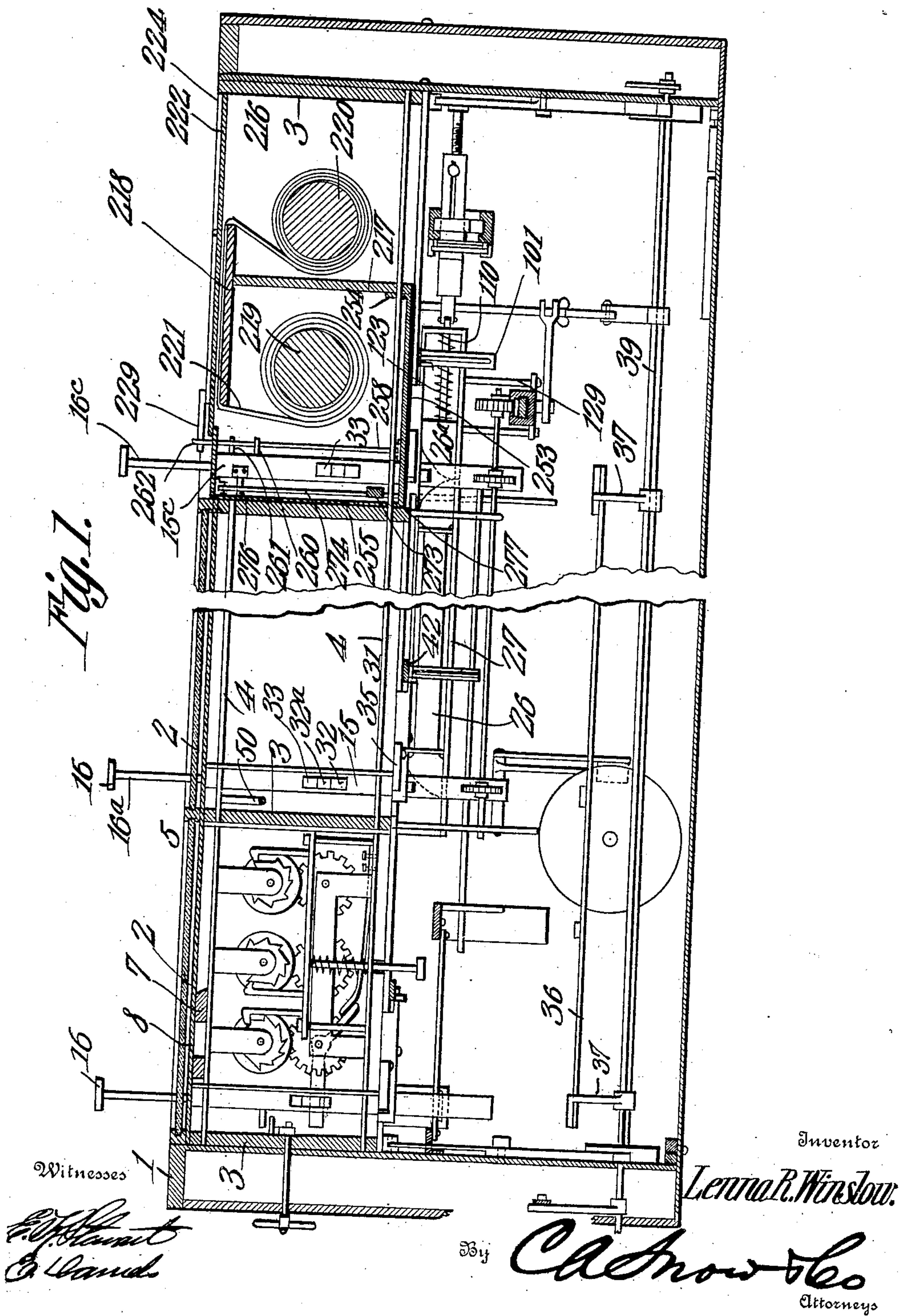


L. R. WINSLOW.  
INDEPENDENT VOTING MECHANISM FOR VOTING MACHINES.  
APPLICATION FILED JULY 15, 1908.

920,102.

Patented Apr. 27, 1909.

4 SHEETS—SHEET 1.

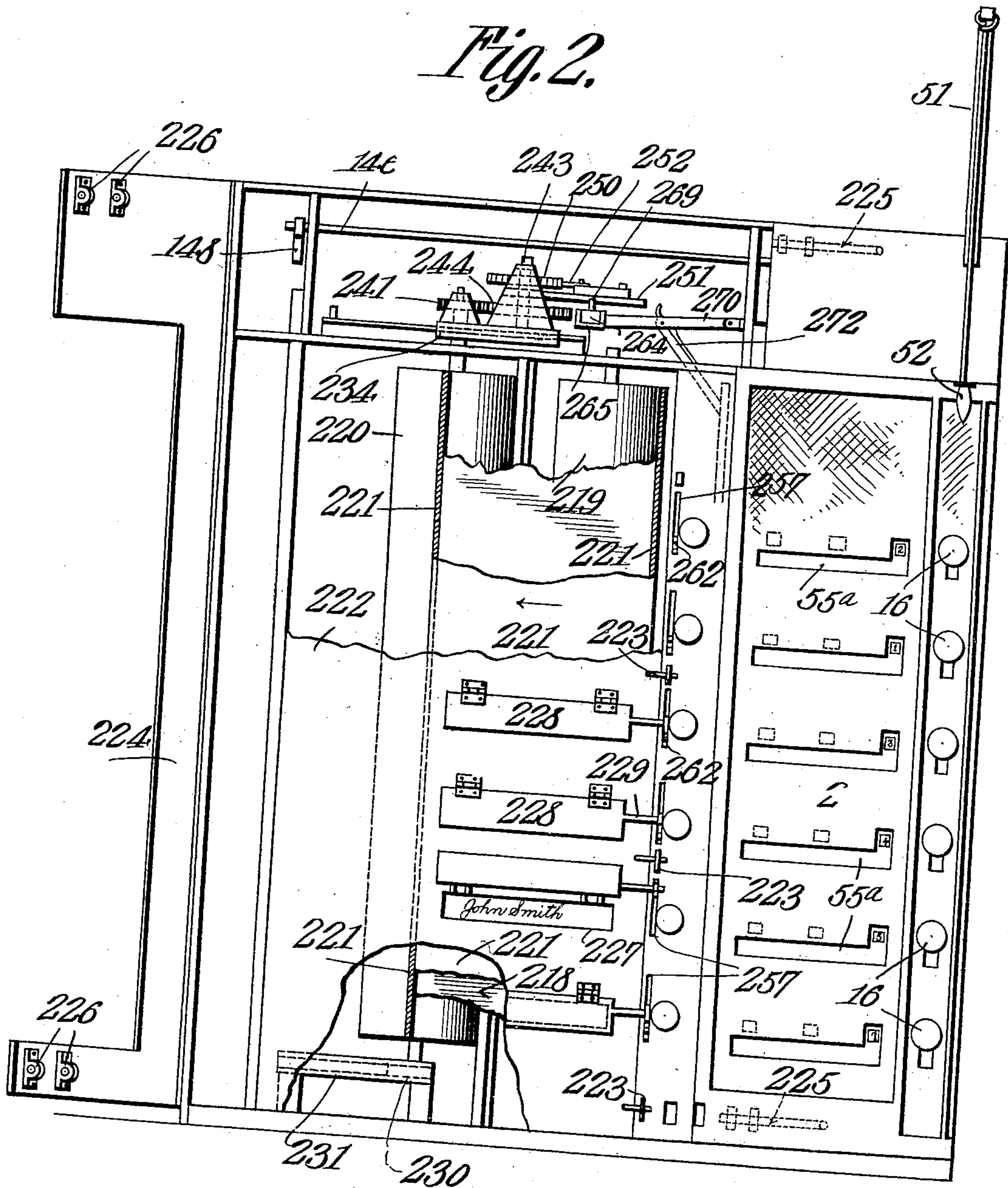


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4 SHEETS—SHEET 2.

Fig. 2.



