

A. O. ABBOTT.  
VOTING MACHINE.

No. 560,015.

Patented May 12, 1896.

Fig. 1.

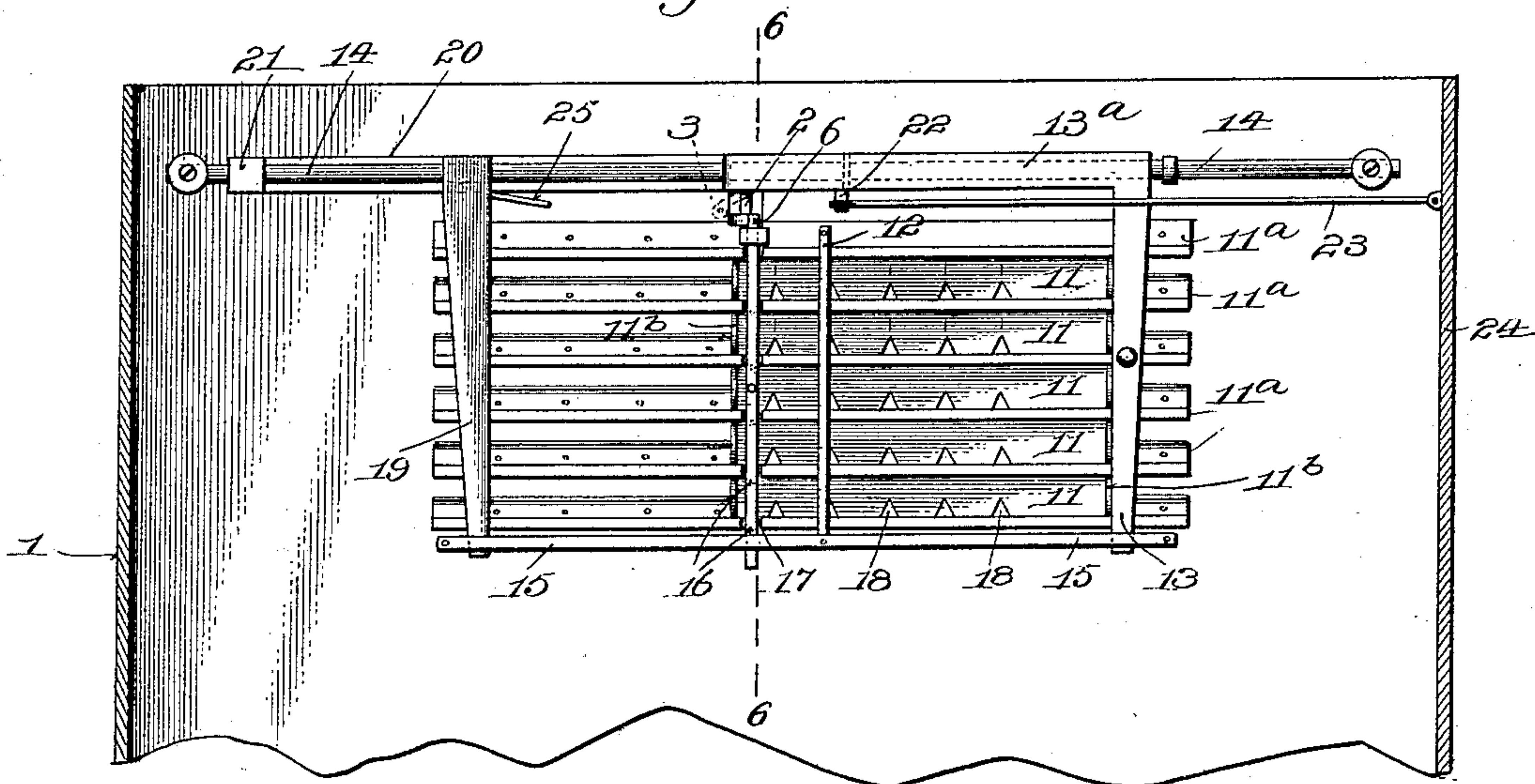
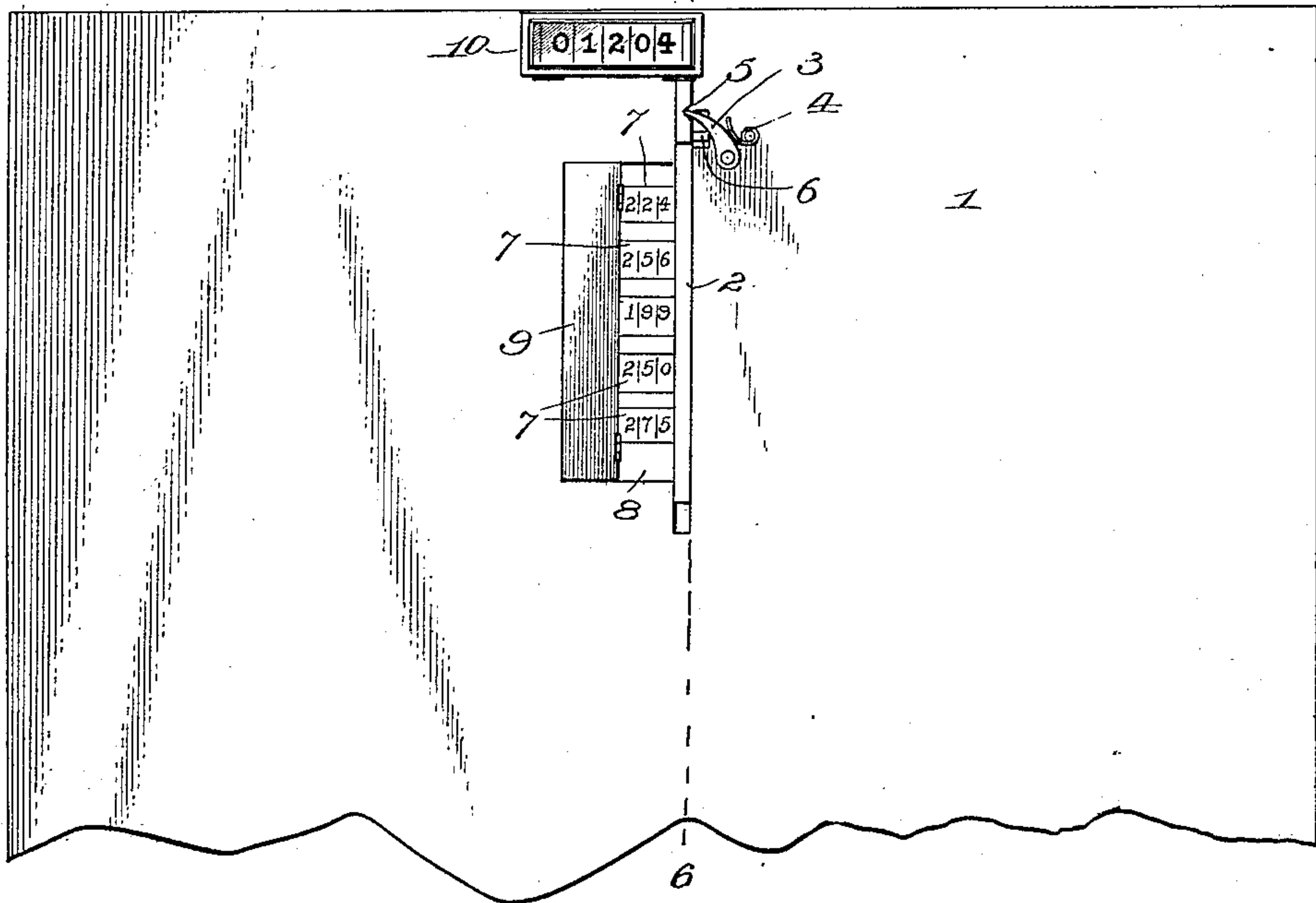


