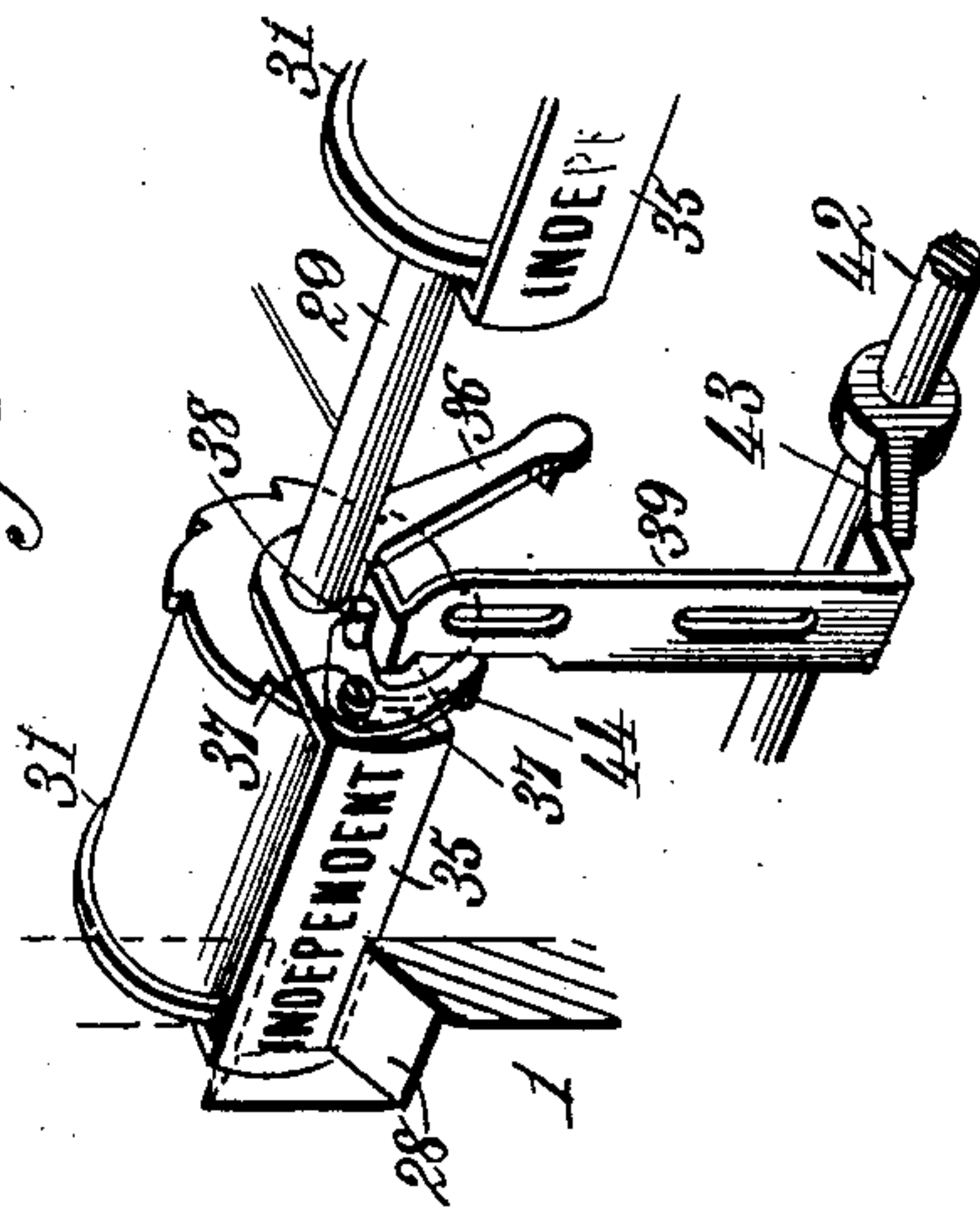


Fig. 9



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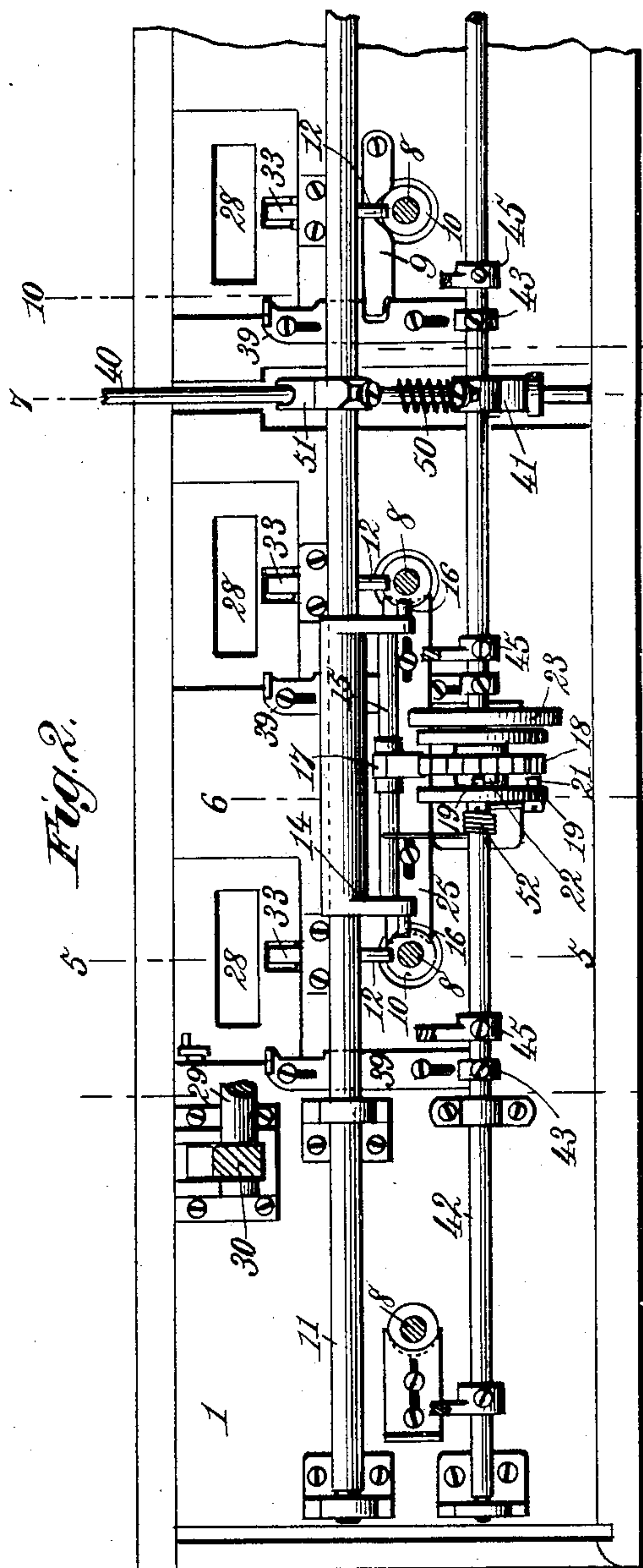


Fig. 2.