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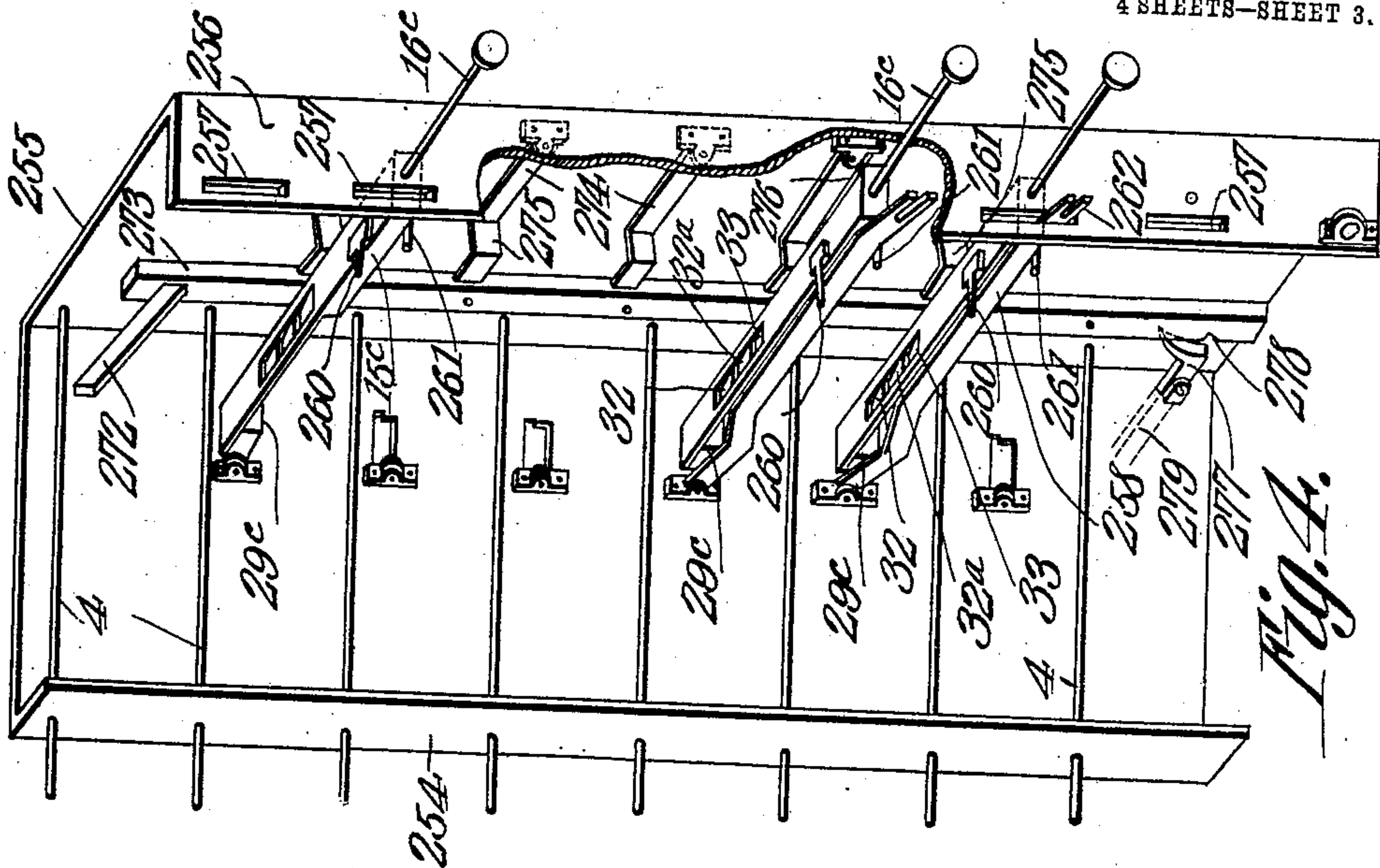


Fig. 4.

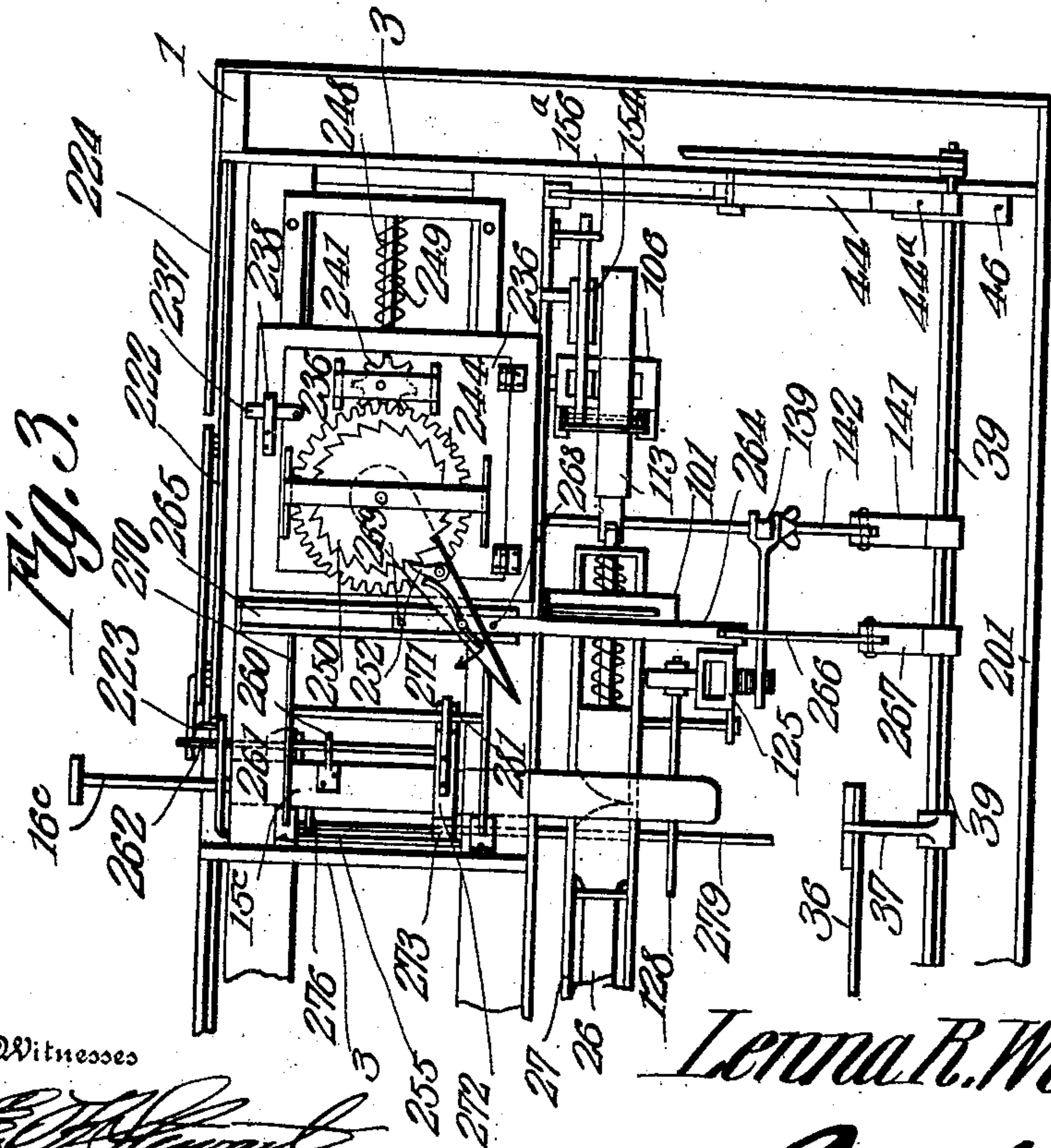
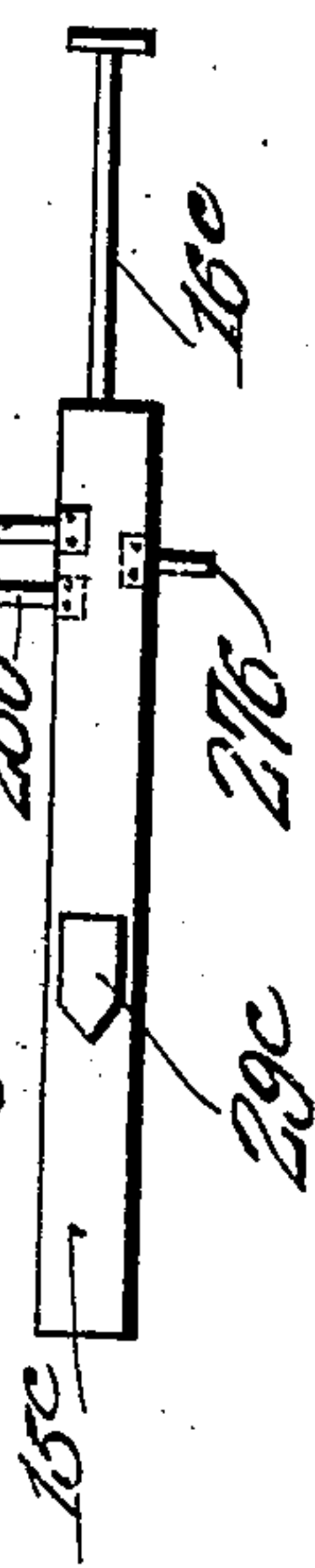


Fig. 3.