Fig. 2.



witnesses:

Harry S. Fisher.  
James White

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A. O. Abbott.  
By Knight Bros  
Atty's.





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Fig. 6.

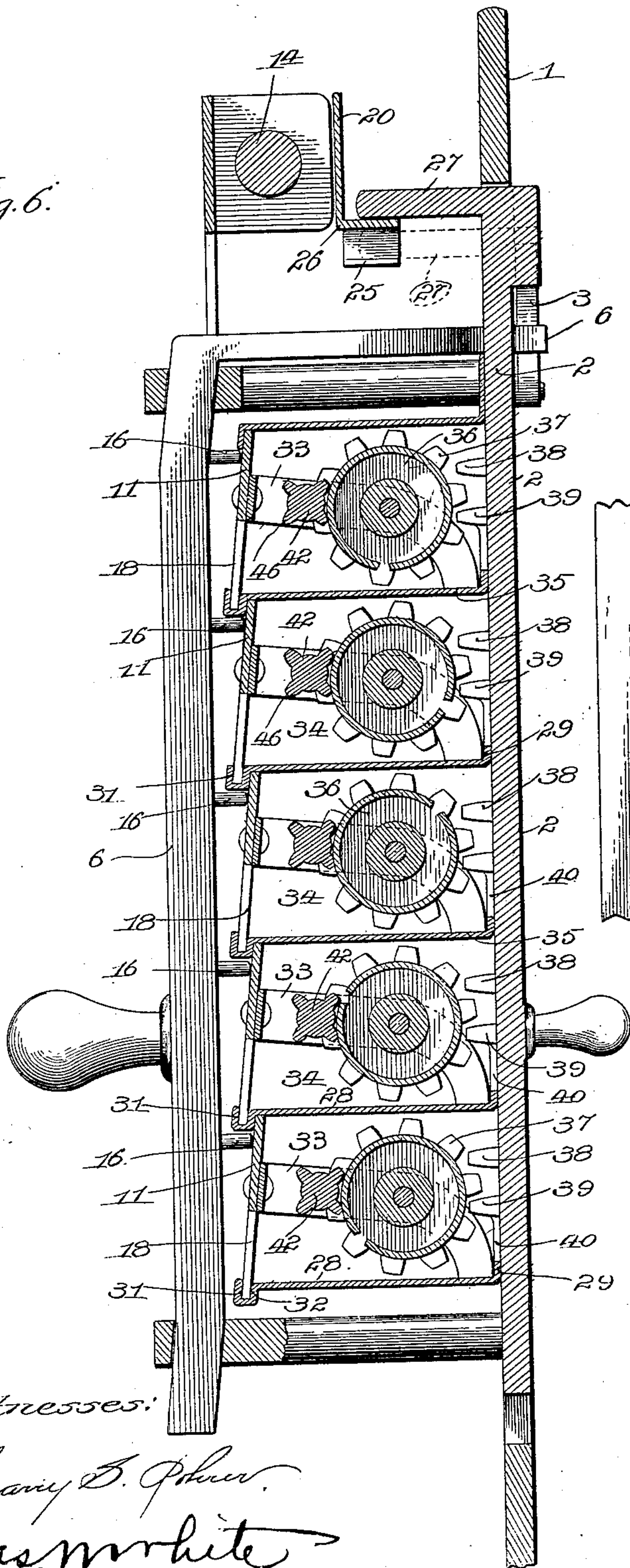
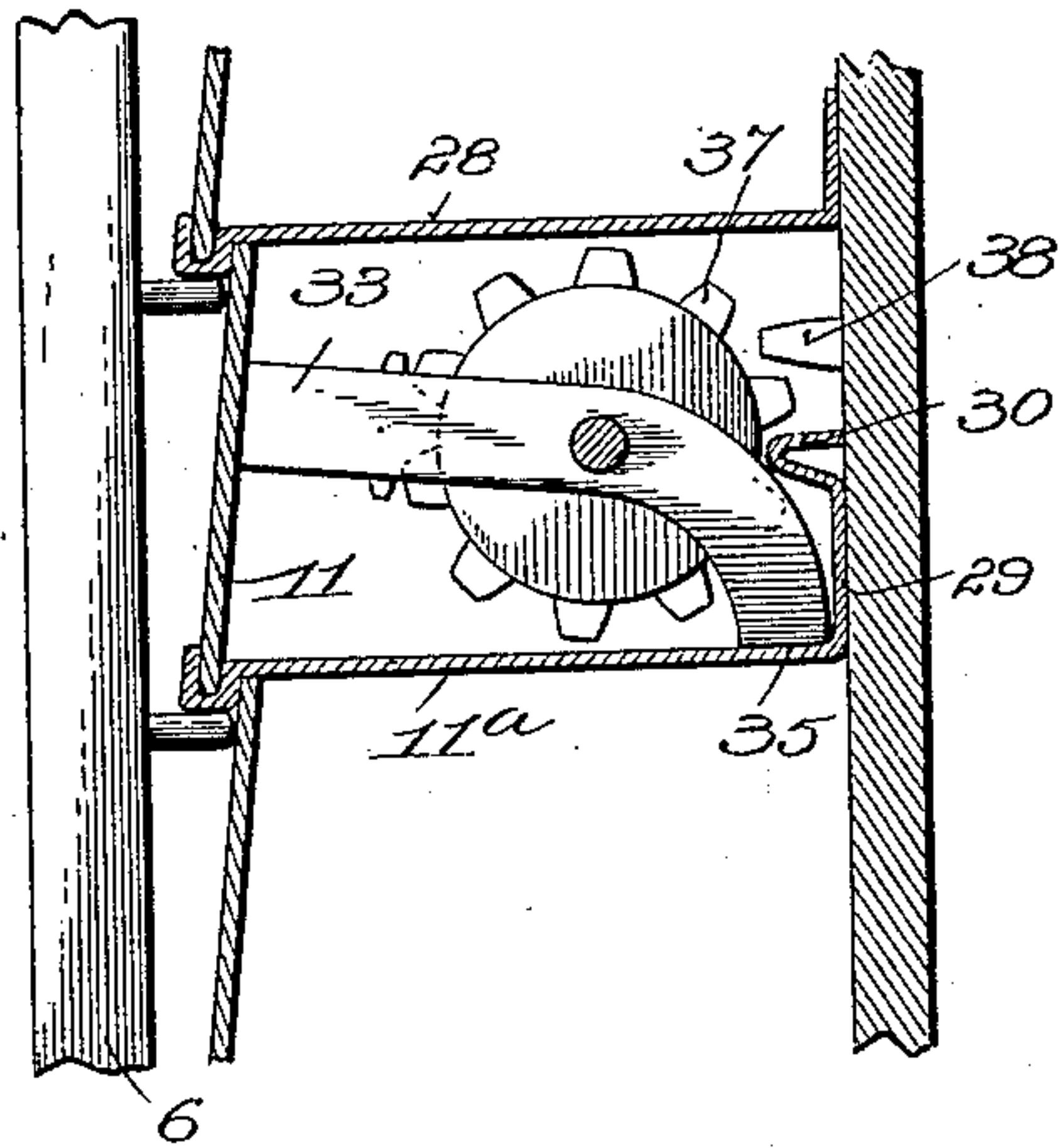


Fig. 7.



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Fig. 8.