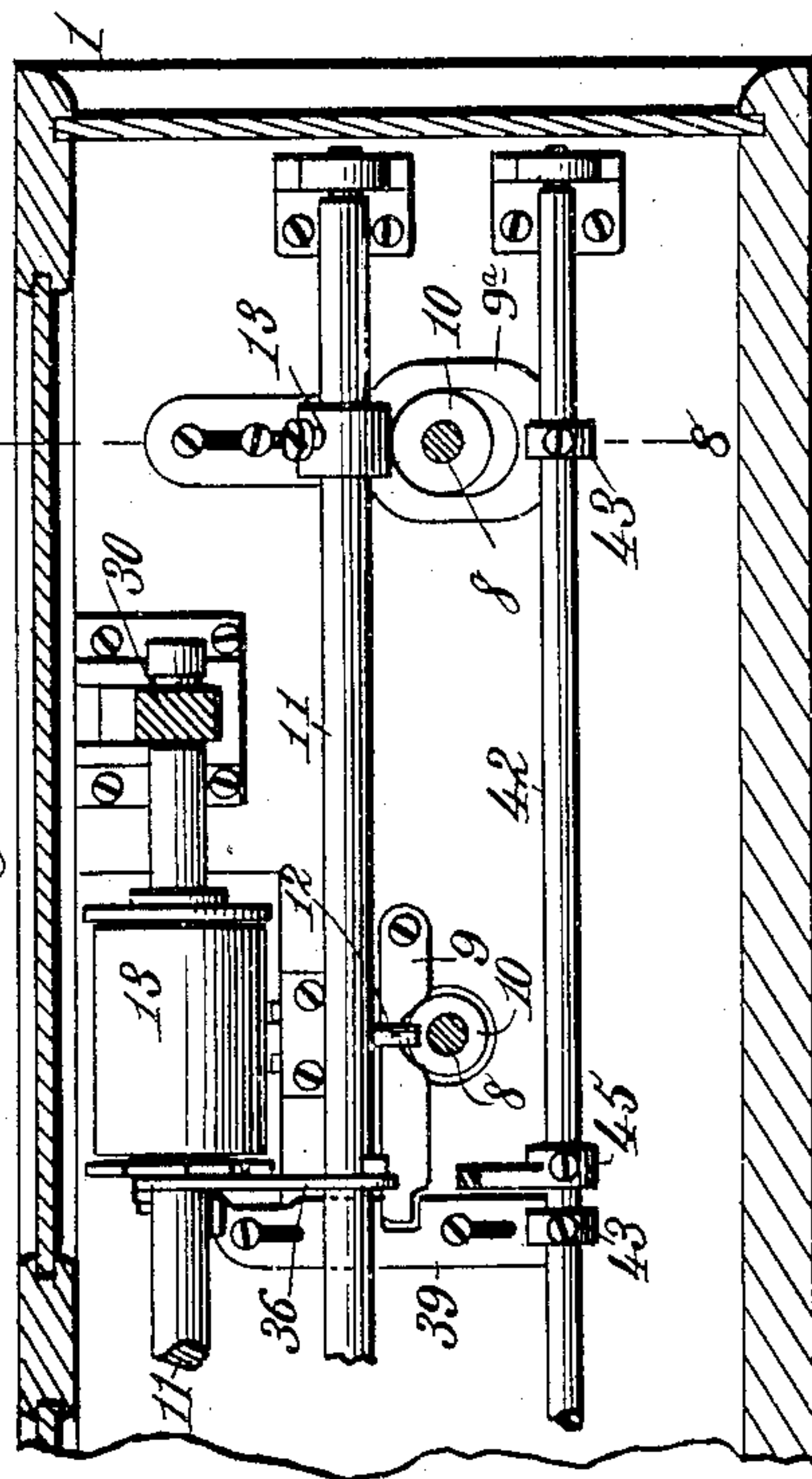


Fig. 3.

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(No Model.)

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VOTING MACHINE.

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Fig. 4.