Fig. 10.



Witnesses

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4 SHEETS—SHEET 4.

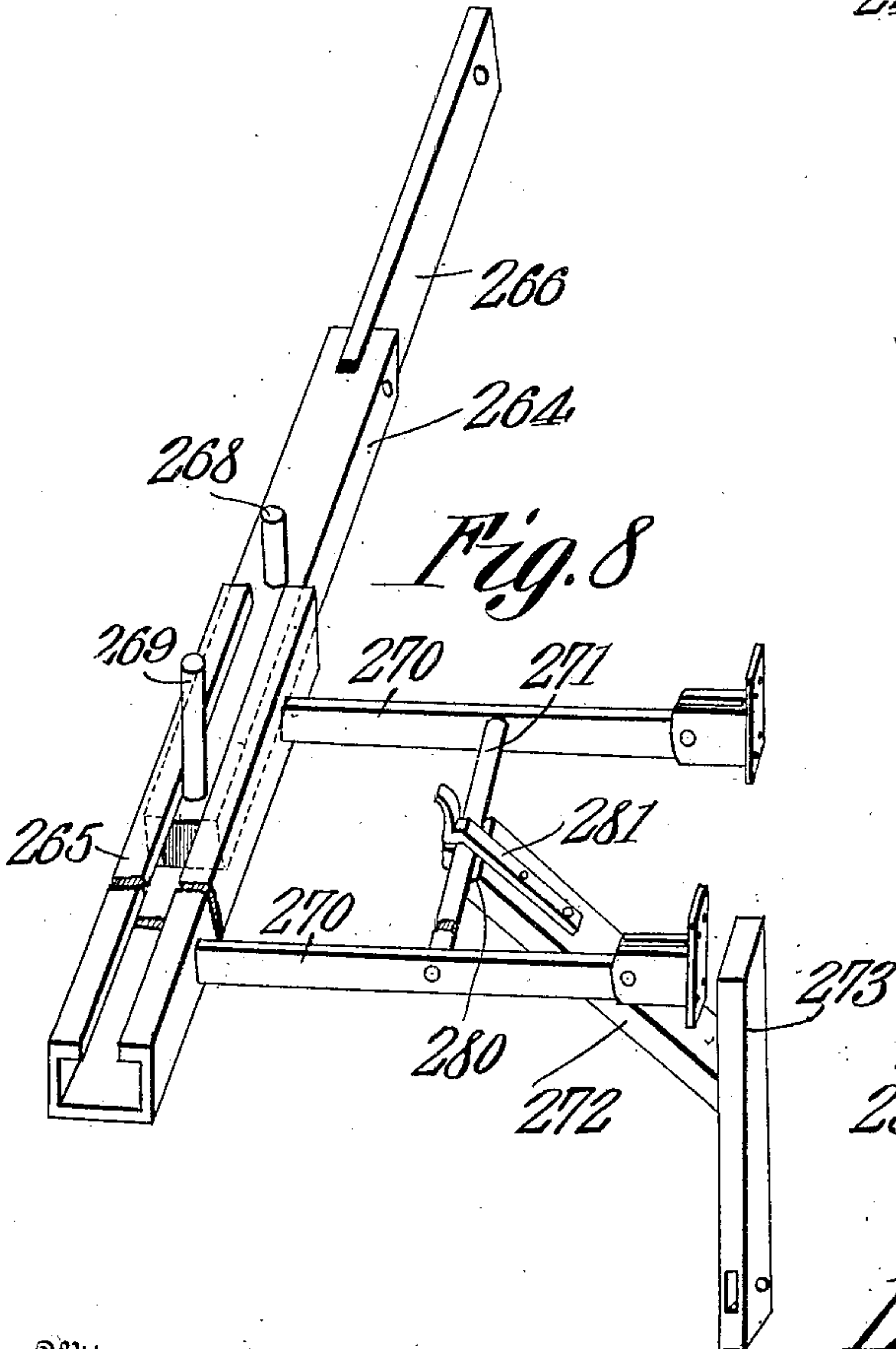
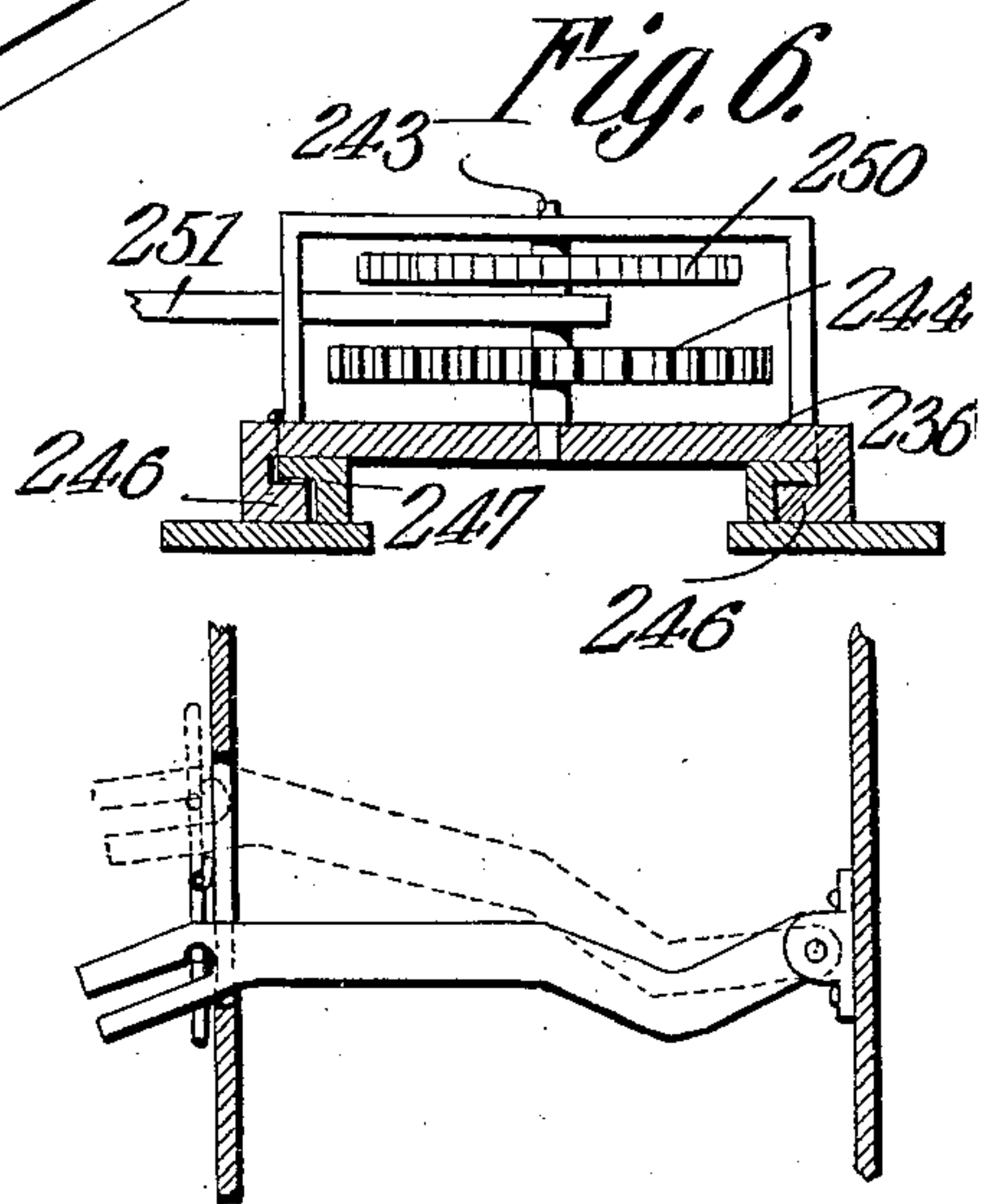
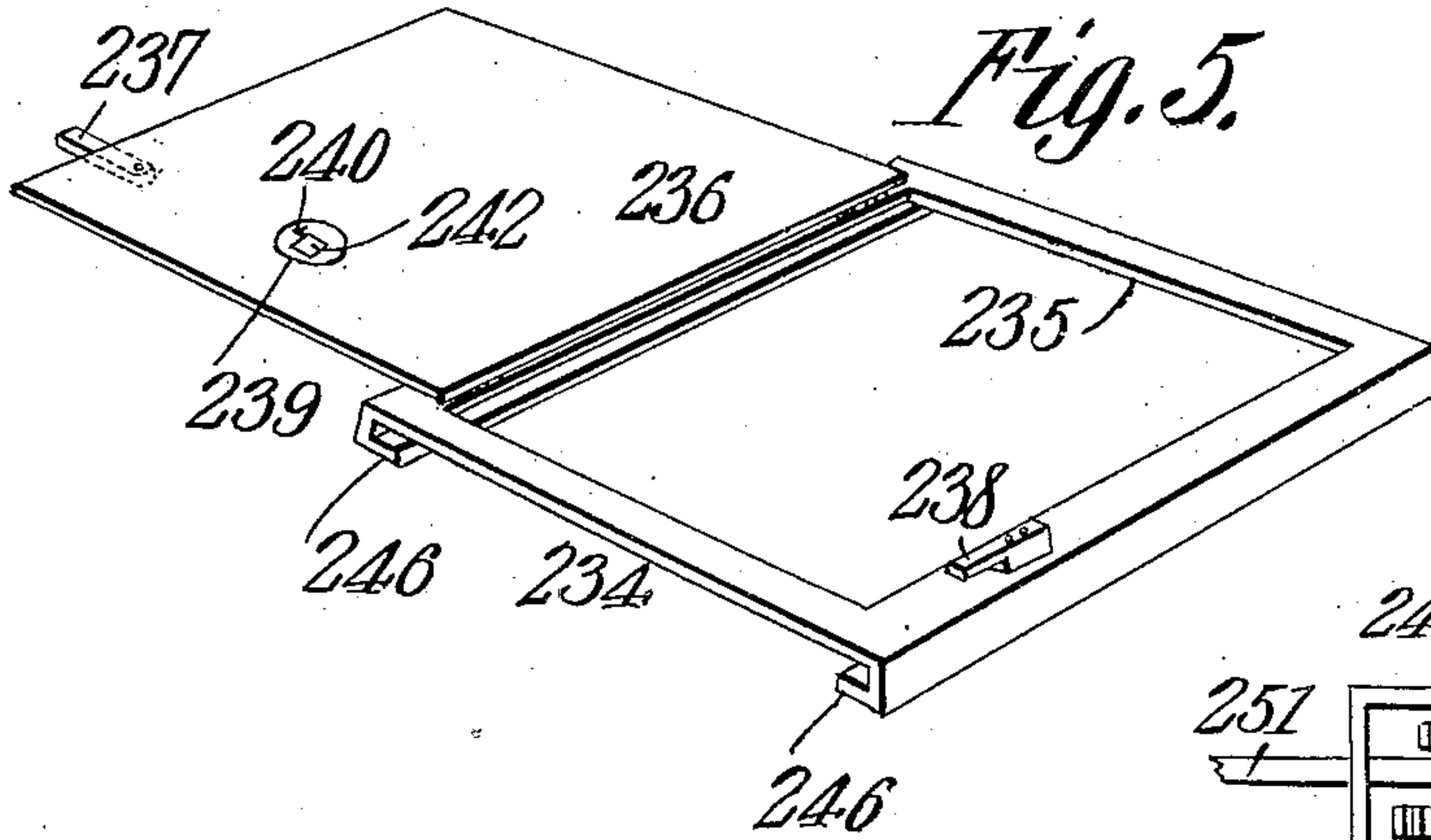
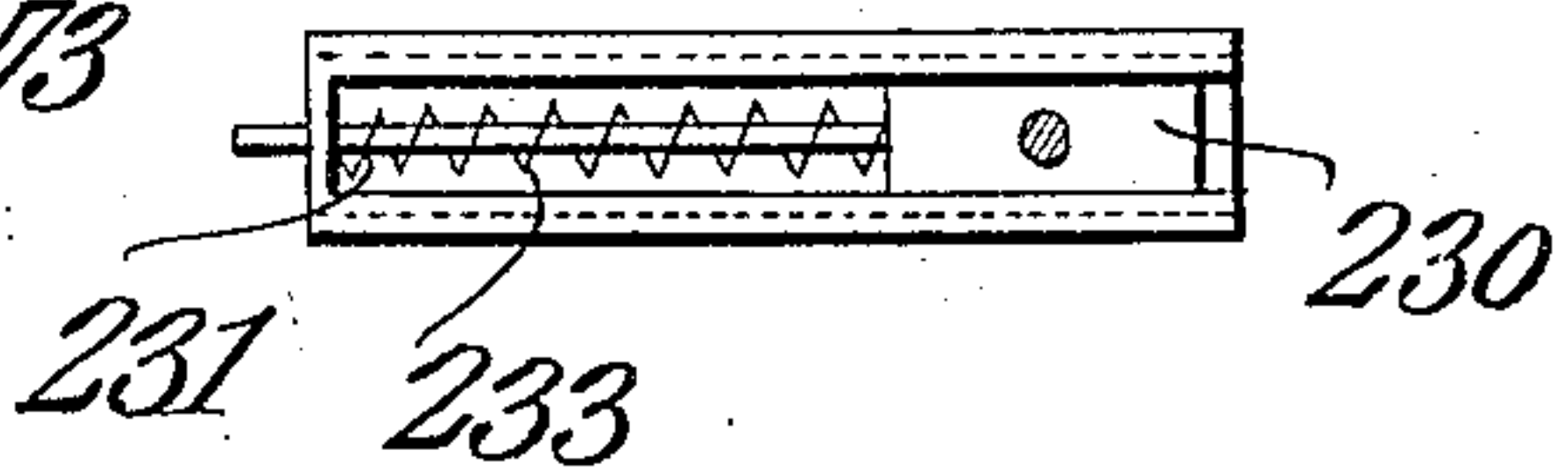