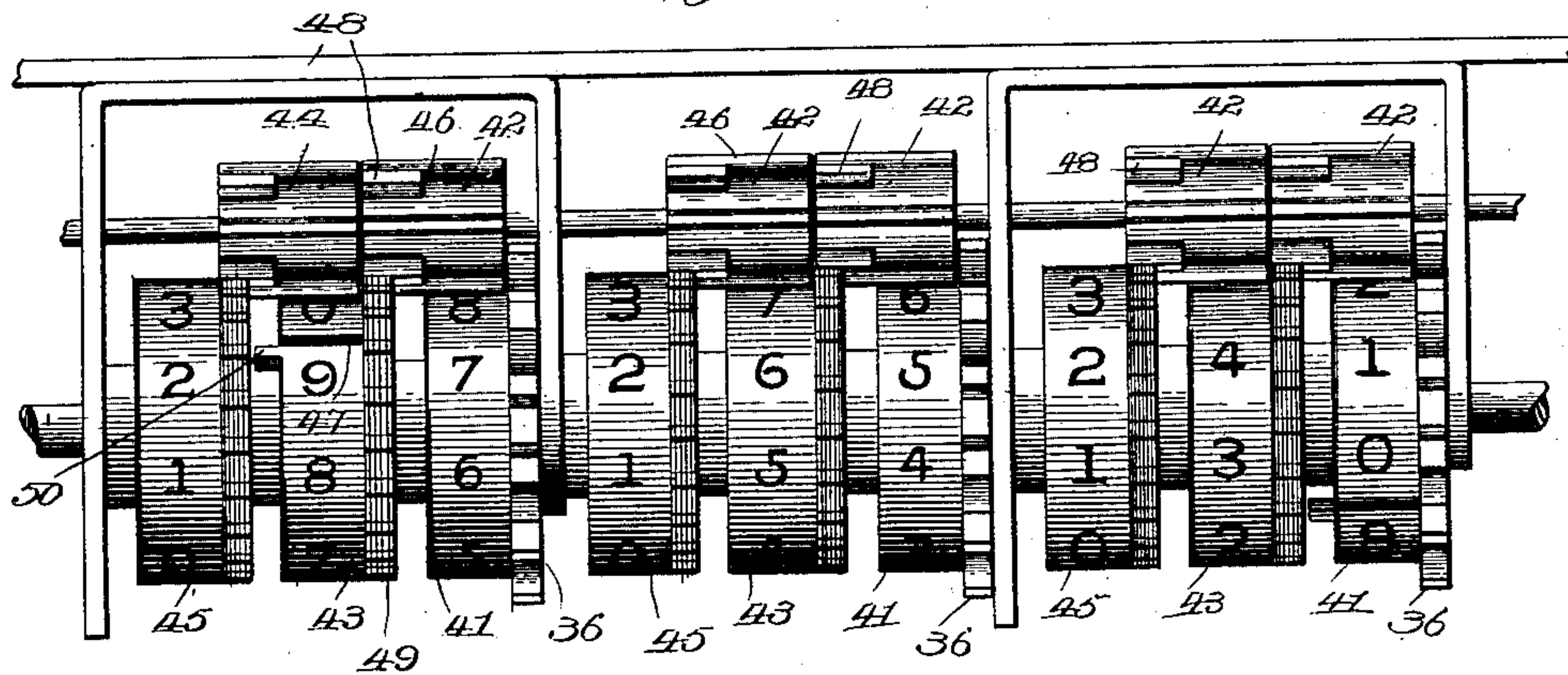


Fig. 9.