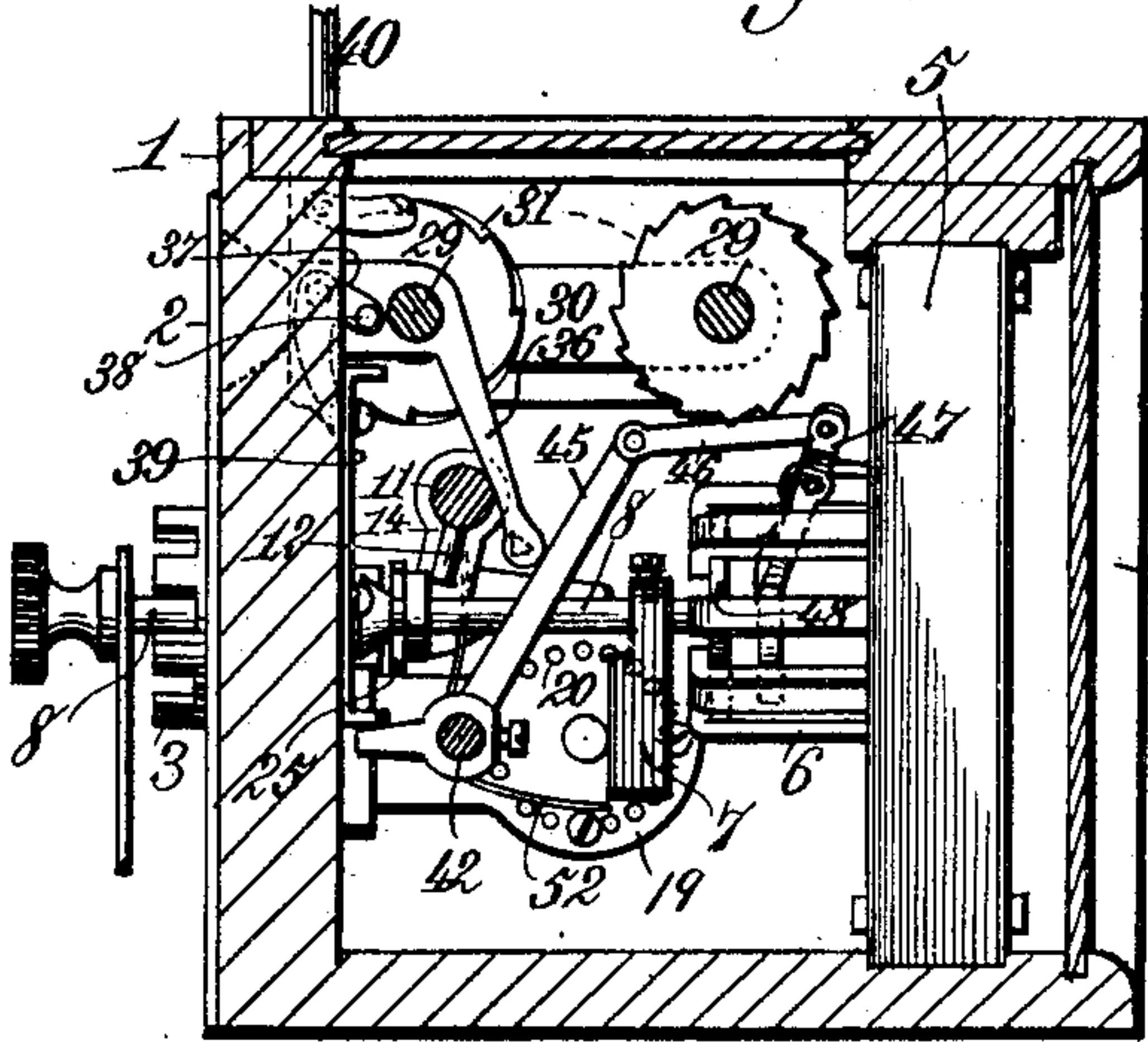


Fig. 5.

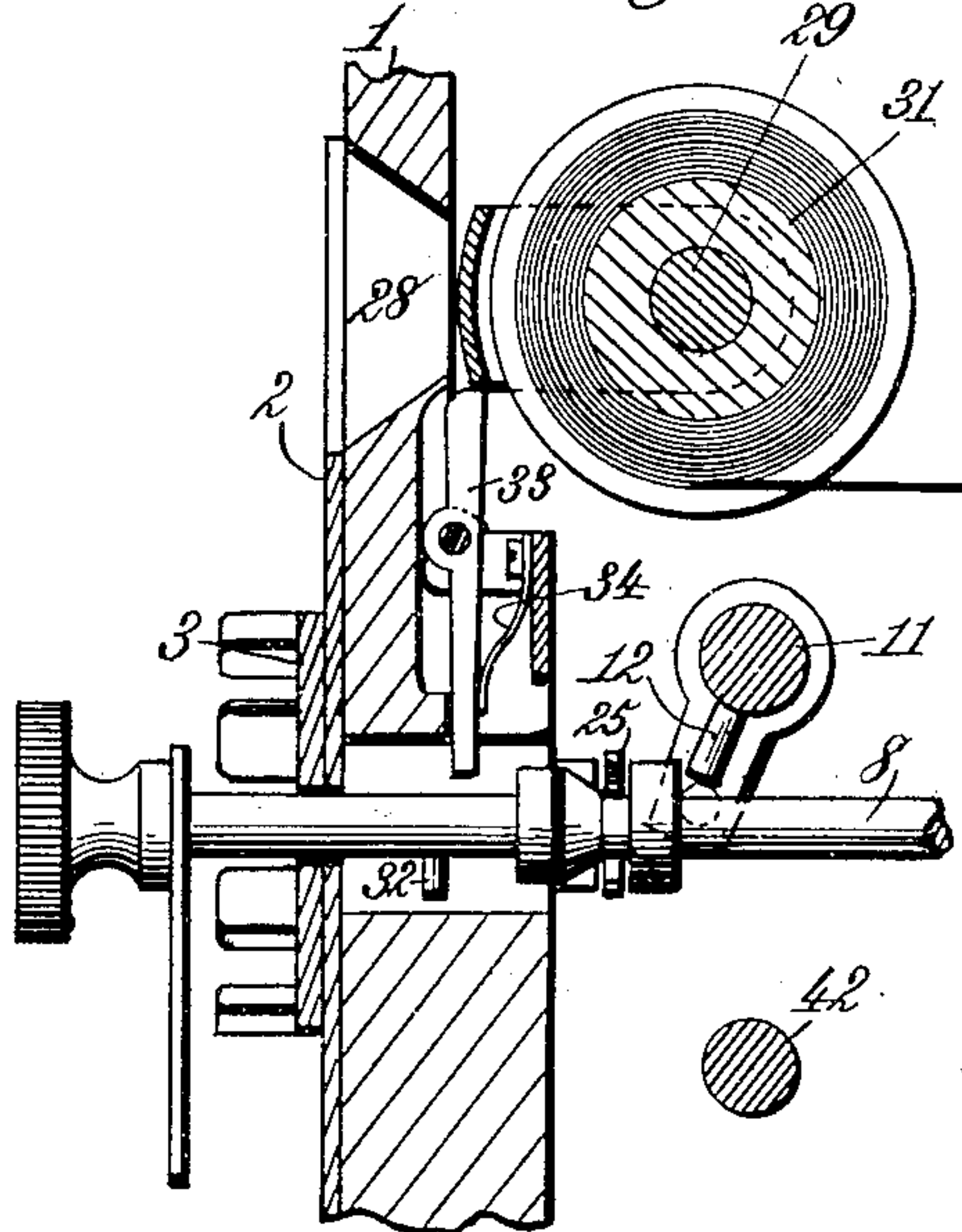


Fig. 6.