Fig. 7.

Fig. 9.



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# UNITED STATES PATENT OFFICE.

LENNA RYLAND WINSLOW, OF CHICAGO, ILLINOIS.

## INDEPENDENT-VOTING MECHANISM FOR VOTING-MACHINES.

No. 920,102.

Specification of Letters Patent.

Patented April 27, 1909.

Original application filed September 22, 1898, Serial No. 691,621. Divided and this application filed July 15, 1908. Serial No. 443,690.

*To all whom it may concern:*

Be it known that I, LENNA R. WINSLOW, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Independent-Voting Mechanism for Voting-Machines, (Case C<sup>9</sup>), of which the following is a specification.

The invention relates to voting machines of the class disclosed in my copending application filed September 22, 1898, Serial No. 691,621, and of which the present application is a division, and the object of the present invention is to provide independent voting mechanism controlled by the general voting mechanism whereby a voter who is not satisfied with the nominees of either of the parties in the field may cast a vote for an independent candidate or any desired number of independent candidates for the several offices to be filled.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims, it being understood that various changes in the form, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

In the drawings—Figure 1 is a horizontal sectional view of a voting machine of the class hereinabove mentioned, showing an independent voting mechanism constructed in accordance with this invention. Fig. 2 is an elevation partly broken away, viewed from the rear of the independent voting mechanism. Fig. 3 is a detail plan view of the independent voting mechanism. Fig. 4 is a detail perspective viewed from the front of a portion of the independent voting mechanism to show the slide arrangement. Fig. 5 is a detail view in perspective of the carriage in which the upper end of the receiving roll of the independent voting mechanism is mounted. Fig. 6 is a transverse vertical section of the carriage and the feeding devices for the receiving roll. Fig. 7 is a detail view of one of the door operating arms of the independent voting mechanism. Fig. 8 is a detail view in perspective of the feed slide to which motion is communicated from the replacing rock shaft to the feeding devices of the receiving roll, together with the supporting devices for said slide, and the means

whereby the same may be adjusted to throw the slide into and out of operative relation with the feed lever. Fig. 9 is a detail view of one of the door operating arms of the independent voting mechanism. Fig. 10 is a detail view of the voting key.