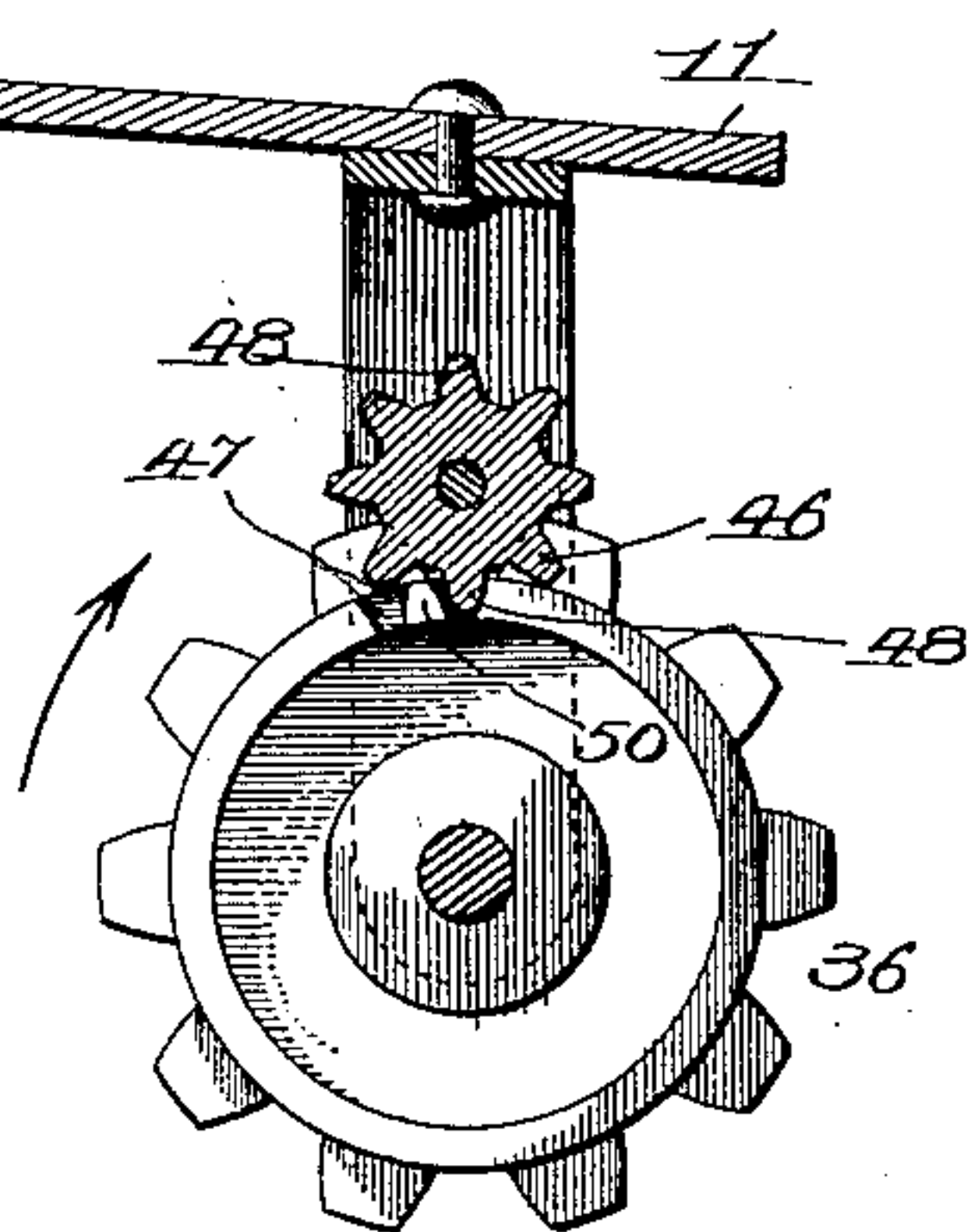


Fig. 10.