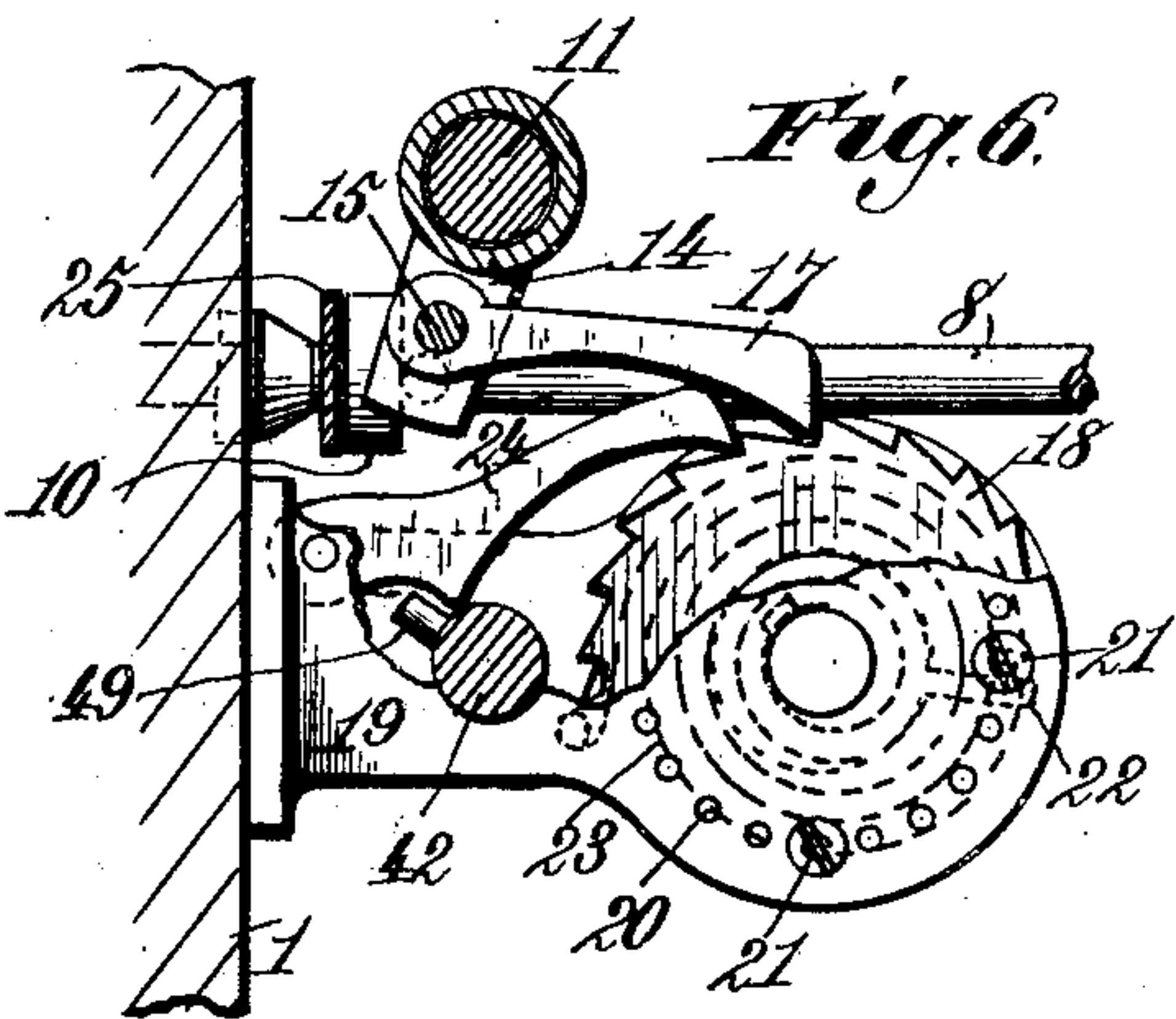


Fig. 11.

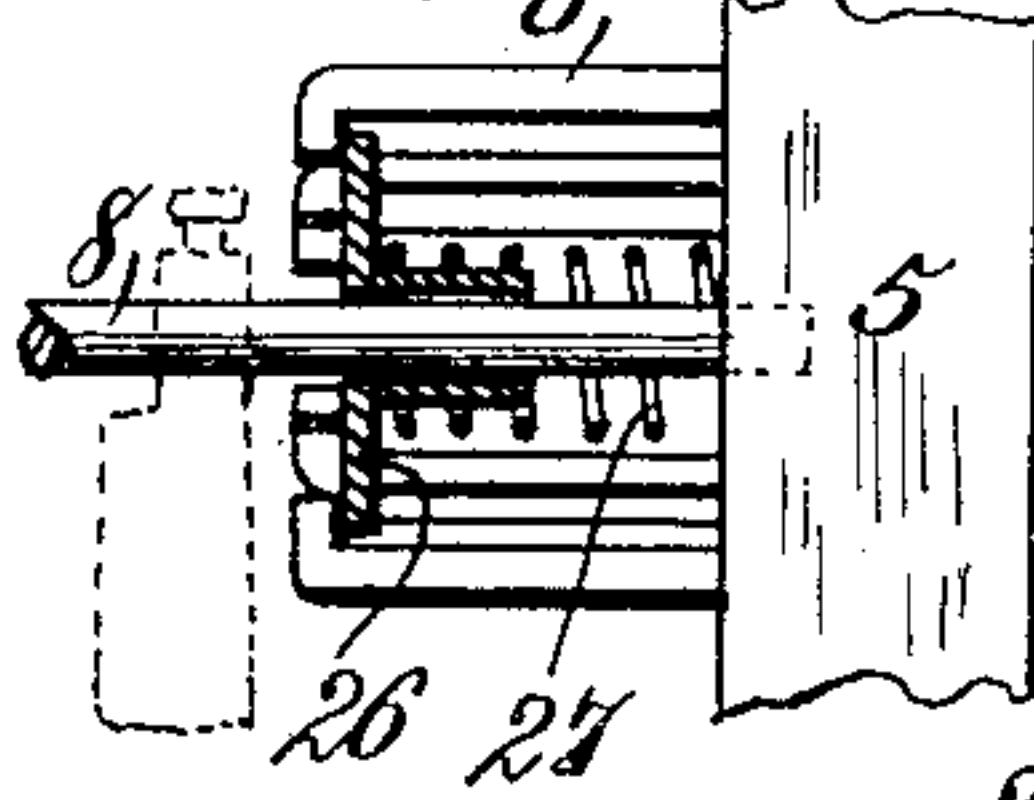


Fig. 8.