Similar reference characters indicate corresponding parts in all the figures of the drawings.

The casing 1 of the voting mechanism is provided in its front wall with a plurality of transparent panels 2 in rear of which are arranged vertical partitions 3 connected by horizontal supporting rods 4 which support tally mechanisms or counters described in detail in my aforesaid application, and also in an application filed of even date herewith No. 443,688, said tally mechanism being actuated by voting elements 15 which cooperate with interlocking devices having blocks 26 arranged in a die 27. Cooperating with the voting elements to return them to and maintain them in their normal or non-voted positions is a replacing mechanism having a frame 36 carried by an arm 37 extending from a replacing shaft 39 which may be actuated by any suitable means.

The above described mechanism is designed for use in casting votes for nominated candidates, but in addition thereto it is desirable in some cases to provide means whereby a voter who is not satisfied with the nominated candidate for one or more offices may cast a vote for a non-nominated candidate, or one of his own selection, but at the same time it is necessary to guard, by suitable devices, against, first, voting independently for a candidate for an office for which a regular vote has been cast; second, voting the same names successively or for different offices. It is usually desirable, however, that a voter should be enabled to cast an independent vote without betraying the fact to the judges or officers of the election, either that he wishes to cast a vote for a candidate for any particular office, such candidate being other than those nominated, or that it is his desire to cast an independent vote for either of the several offices named in the various tickets. In order that these devices may be fulfilled, the mechanism which I have devised for independent or "scattering" voting is constructed as follows: At a suitable point in the casing, as, for instance, at the left hand end of a voter facing the mechanism, or at the



end opposite the tally mechanisms designed for voting upon amendments and other questions, is a compartment 216 having a fixed partition 217 located at an intermediate point, and extending rearwardly from a fixed platen or writing plate 218 which is arranged parallel with and contiguous to the front of the casing. In this compartment, respectively upon opposite sides of the plane of the partition 217, are paying or supply and receiving rolls 219 and 220, to which are connected the opposite ends of a sheet or strip 221 of paper or similar material constituting a recording medium, the direction of movement of the recording medium from the supply roll to the receiving roll being indicated by the arrow in Fig. 2, and the intermediate portion of said medium being arranged to traverse the writing plate 218, as clearly shown in Figs. 1 and 2. The front of the compartment 216 is closed by a front wall or face plate 222, which may be secured in place by means of pins 223, or their equivalents, engaging perforated lugs projecting forwardly from a fixed portion of the casing, as hereinafter explained. The locking means for the front or face plate 222 are covered and concealed, to prevent an occupant of the booth from gaining access thereto by a hinged guard door 224, which may be locked in place by any suitable means, such as a bolt 225, mounted to slide upon the inner surface of a contiguous fixed portion of the wall of the casing, and adapted to engage eyes or keepers 226.

The supply and receiving rolls are axially parallel, and the recording medium carried thereby is of a width sufficient to be exposed simultaneously through a plurality of inspection or access openings 227 formed in the face plate 222, each of said openings being fitted with a movable door, flap, or closure 228, preferably hinged at its upper edge, and having a laterally extending pin 229 to which motion may be communicated to open or close the door or flap. The spindle of the supply roll is mounted in fixed bearings in the casing or frame of the apparatus, but the spindle of the receiving roll is mounted in movable bearings, the bearing for the lower end of said spindle being formed in a bearing block 230 fitted in a flanged guide 231 which is arranged in a horizontal position extending from and in a direction perpendicular to the plane of the partition 217. Extending longitudinally from the bearing block is a stem 232 upon which is coiled a spring 233, projecting through a suitable opening in the end of the guide 231, the function of said spring being to yieldingly maintain the bearing block in such a position as to hold the side of the receiving roll in contact with the contiguous side surface of the partition 217. Obviously, as the recording medium is reeled upon the roll 220, and the thickness of said

recording medium increases, the roll will be pushed outwardly or from the plane of the partition in opposition to the tension of the spring 233, but a firm pressure of the recording medium against the surface of the partition will be maintained at all times, and the rotary movement of the roll in order to coil the recording medium thereon will be accomplished in opposition to the resistance due to the friction caused by said contact. The upper end of the receiving roll spindle is mounted in a slide consisting of a carriage 234, the construction of the latter involving essentially an open frame 235 and a plate or table 236 hinged, or otherwise mounted to fold upon, the frame, a locking device consisting of a pivotal latch 237, or the equivalent thereof, being mounted upon the plate or table to engage a catch 238, whereby said plate or table may be secured in its normal position, but may be readily released and displaced to facilitate the removal of the receiving roll. Said plate is provided at a suitable point with a bearing 239 in which is mounted the hub 240 of a pinion 241, the latter being arranged preferably above the plane of the plate. Said hub of the pinion is provided with a cross-sectionally angular socket 242 in which is fitted the squared upper extremity of the receiving roll spindle, and it is obvious that by displacing the plate 236 the upper end of said roll spindle may be dismounted, and that the roll may then be withdrawn through the open frame 235 of the carriage to facilitate the counting of votes which may have been recorded thereon. Also mounted in the plate 236 is the spindle 243 of a driving gear 244 which meshes with said pinion 241, and is adapted to communicate rotary motion thereto, and hence to the receiving roll. The carriage frame 235 is inwardly turned at its side edges to form guide flanges 246 which take into guides 247 fixed to the frame of the machine, and the carriage is yieldingly held with the surface of the roll, or the recording medium thereon, in contact with the surface of the partition 217 by means of a spring 248 coiled upon a stem 249, the operation of the spring 248 being supplemental to that of the spring 233, hereinbefore described, for actuating the bearing block 230.

Upon the spindle of the driving gear 244 is fixed a ratchet wheel 250, and in operative relation therewith, and mounted upon said spindle 243, is a feeding lever 251 carrying a spring pressed pawl or dog 252 to engage the teeth of said ratchet wheel during the movement of the feeding lever in the direction indicated by the arrow in Fig. 3, the movement of said feeding lever, obviously, being in a path concentric with the ratchet wheel.

The essential features of the independent voting mechanism, and particularly those portions of said mechanism which are employed for communicating motion to the



doors or flaps 228 and to the supply and receiving rolls, are mounted in a plate frame having a rear wall 253 and side walls 254 and 255 provided with openings to receive the rear guide rods 4, the front guide rods not intersecting the chamber 216, and a front flange 256 which is flush with the face plate 222, and in this face flange 256, and respectively contiguous to the access openings 227, are formed vertical slots 257 through which project the front ends of cam operating arms 258, pivotally mounted at their rear ends upon the rear wall 253 of the plate frame, and extending forwardly parallel with voting keys which are substantially of the construction hereinbefore described, and consists of slides 15<sup>c</sup> having forwardly extending stems 16<sup>c</sup> terminating in heads or buttons, and also having notches or shoulders constituting ratchet teeth 32, 32<sup>a</sup> and 33 for successive engagement by locking pawls 31 to lock the slides against withdrawal after they have been advanced sufficiently to engage the pawl with the first tooth. Said independent voting keys also carry cam blocks 29<sup>c</sup> which are identical in construction and operation with those hereinbefore described in connection with the other voting keys. The cam operating arms 258 are provided near their rear or pivotal ends with cam-faced offsets 259, of which the upper and lower faces are depressed rearwardly and are preferably parallel, and the voting slides 15<sup>c</sup> are provided with upper and lower operating pins 260 and 261 which are arranged respectively in operative relation with the upper and lower edges of the cam arms. As a voting key is repressed or moved rearwardly the adjacent ends of the locking blocks 26 and 26<sup>a</sup>, which are of the construction fully described in the aforesaid applications, are first spread to exclude or lock out other voting keys in the same horizontal series, it being understood that the independent voting keys are arranged in horizontal series corresponding with those of the other voting keys of the apparatus and being coöperatively related with said other voting keys, whereby when a general voting key is operated, all of the other general voting keys and the independent voting key in the same horizontal series are locked, and in the same way when an independent voting key is operated, all of the general voting keys in the same horizontal series are locked. As the movement of the key continues the lower pin 261, by coming in contact with the depressed cam-faced lower edge of the arm 258, raises the front end of said arm. The front end of the operating arm is slotted or bifurcated, as shown at 262, to engage the lateral pin 229 of the adjacent door, flap or shutter 228, and it is obvious that the elevation of this bifurcated front end of the arm 258 will open the shutter, and thus expose a portion of the surface

of the recording medium 221, which is equal in area with the opening 227, whereupon the voter may write the name of a selected non-nominated candidate upon the recording medium. In other words, if none of the candidates placed in the field by the several political parties is satisfactory to a voter, he may, instead of operating one of the general voting keys, repress the independent voting key of the same horizontal series, and thereby raise the flap or shutter 228, which will enable him to write the name of the selected candidate upon the recording medium. The voter cannot, however, close the flap or shutter, for the reason that it is locked in an open position by the voting key, and the latter is held by the locking devices provided for that purpose, and described in connection with the other voting keys of the apparatus. When, however, the rock-shaft 39 is operated to actuate the releasing and replacing frames, the voting slides 15 in common with the others of the apparatus are returned to their normal or advanced positions, whereupon the upper pins 260 of the slides 15<sup>c</sup>, by operating in connection with the upper sides of the cams 259, positively return the arms 258 with the flaps or shutters to their normal positions. At the inner ends of the slots in the front ends of the arms 258, and at the upper sides of said slots, are formed small offsets or seats 263 which engage with the pins 229 when the operating arms 258 are depressed, whereby said flaps or shutters are positively locked against opening movement, except by the releasing operation of the voting slides.