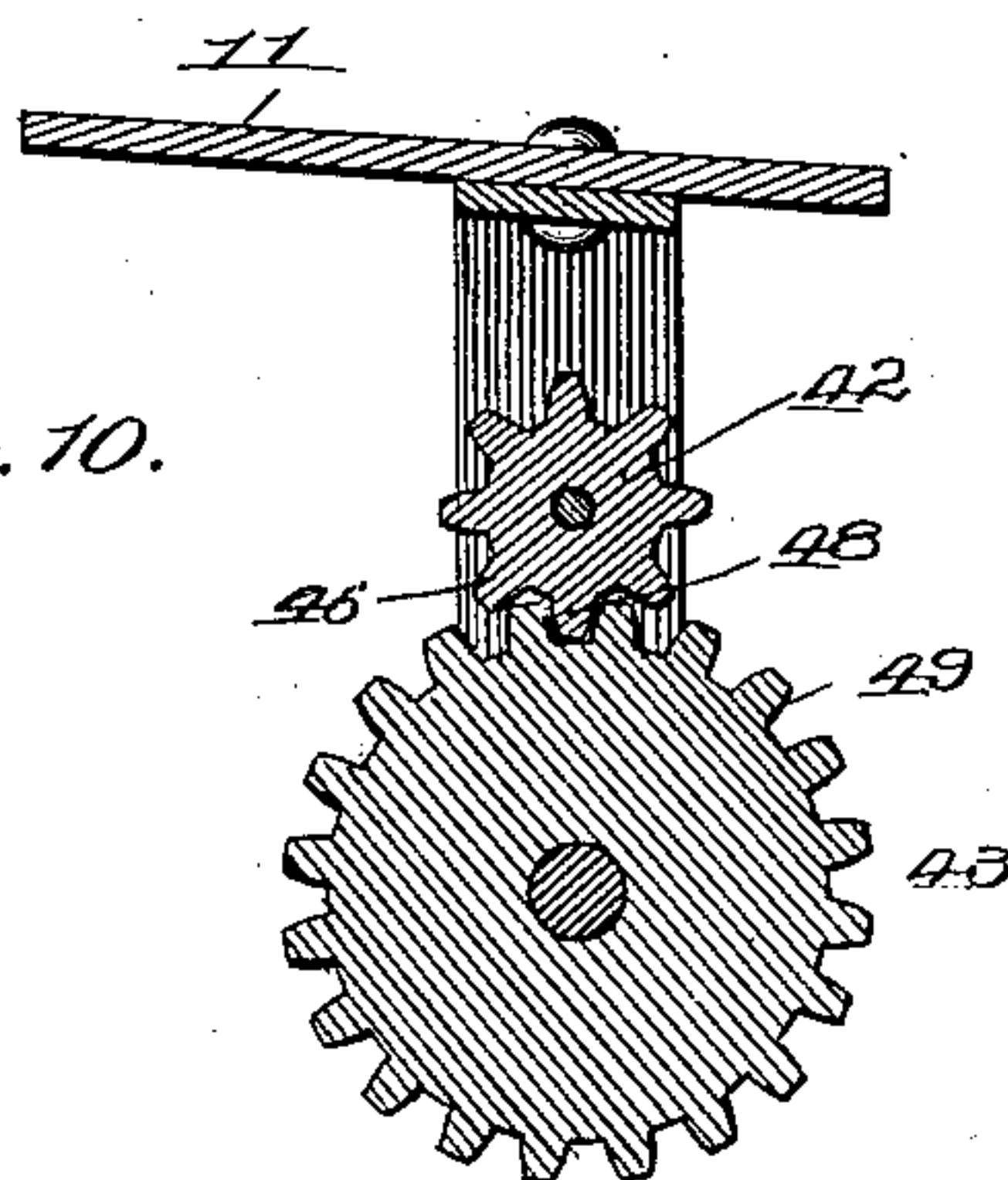
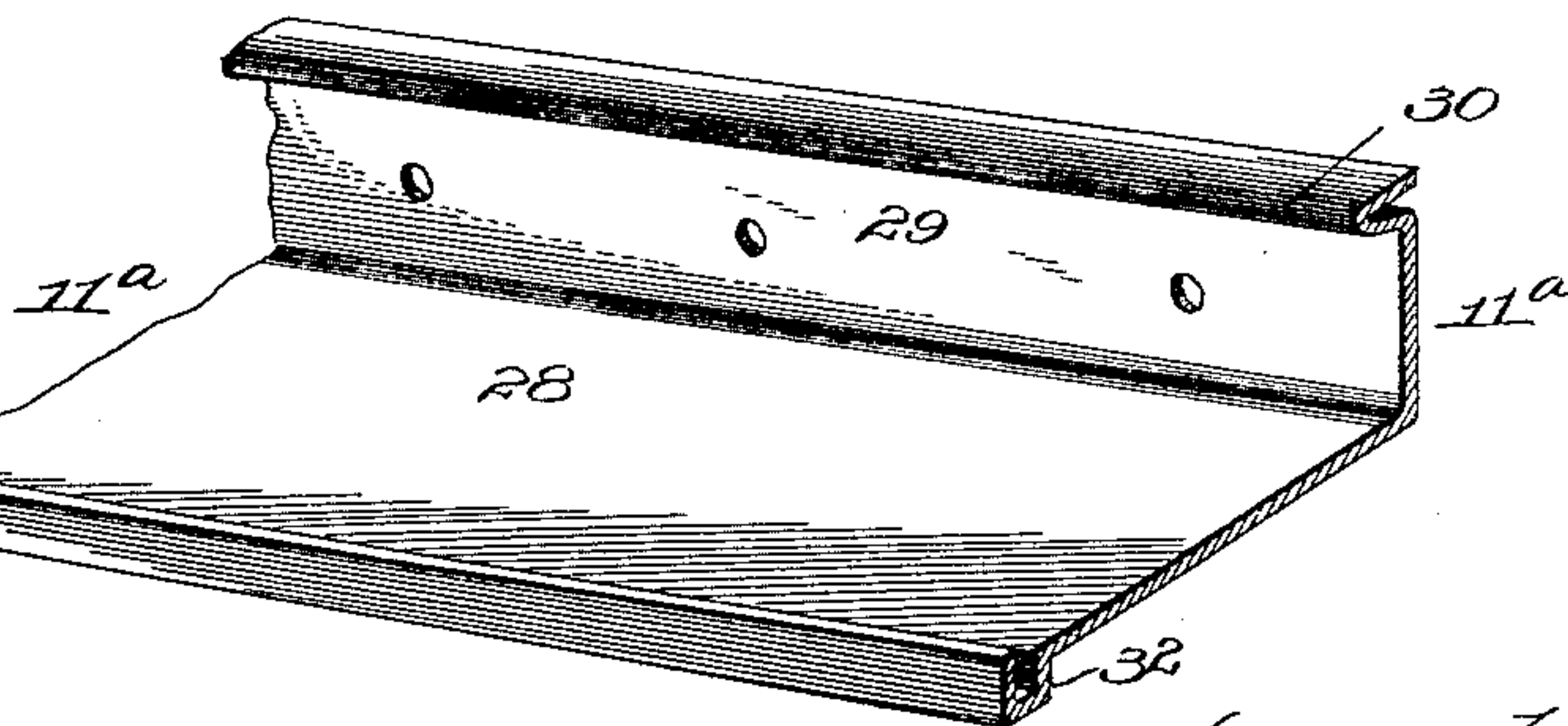