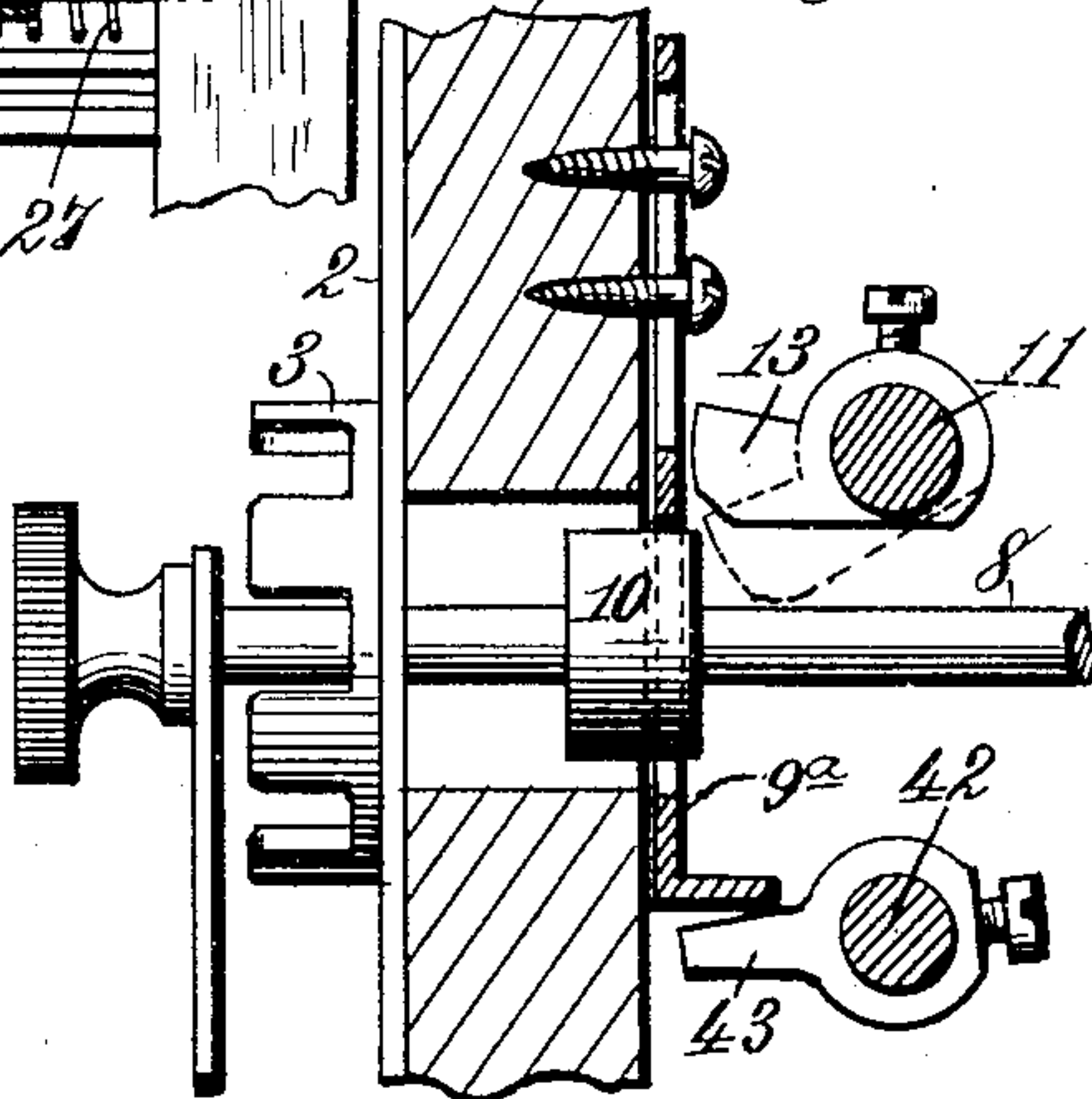
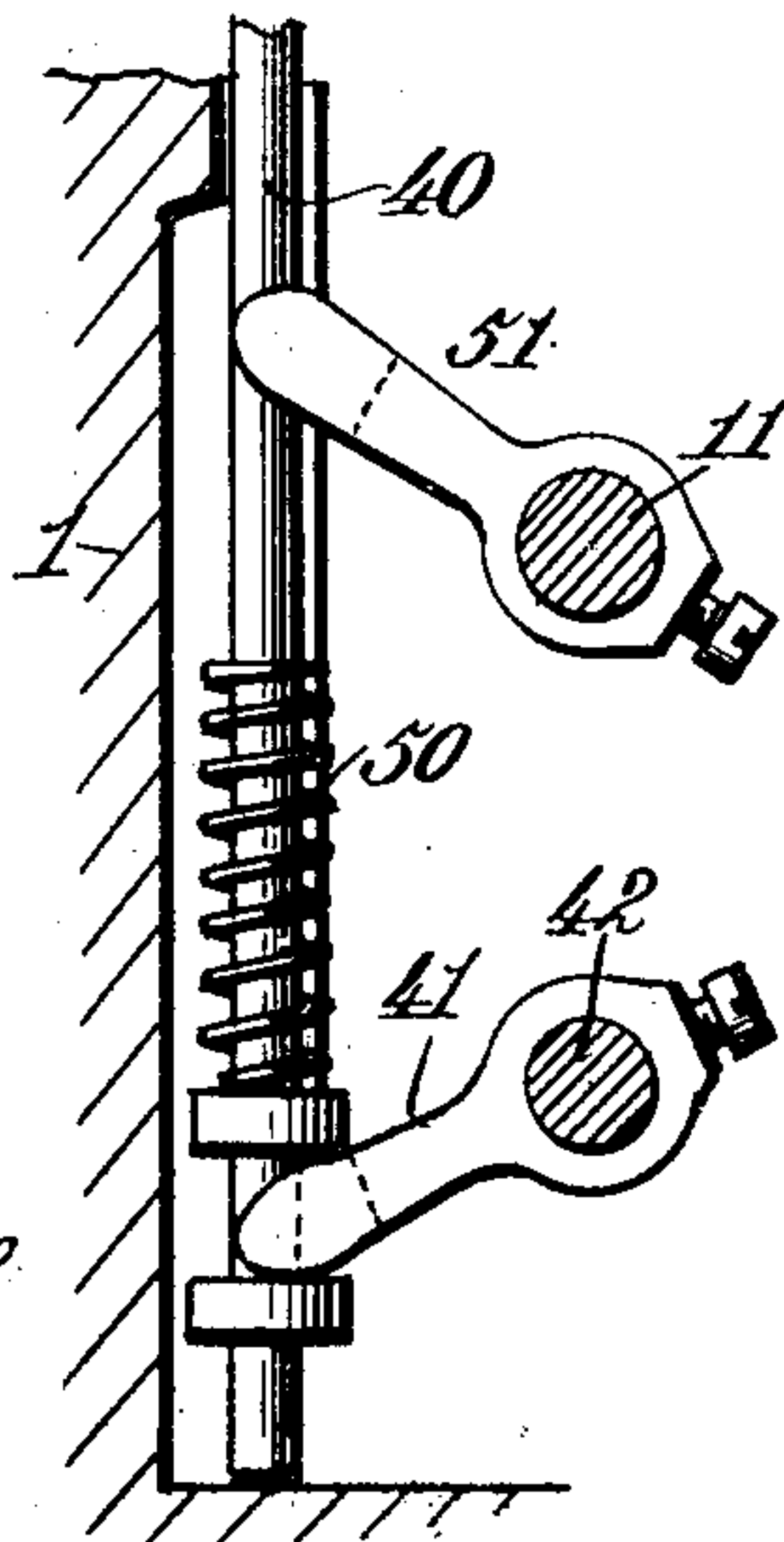


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN A. MARKOE, OF WHITE BEAR LAKE, MINNESOTA, ASSIGNOR TO
LORENZO J. MARKOE, OF SAME PLACE.

VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 596,894, dated January 4, 1898.