I am aware of the existence of voting machines wherein the voter, by operating a key, is given access to the surface of a recording medium, consisting, for instance, of a roll of paper, and, by operating other keys, may gain access to other recording mediums, so that he may write any desired number of names for different candidates, one of these devices consisting of a recording medium, and a key being placed at the end of each series of general voting devices; but when independent recording mediums are employed for the different individual or independent voting devices, there is no way of preventing a voter from writing the same name on two or more recording mediums, for instance, in class voting, for the reason that each device operates independently of all of the others in regard to the movement of the paper rolls. In order to prevent this I use a single continuous recording medium, common to all of the access openings; and, furthermore, I use such a construction and arrangement of feeding devices for the recording medium that the latter is not affected by the movement of the voting slides. On the other hand, the advance movement of the rolls, to move the recording medium sufficiently to expose an



unmarked surface, is accomplished by the same means which are employed for returning the other portions of the apparatus to a condition for operation by a succeeding voter or occupant of the booth. Thus, I employ a feed-slide 264 mounted for movement in a horizontal guide 265, and connected by a link 266 with an arm 267 on the rock shaft 39, said slide being provided with operating and returning pins 268 and 269 located upon opposite sides of the feed-lever 251. This disposition of parts secures the operation of the feeding mechanism only when the rock shaft 39 is turned to replace the voting slides, it being obvious that the operating pin 268 is arranged in rear of the lever 251, and hence is adapted, during the forward movement of the slide 264, to turn said lever in the direction indicated by the arrow in Fig. 3, and hence impart rotary movement to the gearing and to the receiving roll. It is also desirable, however, in order to economize in the use of the recording medium, and feed the same only after one or more names have been written thereon, to provide such feeding devices as to be thrown into operative position only after the actuation of one of the voting slides 15°. Therefore, the guide 265 is mounted for movement toward and from the plane of the feeding lever 251, and the operating pin 268 is made of such a length as to be insufficient to reach the feed lever when the guide is in its normal position, thus rendering it necessary to move the guide 265 toward the plane of the feed lever, in order that said advancing pin may be arranged in operative relation with the feeding lever, the return pin 269, however, being of such a length as to intersect the path of the feed-lever in all positions of the guide, whereby the feed-lever is returned to its normal position during the backward sliding movement of the slide 264, in any position of the guide.

In order to accomplish the above operation, the guide 265 is supported by swinging arms 270 which, connected by a cross rod 271, constitute a swinging bracket pivotally mounted upon the side wall 255 of the plate frame hereinbefore described. Connected by an arm 272 with said cross rod 271 is a plunger 273 which is mounted to slide vertically upon said side wall 255 of the plate frame, and is supported by a series of swinging arms 274, pivotally mounted upon the flange 256 of said frame, and provided with cam-faced offsets 275. The voting slides 15° are provided at the opposite sides of the pins 260, 261 with a trip pin 276, arranged in operative relation with the offset 275 of an arm 274, whereby when a slide is repressed to open a flap or shutter 228, said pin 276 coacts with the cam 275, raises said arm 274, and hence the plunger 273, and thereby imparts upward swinging movement to the bracket arms 270 and raises the guide 265

to depress the short operating pin 268 in the path of the feed-lever. Thus, when an independent voting slide is operated, it not only exposes a suitable portion of the surface of the recording medium to enable a voter to write the name of a candidate thereon, but throws one element of the feeding mechanism for said recording medium into operative relation with the other element, and the parts are locked in this operative relation by a dog 277 which engages a notch or shoulder 278 in the plunger 273. This dog is provided with a trip arm or extension 279 which extends rearwardly beyond the rear wall 253 of the plate frame into the path of the replacing frame 26. Hence, when the rock shaft 39 is turned to operate the replacing frame and return the parts of the mechanism to their normal positions, the slide 264 is advanced, thus bringing the pin 268 into contact with the feed lever 251 and advancing the latter through a distance sufficient to conceal the inscribed portion of the recording medium and bring an un-inscribed portion of the surface of the recording medium opposite the recess openings, but as the motion of the replacing frame continues it comes in contact with the trip arm 279, and thereby disengages the dog 277 from the plunger 273, and allows the latter, with the guide 265, to drop to the normal position, with the operating pin 268 below the plane of the feed-lever 251. Upon the return movement of the rock shaft 39, to withdraw the replacing frame from contact with the extremities of the voting keys, the return pin 269 of the slide 264 comes in contact with the feed lever 251 and returns it to the normal position indicated in Fig. 3. Thus, the advance movement of the recording medium is accomplished only after the portion which has been exposed, or has been opposite the access openings 227, has been used, thus economizing in the use of the recording medium. But a still more important advantage in this construction than that of economy is gained by the fact that if a voter casts votes for more than one independent candidate, all of the names written by him on the recording medium, which is common to all of the access openings 227, are arranged in a vertical column. No intermediate feeding of the recording medium is possible. Therefore, when the recording medium is removed from the machine in making up the totals of the election, all of the independent votes cast by the several voters using the independent mechanism, are arranged in vertical columns, and hence a fraud perpetrated by any voter, in the way of writing the same name in several openings, is obvious at a glance, and those votes may be stricken out. In other words, the mechanism as described constitutes a positive check upon voting the same name more than once, either for the same or



different offices. The arm 272 which forms the connection between the plunger 273 and the bracket which supports the guide 265, is detachably connected with said bracket, in order to enable this portion of the mechanism to be disconnected when desired, such detachable connection, as illustrated in the drawings, consisting of a seat 280 formed in the end of the arm 272 to receive the cross head 271, and a spring tongue or latch 281 attached to said arm and provided with an offset to close the seat. As a further means of economizing in the use of the recording medium, it is desirable to secure such a relation between the members or elements of the feeding mechanism for the receiving roll, as to advance the recording medium, at each movement, through a distance just sufficient to conceal the used portion and expose a portion of the surface which is free from markings, or, in other words, to advance the recording medium through a distance which is equal to or but slightly exceeding the length of the access openings 227.

A positive feeding mechanism, or one which turns the receiving roll through a given angular distance for each movement of the feed-lever would cause a gradual increase in the extent of movement of the recording medium, for the simple reason that as the recording medium accumulates upon the receiving roll, the latter will take up a greater amount at each revolution, or during angular movements of equal extent. Therefore, it is necessary to employ some form of variable feed. That form of variable feed mechanism which I have found to be sufficient in this connection, is constructed as follows: The ratio between the diameters of the operating gear 244 and pinion 241 is such that for each advance movement of the feed lever, the pinion shall be turned through one complete revolution, thus turning the receiving roll through one complete revolution, but as the recording medium is reeled upon the receiving roll, thus increasing the diameter of the surface upon which the recording medium is reeled, it is necessary to reduce the angular movement of the operating gear for each advance movement of the feed-lever, and this I accomplish by reducing the angular movement of the feed lever as the operation of the mechanism proceeds. In this connection I utilize the fact that as the recording medium is reeled upon the receiving roll the latter is pushed farther from the plane of the partition 217, thus carrying the axis of the receiving roll farther from the vertical plane of movement of the feed lever operating slide 264. The carriage 234 in which the upper end of the receiving roll spindle is mounted, also carries the feed lever, feeding ratchet, and connecting gears, and hence as the recording medium is reeled upon the receiving roll