Fig. 11.



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# UNITED STATES PATENT OFFICE.

ADRIAN O. ABBOTT, OF HUDSON, MICHIGAN.

## VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 560,015, dated May 12, 1896.

Application filed January 21, 1895. Serial No. 535,701. (No model.)

*To all whom it may concern:*

Be it known that I, ADRIAN O. ABBOTT, a citizen of the United States, and a resident of Hudson, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification.

The subject of my present invention is a machine in which are arranged a number of slides corresponding to offices to be voted for and each containing in series the names of candidates for the office which it represents and also carrying an independent registering device for each name, the slides being movable to bring any name thereon into a voting position and every registering device being inoperative except when it is accurately adjusted to the voting position and means for automatically actuating the registers on all the slides which may be grouped at the voting position, which actuating means is preferably under control of a rectifying-bar, which is adapted to effect the accurate adjustment of the slides after they have approximately been arranged by hand.

My invention will be fully understood upon reference to the accompanying drawings, in which—

Figure 1 is an elevation of that portion of the machine which is presented to the view of the voter as he proceeds to arrange and register his vote and which is preferably within an inclosure. Fig. 2 is a front elevation of the exterior of the machine. Fig. 3 is a plan of the parts shown in Figs. 1 and 2. Fig. 4 is a detail perspective of a sliding arm and its mountings, which is employed for the purpose of returning all the slides to the initial position and setting the actuating device for the register after a vote has been cast. Fig. 5 is a perspective view of one of the slides, on one face of which, preferably that presented to view, are arranged the names of candidates for the office which the slide represents, while on the back and in position corresponding to each name is arranged a wheel-register. Fig. 6 is a vertical section on the line 6-6, Figs. 1, 2, and 3, on an enlarged scale. Fig. 7 is a detail view similar to Fig. 6, but having the section taken in a different plane. Fig. 8 is a plan illustrating the mode

of attaching the registering devices to the back of a slide. Figs. 9 and 10 are detail views of portions of one of the registers. Fig. 11 is a detail view of a portion of one of the angle-plates constructed to receive and guide a slide with its registers and to prevent possibility of movement of any register until it reaches the voting position. Fig. 12 is an elevation of the slides as arranged for two sets of names.

Referring to Figs. 1, 2, 3, 4, and 5, 1 represents a suitable mounting for the machine, preferably in the form of a four-sided closure approximately the height of the head.