Application filed May 28, 1897. Serial No. 638,510. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. MARKOE, a citizen of the United States of America, residing at White Bear Lake, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification.

My invention relates to improvements in voting-machines, and has for its object to improve the means for voting for unregistered independent candidates for office shown in my application for Letters Patent filed January 21, 1897, Serial No. 620,037, and to otherwise improve in details of construction the voting-machine shown in said application.

The improved means for voting for unregistered candidates are adapted for use in connection with the election of President, Vice-President, Governor, Secretary of State, or other State or local offices, and is also peculiarly adapted for use in connection with what is known as "plural" voting—that is, voting for candidates for offices to be held by a plurality of candidates where the voter is entitled to vote for a plurality of candidates, but is not entitled to cast more than one vote for a given candidate. In such circumstances my improved means is so contrived that such unwarranted plurality of votes for a single candidate cannot be accomplished without detection.

To the ends set forth the invention consists in the novel construction, combination, and operation of parts hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is an elevation of a section of a voting-machine to which my improvements are adapted and applied and in which I have shown a dial for "straight" voting or voting for all the candidates of a party for all offices, a dial for governor, one for treasurer, two for judges, and one for constitutional amendments. Figs. 2 and 3 show an elevation of the interior mechanism. Fig. 4 is a sectional view on the line 4 4, Fig. 2. Fig. 5 is a sectional view on the line 5 5, Fig. 2. Fig. 6 is a sectional view on the line 6 6, Fig. 2. Fig. 7 is a sectional view on the line 7 7, Fig. 2. Fig. 8 is a sectional view on the line 8 8,

Fig. 3. Fig. 9 is a perspective view of the independent-candidate-voting mechanism. Fig. 10 is a section on line 10 10, Fig. 2, illustrating the same in side view and in operative relation to a push-rod for actuating the same. Fig. 11 is a detail.

In the said drawings the reference-numeral 1 indicates the case containing the voting mechanism intended to be arranged in a voting-booth—such, for instance, as that described in my said application for Letters Patent. The case is provided with a series of dials 2, made up of cards grouped radially about a selection-button 3, as many cards being provided as there are candidates of political parties and registered independents standing for election and also a card for unregistered independents. Said cards are marked with the names of the several political parties, as shown, and registered candidates and may be of distinctive colors to assist voters who are unable to read.

In the drawings, Fig. 1, I have shown a section of the machine sufficient to clearly illustrate the present invention, in which there is a dial at the left end for straight voting or voting for all the candidates of a political party for all offices—one for State governor, one for State treasurer, two for judges, and one for voting for or against constitutional amendments. It will be understood that like dials will be provided for other offices. For general voting the dials marked "Governor" and "Treasurer" may be taken as illustrative, and their mechanism will now be described.

Centrally arranged within the several dials are guide-plates 4, having a flange provided with a series of recesses coincident with the several candidate-cards. Within the case in line with each dial are arranged a series of counting mechanisms, (shown conventionally at 5, Fig. 4,) as many sets of counting mechanisms being provided as there are registered candidates and one for unregistered candidates. These counting mechanisms are actuated by slides 6, which are operated for that purpose by an arm 7, carried by a rotatable push-rod 8, having a selection-button 3 at its outer end.

The operation of the parts thus far described is as follows: A voter selects his can-

didate and moves the selection-button 3 to the corresponding recess in the guide-plate 4 and then pushes the rod 8 inward until the selection-button 3 enters the recess, during
 5 which movements the arm 7 will move to and operate the proper slide 6 to count a vote for the selected candidate.

Provision is made whereby a voter may vote for all the candidates of a given party
 10 at one operation by setting apart a special dial for such straight voting. In the drawings the end dial at the left of Fig. 1 is intended for this purpose. A vote for a political party on this dial means a vote for all the
 15 candidates of that party for all offices.

It is essential, of course, to guard against a vote being effected for more than one candidate for the same office or more than once for the same candidate, and also to prevent a
 20 voter from voting for individual candidates for office after he has voted straight. To effect this a gravity-latch 9, Fig. 2, is pivoted at one end to the case and arranged to drop in front of a collar 10 on the push-rod 8 when
 25 said rod is pushed inward, thereby preventing further operation thereof. Each rod employed in the class of voting now being described is provided with such a latch, as clearly shown in section in Fig. 10, which is
 30 a view taken along the dial designated "Treasurer" in the drawings. A shaft 11 extends above all the push-rods and is provided with fingers 12, normally projecting into the paths of the push-rods 8 of the sev-
 35 eral dials, except the straight-voting dial, and which for distinction I term "split" dials, and said shaft also has a wing 13, Fig. 3, projecting in a direction at right angles to the said fingers 12 and above the collars 10
 40 of the straight-voting dial.

In the drawings, Fig. 3, the latch 9^a for locking the straight-dial push-rod is of different form from the latches 9 of the other dials. It straddles the push-rod and is pro-
 45 vided with a projection to be engaged by the latch-lifters, as seen in Fig. 10.

Upon the operation of a rod 8 its gravity-latch 9 drops in front of the collar 10 thereon, thereby preventing the withdrawal and fur-
 50 ther operation of the rod, and it will be seen that when any rod of the split-ticket dials is pushed inward the collar 10 thereof will engage the corresponding finger 12, rotate the shaft 11, and throw the wing 13 into the path
 55 of the collar of the rod of the straight dial, as shown in Fig. 8, and thus prevent its operation, and that when the straight-ticket dial is first operated the collar of its push-rod will pass beneath the wing 13, and thus prevent
 60 the rotation of the shaft, and consequently movement of the fingers 12, so that no one of the rods of the split-ticket dials can be operated.

Thus far the mechanism described is like
 65 that shown in my before-mentioned application for Letters Patent and is not claimed herein.

When an election includes offices, as judges, a suitable number of dials are provided, two being shown in the drawings for example. A
 70 voter is entitled to vote as many times as there are judges to be elected, but not to vote more than once for any one candidate. In this part of the machine the gravity-latches
 75 9 are omitted, so that the push-rods 8 may be withdrawn for repeated operation, and with this exception and the additional elements now to be described the mechanism is the same as that already set forth.

As shown in Fig. 2 of the drawings, a pawl-
 80 carrier 14 is mounted loosely upon the shaft 11 and provided with legs connected by a bar 15, to which a pawl 17 is secured, as best shown in Fig. 6. The nose of this pawl is adapted to engage a ratchet-wheel 18, jour-
 85 naled in a bracket 19, secured to the casing. The bracket is provided with a series of perforations 20 to receive removable stop-pins 21 to limit the movement of the wheel through
 90 the medium of a stop 22, carried by the wheel, (shown in dotted lines, Fig. 6,) which engages the one or other of said pins when the wheel has rotated the determined distance,
 95 in the instance illustrated in Fig. 6 corresponding to five teeth of the wheel. One pin is set to determine the initial position of the
 100 wheel and to which it is returned by a spring 23, secured to its axle and the bracket 19, when it is released from a gravity-dog 24, the office of which is to prevent the return of the
 105 wheel until the voter has completed his vote and left the booth, when it is released, as will be hereinafter described.