said carriage is moved farther from the vertical plane of the slide 264, and, therefore, the pins on the slide engage with the feed-lever 251 at more remote points from the fulcrum of said lever at each successive movement of the device. If the difference in distances from the fulcrum of the lever and the points of engagement of said pins therewith is insufficient to accomplish the desired reduction in the angular adjustment of the operating gear 244, said feed-lever may be tapered toward its extremity, as shown in the drawings, see Fig. 3, and the extent of taper may be varied to secure an accurate relation between the parts, whereby as the receiving roll recedes from the plane of the partition 217 by reason of the accumulation of the recording medium thereon, the advance of the recording medium by the feeding mechanism will be proportionate, and said recording medium, at each advance movement, will traverse a distance equal to or but slightly exceeding the length of one of the access openings 227. Thus, it will be seen that there is a compensating relation between the elements of the feeding mechanism, controlled by the reeling of the recording medium upon the receiving roll, to insure the proper forward movement of the recording medium, limited to that which is necessary to conceal the record of a previous voter from the succeeding voter, without wasting the material of the recording medium. This relation between the parts, in addition to that hereinbefore described whereby no advance movement of the recording medium is produced except after one of the independent voting keys has been operated to expose a portion of the recording medium, enables me to economize in the use of the recording medium, and at the same time provide a check against "repeating", or voting the same name for more than one office.

As hereinbefore described, I preferably employ the plate frame shown in detail in Fig. 4 to support the voting keys, shutter operating and trip arms, and cooperating parts, whereby the same may be placed in or removed from the casing of the machine with facility, but in addition to the above, said frame forms a convenient means whereby the face plate 222 is secured in place, said face plate being removable, after displacing the guard door 224, to give access to the independent voting mechanism for removing or replacing the recording medium.

In order that the full advantage of using the described means for detecting the casting of a plurality of independent votes for the same name may be fully understood, it should be supposed, for instance, that a series of ten voting keys in each political column is established for presidential electors. Of course, ten keys are also included



in the independent column, for the reason that a voter is entitled to cast his ten votes for non-nominated candidates, if he so elects. Now, if the voter, instead of voting for ten  
 5 different non-nominated candidates, assuming that he casts all of his votes for non-nominated candidates, should write one name in two or more places, or, in other words casts two or more votes by means of  
 10 the access openings 227 for the same elector, it would be detected by the fact that all of the names written by any one voter would be disposed in the same vertical column. Hence, duplicates may be thrown out. With  
 15 the use of independent recording mediums for the different access openings, or controlled by different voting slides, this duplication of names could not be detected, or, if possible, only by a careful comparison of the  
 20 several recording mediums, which is rendered wholly unnecessary with an apparatus constructed in accordance with my invention.

It should be understood in connection with the independent voting devices, that the  
 25 operation of an arm 274, the plunger 273, and the bracket arms 270, is accomplished by the movement of the first slide repressed by each voter; but that the trip pin 276 does not reach that portion of the offset 275 which  
 30 is necessary to move the arm 274 until the notch 32<sup>a</sup> is engaged by a pawl 31 which is employed for securing said slide in its different adjusted positions, or for preventing the withdrawal of a slide after the first step  
 35 in its repression has been accomplished. After the engagement of the notch 32<sup>a</sup> by means of said pawl, the further movement of the voting slide will elevate the plunger, and thus allow the voter to proceed as herein-  
 40 before explained. The shutters do not reach an open position until the slide locking pawl 31 has engaged the notch 33. After the slide has been repressed sufficiently to cause the engagement of the notch 32<sup>a</sup> by the  
 45 pawl 31, the elevation of the plunger begins, and simultaneously the opening movement of the shutter 228 is instituted, said shutter rising as the pawl 31 slips from the notch 32<sup>a</sup> to the notch 33. This requires the voter to  
 50 completely operate all of the locking devices, limiting devices, etc., prior to his gaining access to the record medium.

Having described the invention, what I claim is:—

55 1. In a voting machine, the combination with general voting devices, of independent voting devices having a movable recording medium, means for controlling access to the  
 60 recording medium, feeding devices for the recording medium having a lever and a slide adapted for engagement with said lever and normally arranged in inoperative relation therewith, a replacer for the movable  
 65 parts of the general voting devices, operating connections between said replacer and

the slide of said feeding devices, and connections between said slide and the means for controlling access to the recording medium.

2. In a voting machine, the combination 70 with general voting devices, of independent voting devices having a movable recording medium, means for controlling access to the recording medium, feeding devices for the recording medium having a lever, a slide 75 provided with spaced pins for interlocking engagement with the lever and a movable guide for carrying said slide into and out of engagement with the lever, a replacer for the movable parts of the general voting de- 80 vices, operating connections between said replacer and the slide of the feeding devices, and connections between said guide and the means for controlling access to the recording medium. 85

3. In a voting machine, the combination with general voting devices, of independent voting devices having a recording medium, means for controlling access to the recording medium, feeding devices for the recording 90 medium having a lever, a slide for engagement with the lever, and a guide for the slide, a replacer for the movable parts of the general voting devices, a movable supporting bracket for said guide, and connections 95 between the guide-supporting bracket and the means for controlling access to the recording medium.

4. In a voting machine, the combination with general voting devices, and replacing 100 devices for returning the movable parts of the general voting devices to their normal positions, of independent voting devices having a recording-medium, means, including other movable parts, for controlling ac- 105 cess to the recording-medium, feeding devices for the recording medium having a feed-lever, a slide operatively connected with said replacing devices, and provided with means for engagement with said feed-lever, 110 and a guide for the slide, a movable supporting bracket, and means connected with the plunger, and actuated by a movable part of the independent voting devices, for moving the slide-supporting bracket to ar- 115 range the slide in operative relation with the feed lever.

5. In a voting machine, the combination with general voting devices including movable parts, and replacing devices for return- 120 ing said movable parts to their normal positions, of independent voting devices having a recording medium, means, including other movable parts, for controlling access to the recording medium, feeding devices for the 125 recording medium having a feed lever, a slide operatively connected with said replacing devices, and provided with means for engagement with said feed-lever, and a guide for the slide, a movable supporting 130



bracket for said guide, a plunger operatively connected with the movable parts of the independent voting devices, and a detachable connection between said plunger and the guide-supporting bracket, the movement of said plunger being adapted to advance the slide into operative relation with said feed lever.

6. In a voting machine, the combination with general voting devices including movable parts, and replacing devices for returning said movable parts to their normal positions, of independent voting devices having a recording-medium, means, including other movable parts, for controlling access to the recording medium, feeding devices for the recording medium having a feed-lever, a slide operatively connected with said replacing devices, and provided with means for engagement with said feed-lever, and a guide for the slide, a movable supporting-bracket for said guide, a plunger connected with said supporting bracket, and cam-faced trip arms connected with said plunger and arranged in operative relation with the movable parts of the independent voting devices.

7. In a voting machine, the combination with general voting devices, including movable parts, and replacing devices for returning said movable parts to their normal positions, of independent voting devices having a recording-medium, means, including other movable parts, for controlling access to the recording-medium, feeding devices for the recording-medium including a feed-lever, a guide movable toward and from the plane of movement of the feed-lever, and a slide operatively connected with said replacing devices and provided with operating and returning pins of different lengths, the former being normally out of operative relation with the feed-lever, and the latter being permanently in operative relation therewith, and means actuated by said movable parts of the independent voting devices for adjusting the guide to arrange the operating-pin of the slide in operative relation with the feed-lever.

8. In a voting machine, the combination with general voting devices including movable parts, and replacing devices for returning said movable parts to their normal positions, of independent voting devices having a movable recording medium, means including slides for controlling access to the recording-medium, feeding devices for the recording-medium, including a lever, a guide movable toward and from the plane of the feed-lever, and a slide operatively connected with said replacing devices, and provided with pins for engagement with the feed-lever, said slide being normally arranged out of operative relation with the lever, a plunger connected with the guide for imparting vertical movement thereto, trip-arms oper-

atively connected with said plunger and having cam-faced offsets, and trip-pins carried by said slide for coöperation with the cam-faced offsets to communicate motion to the plunger.