2 is a drop-bar, which automatically effects the registering at the proper time and which is held normally elevated by means of a pawl 3, having a spring 4 and engaging in a notch 5 in the drop-bar. The pawl 3 is displaced from notch 5 by the end of a bar 6, which engages beneath said pawl and has upward movement. When the drop-bar 2 descends, it engages all of the series of registers, which may have been previously brought into the voting position, and one vote is recorded on the dial 7 of each of these registers, which said dials may be examined at an opening 8 in the closure, which is normally kept hidden from view by the door 9. The construction of the parts whereby this action takes place will be fully described hereinafter. In addition to this registration by the individual registers the drop-bar 2 may be readily arranged to actuate a register 10 and thus indicate the total number of votes cast. The connection between bar 2 and register 10, as well as the construction of said register, may follow any suitable well-known construction and need not be further described.

11 represents the slides, (see Fig. 1,) which are mounted in angle-plates 11<sup>a</sup>, and are adapted to be moved to voting position between a bar 12 and a bar 6, either individually through the medium of one of their upturned ends or as a whole by means of an arm 13, which has a mounting 13<sup>a</sup>, arranged to slide upon a bar 14. Inasmuch as the names of the respective candidates on the several slides are grouped transversely according to party, it will many times be desired to simply shift the slides bodily until all



the candidates of any one party are brought into the voting position and a straight ticket thus voted.

15 represents a lower guide for the arm 13. Upon the bar 6, which has heretofore been described for tripping the pawl 3, are arranged a number of pins 16, which work through openings 17 in the guide-plates 11<sup>a</sup> and are adapted by an upward movement of the bar 6 to enter the series of slots 18 in the slides 11, and by continued movement until the pins reach the points of said V-shaped slot the slides, which have previously been arranged roughly by hand, will be brought into accurate voting position. This bar thus becomes a rectifying-bar and it rectifies the alinement of the slides and the registering devices carried thereby simultaneously with the releasing of the drop-bar 2, which actuates said registers. After this takes place the slides may all be returned to their normal positions and the vote which has been cast obscured by means of a second arm 19, having a mounting 20 with bearings 21, and in order to make this action automatic said mounting is connected at 22 by a rod 23 to a door 24, through which the voter passes out, so that the act of opening the door obliterates the vote so far as might be disclosed by the arrangement of the slides.

25 represents a deflecting tongue on the mounting 20, which, as the return-bar 19 moves, passes under the end 27 of the drop-bar 2 and elevates it onto a flange 26, by which it is held until it is engaged by the pawl 3. Another function of this flange 26 is to prevent the dropping of the bar 2 while the arm 19 is out of its normal position. As the door 24 is connected to the mounting 20 it is obvious that the drop-bar 2 will not perform its function until the door is closed and a recess 26<sup>a</sup> in the flange 26 is brought beneath the end 27 of said drop-bar 2.

From so much of the description it will be obvious that it is practically impossible for a vote to be cast or the mechanism otherwise tampered with at the wrong time or for more than one vote to be registered while the voter is within the inclosure, unless he shall first pass out and reënter.

The manner of arranging the angle-plates 11<sup>a</sup> to receive and guide the slides 11 will be understood more clearly from Figs. 6 and 7, and the construction of said plate will be seen in Fig. 11. Each plate is formed with a horizontal portion 28, a vertical attaching portion 29 with a register-locking flange 30, and a longitudinal channel 31 on the edge of the horizontal portion 28. The channel 31 also forms a shoulder 32 beneath the plate, and this shoulder 32 on one plate and the channel 31 on the next lower plate constitute the guides for the slides 11. To the back of slides 11 are riveted brackets 33, which afford bearings for registers 34 and are curved down so as to have a bearing at 35 on the horizontal portions of the angle-plates 11<sup>a</sup> and at the same time to sup-

port the slides 11 in the position shown. This construction permits the slides to be freely moved longitudinally with the registers attached to them. Each register has a main spur-wheel 36, by which the register is actuated, and this actuation takes place by the engagement of the teeth 37 by pins 38 on the drop-bar 2. It will thus be observed that when the slides are moved so as to bring a series of the spur-wheels 36 into the vertical plane of the pins 38 and the drop-bar 2 is released in the manner heretofore described the downward movement of the drop-bar will move each wheel 36 a distance of one tooth. In order to prevent the movement of wheel 36 in any other manner than by the tooth 38 on the dropping of the bar 2 while the register is in voting position, said drop-bar is provided with an additional series of pins 39, which normally engage between the teeth of wheel 36 and prevent its rotation while in voting position. In order to prevent the rotation of any register-wheel 36 at any time when they are out of voting position, the flange 30 on the angle-plate 11<sup>a</sup> projects between the teeth 37, as shown in Fig. 7, throughout the length of the plates 11<sup>a</sup>, except at the voting position, where the flange 30 is notched or cut away, as shown at 40. This notch 40 permits the teeth 38 39 to drop, and also permits the wheels 36 to rotate.

In the registers each wheel 36 carries a unit-disk 41, which communicates motion through a barrel 42 to the tens-wheel 43, which in turn communicates motion through the barrel 44 to the hundreds-wheel 45. In order that motion may be communicated from each disk-wheel 41 43 to the succeeding wheel only at the completion of a revolution, each barrel 42 is provided with cogs 46, which rest astride the periphery of the disk-wheel from which they receive motion, and this prevents the barrels from turning until a slot 47 in the periphery of a disk-wheel comes around and engages one of the teeth 46, when the barrel is turned a distance of one tooth to another, and this motion is imparted through the opposite ends of said teeth 46, together with an interposed series of teeth 48, to the gear-wheel 49, which drives the next disk-wheel a distance sufficient to bring into view the next digit on its face. In order to bring a tooth 46 into engagement with the slot 47 at the proper time and prevent lost motion, each disk-wheel 41 43 carries a finger 50, which engages the barrel at the proper time and turns its tooth 46 down into the slot 47.