In the operation of either of the push-rods 8 of the dials the collar 10 thereof engages a
 110 suitable projection 16 on the pawl-carrier 14, and thus forces the pawl 17 into engagement with the wheel 18, moving the same a distance of one tooth, after which the pawl re-
 115 turns to its original position under the action of a spring 52, coiled on the shaft 42, Figs. 2 and 4. Whenever one of the rods is pushed, this operation takes place, and when a number of votes is cast, predetermined by adjust-
 120 ment of the stop-pins 21, further voting cannot be done.

It will be seen now that a voter may vote for a fixed number of judges since the push rod or rods of the dial or dials set apart for
 125 this class of voting are free to be operated a plurality of times, but he cannot vote more than one time for the same candidate, because the slide 6 for actuating the counting mechanism for such candidate will remain in in-
 130 operative position. To prevent the simultaneous operation of two push-rods and thus effecting two votes while the wheel moves but one tooth, a sliding barrier 25, Fig. 2, is secured to the casing between adjacent
 135 push-rods, which when one of the rods is operated will block operation of the other. When more than two dials are set apart for this particular class of voting, additional barriers will be provided.

The collars 10 of the push-rods employed in these dials are conical, as shown in Fig. 5, to engage and slide the barrier 25.

In an analogous class of voting, called "cumulative" voting, the voter is entitled to cast a plurality of votes for the same candidate, and to make this possible the push-rods 8 (instead of the slide-returning levers which will be presently described) are provided with loose spring-pressed collars 26, which under the impulse of the spring 27 return the slides which have been actuated to position to be again operated upon to actuate the counting mechanism of the same candidate the determinate number of times.

In voting for or against constitutional amendments the mechanism is like that described for split voting, except in my invention I contemplate providing a dial, as shown, adapted for voting "Yes" or "No" to a plurality of proposed amendments. Hence the latch 9 is omitted, since the rod must be capable of repeated operation, and the finger 12 on the shaft 11 is also omitted, because if it were present a vote on the straight dial would prevent operation of the amendment-voting mechanism, and vice versa.

In each dial the top card is designated "Independent," and the casing is provided with a slot 28, through which the name of an unregistered candidate may be written upon a paper-roll and so voted.

A pair of rotatable shafts 29, Fig. 10, are journaled in arms 30, Figs. 2, 3, and 4, removably seated in brackets secured to the casing, and upon these shafts at each dial are secured a pair of paper-rolls 31, upon the rear one of which the paper is initially wound, and from which during the progress of voting it is unwound and wound upon the front roll. A voter desiring to vote for an unregistered candidate turns the selection-button 3 to the recess of the guide-plate 4 in front of the independent-card and then pushes the rod 8. In these movements the arm 7 will have moved into register with and have moved the appropriate slide 6 to actuate the independent-counting mechanism, and a trip 32, Figs. 5 and 10, projecting from said rod will also have moved into line with a trigger 33, pivoted to the case, and by pressure of a spring 34, supporting a shutter 35, which normally closes the slot 28, as shown in Fig. 5. The trip 32 engages the trigger 33 and moves its end from beneath the shutter 35, the operation being illustrated in dotted lines in Fig. 10, permitting said shutter to drop by gravity, exposing the paper-roll 31, upon which the voter may inscribe the name of the one for whom he desires to vote. The shutter is mounted to swing on the front shaft 29 and is provided with a rearward extension 36, Fig. 10, which when the shutter drops engages ratchet-teeth on the rear roll, locking both said rolls from movement and thus preventing a voter from manipulating the paper to bring a new space in front of the slot to effect a second vote.

Pivoted upon the shutter 35 is a two-armed lever 37, as best shown in Figs. 9 and 10, the rear arm of which is provided with a lug 38, resting upon a gravity-slide 39. When the rod 8 has been pushed in, the latch 9 drops in front of the collar 10, as before explained, and the gravity-slide 39, with which said latch engages, as shown in Figs. 2 and 3, drops also. Now as the voter leaves the booth the opening of the door through appropriate known mechanism or mechanism such as described in my aforesaid application for patent lifts the rod 40 and by an arm 41, Fig. 7, on a shaft 42, extending beneath the push-rods and gravity-slides, rotates said shaft, bringing lifters 43, carried thereby, Figs. 9 and 10, under the gravity-slides 39, whereby each of said slides is lifted and in its movement engages the rear arm of the lever 37, throwing the pin 44, carried by the front arm thereof, into engagement with a ratchet carried by the front roll, and in its continued movement restores the shutter 35 to its normal position to close the slot 28, withdraws the rearward extension 36 from the ratchet of the rear roll, and through the medium of the pin 44 on the front arm of the lever rotates the front roll to wind the paper sufficiently to bring a new space thereon opposite the slot for use by a subsequent voter. Until this operation has been caused by the voter leaving the booth it is impossible to write the name of the candidate more than once, (unless he does it upon the same space of paper, in which case it will at once be detected and avail nothing,) because of the paper-roll lock which has been described, and a vote cannot be given for an unregistered and a registered candidate, because the rod 8 will be locked at its first operation by the latch 9. The slide 39 also in its rising movement lifts the latch 9 from the collar on the push-rod, leaving the latter free to be automatically projected to normal position for further use, as will be now described. The said shaft 42 carries an arm 45, as shown in Fig. 4, to which one end of a link 46 is connected, the other end of which is pivoted to the tail end of a forked projector-lever 47, fulcrumed on a bracket carried by the housing of the counting mechanism or other suitable support. When the shaft 42 is rocked by the rod 40, as before described, the forked end of the projector-lever 47 engages a fixed collar 48 on the push-rod 8 and forces said rod and collar outward, and at the same time the collar engages the bent ends of the slide 6, which has been actuated and withdraws it to position for further use. In the rocking movement of the shaft 42, as just referred to, a pin 49, carried thereby, engages and lifts the dog 24 from the ratchet-wheel 18, when said wheel is returned to its initial position by the spring 23. The rod 40 in rising also contacts by a spring 50, coiled thereon, with an arm 51, carried by the shaft 11, thus rotating said shaft and restoring the fingers 12 and wing 13 to normal position. All elements

of the mechanism are now in appropriate position for use by a subsequent voter.