9. In a voting machine, the combination with general voting devices including movable parts, and replacing devices for returning said movable parts to their normal positions, of independent voting devices having a movable recording-medium, means including slides for controlling access to the recording-medium, feeding devices for the recording-medium, including a lever, a guide movable toward and from the plane of the feed-lever, and a slide operatively connected with said replacing devices and provided with pins for engagement with the feed-lever, said slide being normally arranged out of operative relation with the lever, a plunger for communicating movement to the guide toward and from the feed-lever, a locking device for holding said plunger and guide with the slide in operative relation with said feed-lever, and including a trip arranged in the path of movement of said replacing devices, and means for communicating motion from the first-named slides to the plunger for disposing the second-named slide in operative relation with the feed-lever.

10. In a voting machine, the combination with general voting devices including movable parts, and replacing devices for returning said movable parts to their normal positions, of independent voting devices having a movable recording-medium, means including slides for controlling access to the recording medium, feeding devices for the recording-medium, including a lever, a guide movable toward and from the plane of the feed-lever, and a slide operatively connected with said replacing devices and provided with pins for engagement with the feed-lever, said slide being normally arranged out of operative relation with the lever, a vertically movable plunger for communicating movement to the guide, a locking device for maintaining the plunger in an elevated position and provided with a trip arranged in the path of said replacing devices, said plunger being adapted to return to its normal position by gravity, and means for communicating motion from the first-named slides to the plunger for disposing the second-named slide in operative relation with the feed-lever.

11. In a voting machine, the combination with general voting devices including movable parts, of independent voting devices having movable traps or shutters, other movable parts arranged respectively in series with the movable parts of the general voting devices, common interlocking devices for the movable parts of said general and independent voting devices, and cam-faced operating arms connected with said traps or



shutters and arranged in operative relation with projections on the movable parts of the independent voting devices.

12. In a voting machine, the combination  
5 with general voting devices including movable parts, of independent voting devices having hinged traps or shutters provided with operating pins, slides arranged respectively in series with the movable parts of the  
10 general voting devices, common interlocking devices for the movable parts and slides of said general and independent voting devices, terminally bifurcated swinging-arms engaged with the operating pins of the traps or  
15 shutters provided with cam-faced offsets, and projections on said slides for cooperation with the cam-faced offsets to operate the traps or shutters.

13. In a voting machine, the combination  
20 with general voting devices including movable parts, of independent voting devices having hinged traps or shutters provided with lateral operating pins, swinging arms provided at their free ends with slots engaged with said operating pins of the traps  
25 or shutters, and terminating at their inner ends in offsets for engagement with said pins when the traps or shutters are closed, said arms being provided with cam-faced offsets,  
30 slides provided with projections in engagement with said cam-faced offsets, and arranged in series, respectively, with the movable parts of the general voting devices, and common interlocking devices for the movable  
35 parts and slides of the general and independent voting devices.

14. In a voting machine, the combination with a recording-medium, of variable step-by-step feed mechanism for the same having  
40 operating and operated members, a voting slide actuated means for placing the operating and operated members in proper relative position for the transmission of movement from one to the other, and compensating devices  
45 for varying the amplitude of the successive movements of the operated member as the recording-medium is advanced.

15. In a voting machine, the combination with a recording medium, of variable feed  
50 mechanism for the same having operating and operated members, a voting slide actuated means for placing said members in proper relative position for the communication of motion from one to the other, means  
55 for communicating motion to the operating member, to communicate movement thereto through a path of uniform extent, and compensating devices for varying the relative positions of said operating and operated  
60 members to cause a gradually decreasing communication of movement from the operating member to the operated member.

16. In a voting machine, the combination with a recording-medium having a roll, of  
65 variable feed mechanism including an oscil-

lating lever having ratchet connection with the roll, and an operating element capable of reciprocatory movement to impart oscillatory movement to said lever, a voting slide  
70 actuated member for moving said operating element into lever engaging position, and means for varying the relative positions of the parts to vary the interval between the fulcrum of said lever and the point of engagement of the operating member with the  
75 lever.

17. In a voting machine, the combination with a recording-medium having a receiving roll, of variable feeding mechanism including  
80 a tapered lever having a ratchet connection with the receiving roll, a slide arranged in operative relation with said lever for communicating swinging movement thereto, a voting slide actuated means for moving the  
85 operating slide into lever engaging position, operating devices for the lever engaging slide, and means for varying the interval between the point of engagement of the slide with the lever and the fulcrum of said lever.

18. In a voting machine, the combination  
90 with a recording-medium having a receiving roll, of feeding mechanism for the receiving roll including a tapered lever having a ratchet connection with said roll, a slide adapted for engagement with the lever, a voting key  
95 actuated means for adjusting said slide to operative position, operating devices for communicating motion to the slide, and means for advancing the fulcrum of said  
100 lever in a direction from the plane of movement of the slide to cause the engagement of the slide with the lever at gradually increasing distance from the fulcrum thereof.

19. In a voting machine, the combination with a recording-medium having a receiving-  
105 roll, of feeding mechanism for the receiving-roll including a tapered lever having a ratchet connection with the receiving-roll, a slide for engagement with the lever, a voting key actuated means for adjusting said slide to  
110 operative position, operating devices for actuating the slide, and means for advancing the receiving-roll in a direction from the plane of movement of the slide to increase the distance between the fulcrum of said  
115 lever and the point of engagement of the slide with the lever.

20. In a voting machine, the combination with a recording-medium having a receiving-  
120 roll, of movable bearings for the spindle of the receiving-roll, yielding means for holding said bearings with the surface of the receiving-roll, or the recording-medium thereon, in contact with a fixed object, feeding mechanism including a tapered lever having a  
125 ratchet connection with the receiving-roll, a slide for engagement with the lever, a voting key actuated means for moving said slide into operative relation with the lever, and operating devices for the slide, the suc- 130



cessive rotary movements of the receiving roll being accompanied by the receding thereof from the plane of the slide to cause the engagement of said slide with the lever at gradually increasing distances from the fulcrum thereof.

21. In a voting machine, the combination with a recording-medium having a receiving-roll, of yieldingly actuated bearings for the spindle of the receiving-roll to maintain the surface of the latter in contact with a fixed object, an operating lever having a ratchet connection with the receiving-roll, said lever being reduced in width toward its extremity, a slide having projections for engagement with the lever, a voting key actuated means for moving said slide into operative position with relation to the lever, and operating devices for the slide.

22. In a voting machine, the combination with a receiving-medium and supply and receiving-rolls for carrying the same, of feeding mechanism for the receiving-roll having a lever, a ratchet connection between the lever and the spindle of the roll, and a slide provided with means for engagement with said lever, a voting key actuated means for moving said slide into operative relation with the lever, operating devices for said slide, a sliding carriage mounted upon guides for movement in a direction perpendicular to the plane of movement of the slide and having a movable plate carrying said lever and provided with a bearing for one end of the receiving-roll, to facilitate dismounting the latter, a bearing-block for the other end of the receiving-roll spindle, and yielding means for maintaining said carriage and bearing-block with the surface of the receiving-roll in contact with a fixed object.

23. In a voting machine, the combination with a casing, and general voting devices mounted therein, of a recording-medium, supply and receiving-rolls mounted in a compartment of the casing upon opposite sides

of the plane of an interposed partition, a writing-plate supported by said partition and traversed by the recording-medium, yieldingly actuated bearings for the spindle of the receiving-roll, whereby the surface of said roll is permanently held in contact with one side surface of said partition, a carriage movable with the spindle of the receiving-roll, operating and receiving gears mounted upon said carriage, the latter being attached to the spindle of the receiving-roll, a ratchet wheel fixed to the spindle of the operating-gear, a tapered feed-lever fulcrumed concentrically with said ratchet-wheel and having a tooth for engagement therewith, a slide mounted for reciprocatory movement and provided with pins for engagement with the feed-lever, a voting key actuated means for moving said slide into operative relation with the lever, and operating devices for said slide.

24. In a voting machine, the combination with a casing, and general voting devices arranged therein, of a recording-medium, supply and receiving-rolls carrying the recording-medium and arranged in a compartment of said casing, a removable face-plate closing the front side of said compartment and provided with access-openings whereby portions of the recording-medium between said supply and receiving-rolls are exposed, movable flaps or shutters for normally closing said openings, a voting key actuated means for opening said flaps or shutters, feeding mechanism for the receiving-roll, operating devices for the flaps or shutters, a hinged skeleton guard-door to close over said face-plate, and means for securing the guard-door in its normal position.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

LENNA RYLAND WINSLOW.

Witnesses:

WM. C. LEWIS,

EMILIE WINSLOW.