From the foregoing description of the registers it will be observed that none of the wheels can move except at the proper rate with relation to the units-wheel, and this wheel can only move when in the voting position, and even then can only be moved by the drop-bar in its downward movement.

The return-bar 19 is secured to its mounting 20 by means of a set-screw 19<sup>a</sup>, which works in a slot 20<sup>a</sup> of the mounting and per-



mits the bar 19 to be set forward, if desired, to intercept the upturned ends 11<sup>b</sup> of the slides and prevent the slides being moved far enough to bring the last spaces into the voting position in case said spaces contain no names or in case they contain names which have no place in the election. The slides are intended to receive names in any convenient manner. Thus far no provision has been made for voting for more than one person to the same office or to an office filled by two or more persons—such as a board of directors, trustees, or commissioners, &c.—and for selecting any two candidates for the same office. To provide for doing this, the slides may be arranged as shown in Fig. 12, in which two slides 11 are provided with duplicate sets of names *a b c d e f g*, but coupled together, so that similar names on both slides cannot be brought opposite, and therefore two votes cannot be registered for the same party at the same operation, but any two persons on these slides may be combined. To conveniently couple the slides, one slide 11 may be provided with a cross-bar 11<sup>c</sup>, which is securely attached to it and which projects over in front of, but is not attached to, the projection 11<sup>b</sup> on the adjacent slide. By this means the upper slide cannot be moved sufficient to bring similar names into coincidence, but may be moved freely in the opposite direction to make any combination of names, as stated.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a voting-machine the combination of the series of slides each provided with registers having main spur-wheels and movable to bring said registers into voting position, and a drop-bar having means for engaging the main spur-wheel of each register thus brought into voting position and actuating it as explained.

2. In a voting-machine, the combination of the slides containing means for indicating a vote and movable to bring said means into a voting position, a drop-bar for actuating said means thus brought into voting position and the rectifying-bar constructed to bring into accurate alinement the portions of the slides to be voted and having working connection with said drop-bar for releasing it, as explained.

3. In a voting-machine the combination of the slides each containing a series of wheel-registers having a toothed actuating-wheel, and movable to bring any register into a voting position, and a drop-bar mounted to reciprocate and having teeth projecting into the plane of the tooth-actuating wheels when in voting position, as explained.

4. In a voting-machine the combination of the movable slides having registers, the drop-bar arranged to actuate said registers, the pawl engaging said drop-bar to hold it in elevated position and the rectifying-bar having

releasing connection with said pawl, as explained.

5. In a voting-machine the combination of the movable slides arranged to be moved to bring selected portions of them into a voting position the return-bar 19 for returning the slides to normal position, an inclosure for the voting-machine, having a door and connection between the door and inclosure and the bar 19 whereby the latter is operated to return the slides by the exit of the voter, substantially as explained.

6. In a voting-machine the combination of the registering devices, the drop-bar for actuating the same having the projecting end 27, and the inclined elevating tongue 25 movable beneath the projection 27 for raising the drop-bar, as explained.

7. In a voting-machine the combination of the slides having means for indicating a vote and movable to bring said indicating means into voting position, the return-bar 19 arranged to engage all the slides and movable for returning them to normal position, and means for fixing said bar 19 at different points for the purpose of cutting off the movement of the slides and preventing the bringing of their ends into the voting position when it is desired to prevent the voting of the names thereon, substantially as explained.

8. In a voting-machine the combination of the slides having the series of registers and movable to bring said registers into a voting position, sprocket-wheels on said registers for moving them and a flange projecting between the teeth of all the registers on each slide to prevent their rotating but having a cut-away portion to permit them to be rotated at the voting position as explained.

9. In a voting-machine the combination of a slide arranged to receive the names of parties to be voted for on one side, a series of brackets 33 secured to the slide and at points opposite the names and registers mounted in the respective brackets as explained.

10. In a voting-machine the combination of the plate 11<sup>a</sup> and the slide 11 having secured to its back the brackets 33 carrying registers 34 and mounted to slide upon said plate as explained.

11. In a voting-machine the combination of the angle-plate formed with the front groove, and the slide having its edge inserted in the groove and having secured to its back portion the bracket which extends down and bears upon the angle-plate and affords bearing for the register as explained.

12. In a voting-machine the combination of the angle-plate 11<sup>a</sup> formed with the horizontal portion 28, the upright portion 29 and the flange 30, and the slide arranged to move on said plate and carrying a register located to receive the flange 30 between the teeth of one of its wheels, as explained.

13. In a voting-machine the combination of a vertical series of angle-plates formed with the horizontal portion 28 the vertical portions



29 having flanges 30 and with the channels 31 making rear shoulders 32; the series of slides having bearings at their lower edges in the channels 31 and at their upper edges against shoulders 32; the brackets 33 secured to the rear sides of the slides and projecting downward to bear at 35 upon the horizontal portions 28 of the plates, and registers 34 having sprocket-wheels 36 mounted in the brackets 33 in position to receive the flanges 30 between the teeth of said sprocket-wheels; all substantially as and for the purposes set forth.

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Witnesses:

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