The arrangement of the independent-voting mechanism for judges, which I have hereinbefore termed plural-voting mechanism, is the same as that just described, except that the paper-rolls 31 of all the dials set apart therefor must be fixed rigidly on the shafts 29, so that all move in unison when any one of the push-rods 8 is actuated, for it will be remembered that in this class of elections a voter has a right to a plurality of votes, but is not entitled to vote more than once for the same candidate. It will be apparent that he cannot effectively vote twice for the same candidate, because all the paper-rolls move in unison, and when the election officers inspect the rolls in counting the independent votes it will be known to them if more than one vote has been cast by the same voter for a given candidate by the fact that the name of the candidate appears simultaneously in alignment in all the slots in which it may have been written, and they will not count the unauthorized vote.

What I claim is—

1. In a voting-machine, the combination with counting mechanism, a slide for actuating the same and a push-rod for actuating the slide, of a projector-lever, a shaft, means for rocking the shaft, and connections between said shaft and projector-lever, whereby when the shaft is rocked the lever forces said slide to normal position, substantially as described.

2. In a voting-machine, the combination with counting mechanism, a slide for actuating the same, and a push-rod for actuating the slide, of a projector-lever, a shaft, a vertically-movable rod for rocking said shaft, a pitman carried by said shaft, and a link connecting said pitman and said projector-lever, whereby when the shaft is rocked the lever forces said slide to normal position, substantially as described.

3. In a voting-machine, the combination with counting mechanism, and a push-rod for actuating the same, of a toothed wheel, means for limiting the rotation of said wheel, a pawl-carrier loosely hung on a shaft and projecting into the path of the push-rod, a pawl carried thereby and adapted to engage and rotate said wheel when the rod is operated, a dog in engagement with said wheel, a rock-shaft provided with a pin and means for rocking said shaft to force the dog from engagement with the wheel by means of the pin, substantially as described.

4. In a voting-machine, the combination with a casing provided with a slot, of a pair of paper-rolls arranged in said casing opposite said slot, a shutter hung upon the shaft of one of said rolls, normally closing said slot, and provided with a rearward extension which, when the shutter moves from the slot, engages the other of said rolls and locks both from rotation, substantially as described.

5. In a voting-machine, the combination with a casing provided with a slot, a pair of paper-rolls arranged in said casing opposite said slot, a gravity-shutter hung upon the shaft of one of said rolls and provided with a rearward extension which, when the shutter drops from the slot, engages the other of said rolls and locks both from rotation, substantially as described.

6. In a voting-machine, the combination with a casing having a slot, of a pair of paper-rolls arranged in said casing opposite said slot, a gravity-shutter hung upon the shaft of one of said rolls, normally closing said slot and adapted to drop away therefrom and be returned in front thereof, said shutter being provided with a device which, when the shutter drops, engages the other of said rolls and locks both from operation, and when it returns is released from said rolls, said shutter also provided with means which, when it returns to close the slot, engages one of said paper-rolls and rotates the same to advance the paper thereon, substantially as described.

7. In a voting-machine, the combination with a casing having a slot, and a pair of paper-rolls arranged in said casing opposite said slot, of a gravity-shutter hung upon the shaft of one of said rolls, normally closing such slot and provided with a rearward extension which engages the other of said rolls when the shutter drops from the slot, whereby both of said rolls are locked from rotation, a lever carried by said shutter and means for returning said shutter to position to close the slot and simultaneously force the lever into engagement with the paper-roll to rotate the same and advance the paper thereon, substantially as described.

8. In a voting-machine, the combination with a casing provided with a group of candidate-cards and a slot, and with counting mechanism, of a paper-roll arranged in said casing opposite said slot, a rotatable push-rod arranged centrally in said group of candidate-cards and adapted to actuate the counting mechanism, a gravity-shutter, a pivoted trigger normally supporting said shutter to close said slot, a trip carried by said rod to trip said trigger from its shutter-supporting position, and means for returning said shutter to normally closing position, substantially as described.

9. In a voting-machine, the combination with a casing provided with a group of candidate-cards and a slot, and with counting mechanism, of a paper-roll arranged in said casing opposite said slot, a rotatable push-rod arranged centrally in said group of candidate-cards and adapted to actuate the counting mechanism, a gravity-shutter hung on the shaft of said paper-roll, a lever carried thereby, a pivoted trigger normally supporting said shutter to close said slot, a trip carried by the push-rod to trip said trigger from such supporting position to permit the shutter to drop, a gravity-slide engaging said lever, and means

for operating said slide to return the shutter to normal position and simultaneously there-
with force said lever into engagement with the
paper-roll to actuate the same and advance
the paper thereon, substantially as described.

10. In a voting-machine, the combination
with a casing provided with a group of can-
didate-cards and a slot and with counting
mechanism, of a pair of paper-rolls arranged
in said casing opposite said slot, a rotatable
push-rod arranged centrally in said group of
candidate-cards and adapted to actuate the
counting mechanism, a gravity-shutter hung
on the shaft of one of said rolls and provided
with a rearward extension, a lever carried by
said shutter, a pivoted trigger normally sup-
porting said shutter to close said slot, a trip
carried by the push-rod to trip said trigger
from said supporting position to permit the
shutter to drop, a gravity-slide engaging said
lever, and means for operating said slide
to return the shutter to normal position and
thereby withdraw the rearward extension
thereof from its locking engagement and si-
multaneously therewith force said lever into
engagement with the paper-roll to rotate the
same and advance the paper thereon, sub-
stantially as described.

11. In a voting-machine, the combination
with a casing provided with a plurality of
voting-slots, of a pair of rotatable shafts hav-
ing a plurality of paper-rolls fixedly mounted
thereon and arranged respectively opposite

said slots, and automatic means for operat-
ing all of said rolls in unison to advance the
paper carried thereby simultaneously past the
slots, substantially as described.

12. In a voting-machine, the combination
with a casing provided with a plurality of
voting-slots, of a pair of rotatable shafts, pa-
per-rolls fixedly mounted thereon and ar-
ranged in pairs respectively opposite said
slots, shutters hung upon one of said shafts,
and automatic means for moving said shut-
ters to close said slots and rotate all of said
rolls in unison to advance the paper carried
thereby simultaneously past the slots, sub-
stantially as described.

13. In a voting-machine, the combination
with a casing provided with a plurality of
voting-slots, of a pair of rotatable shafts hav-
ing a plurality of pairs of paper-rolls fixedly
mounted thereon and arranged respectively
opposite said slots, means for operating all
of said rolls in unison to advance the paper
carried thereby simultaneously past the slots,
and means for locking said rolls from rota-
tion, substantially as described.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

JOHN A. MARKOE.

Witnesses:

FREDERICK PIKE.

CHAS. CONRADIS.