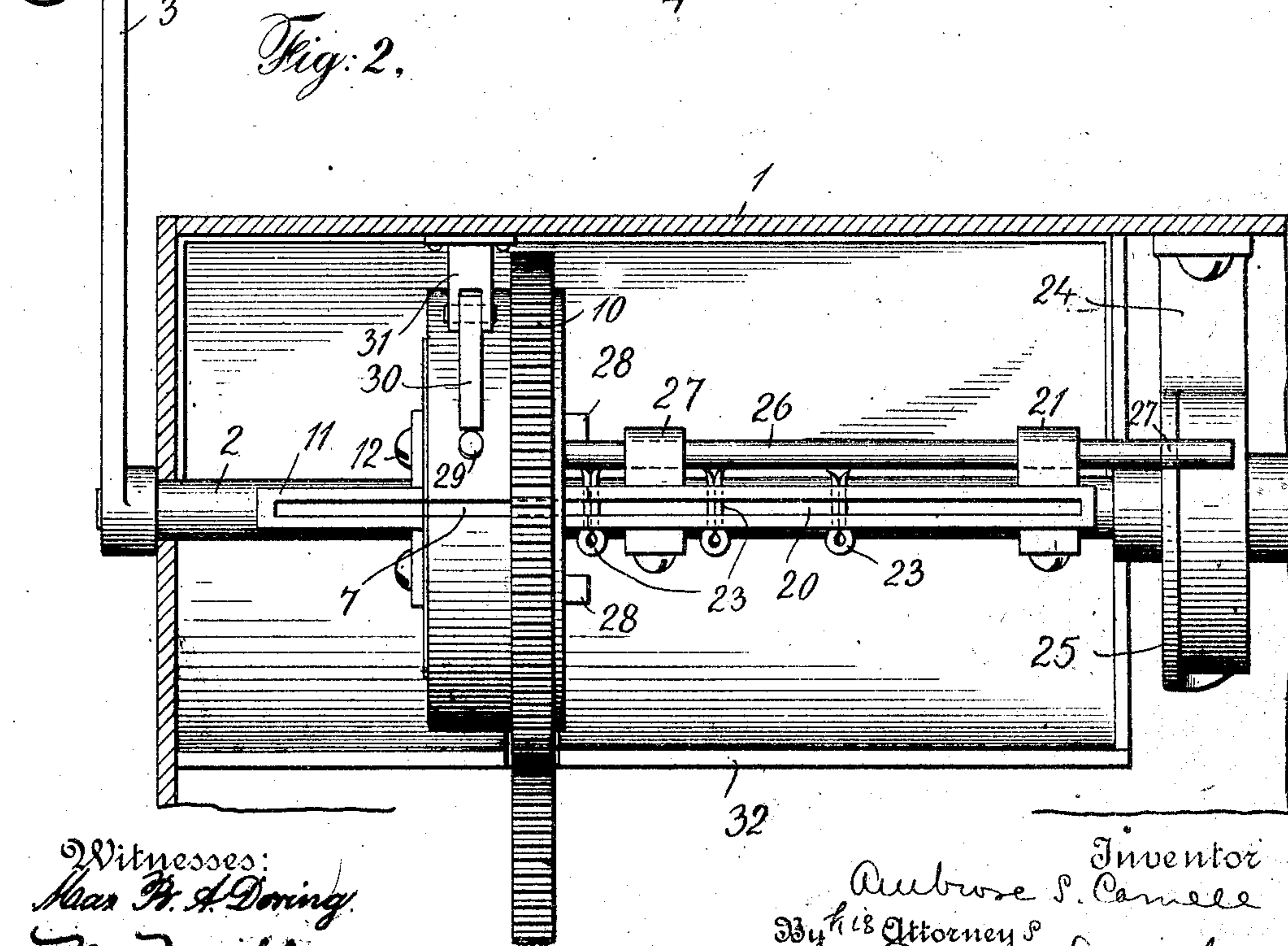
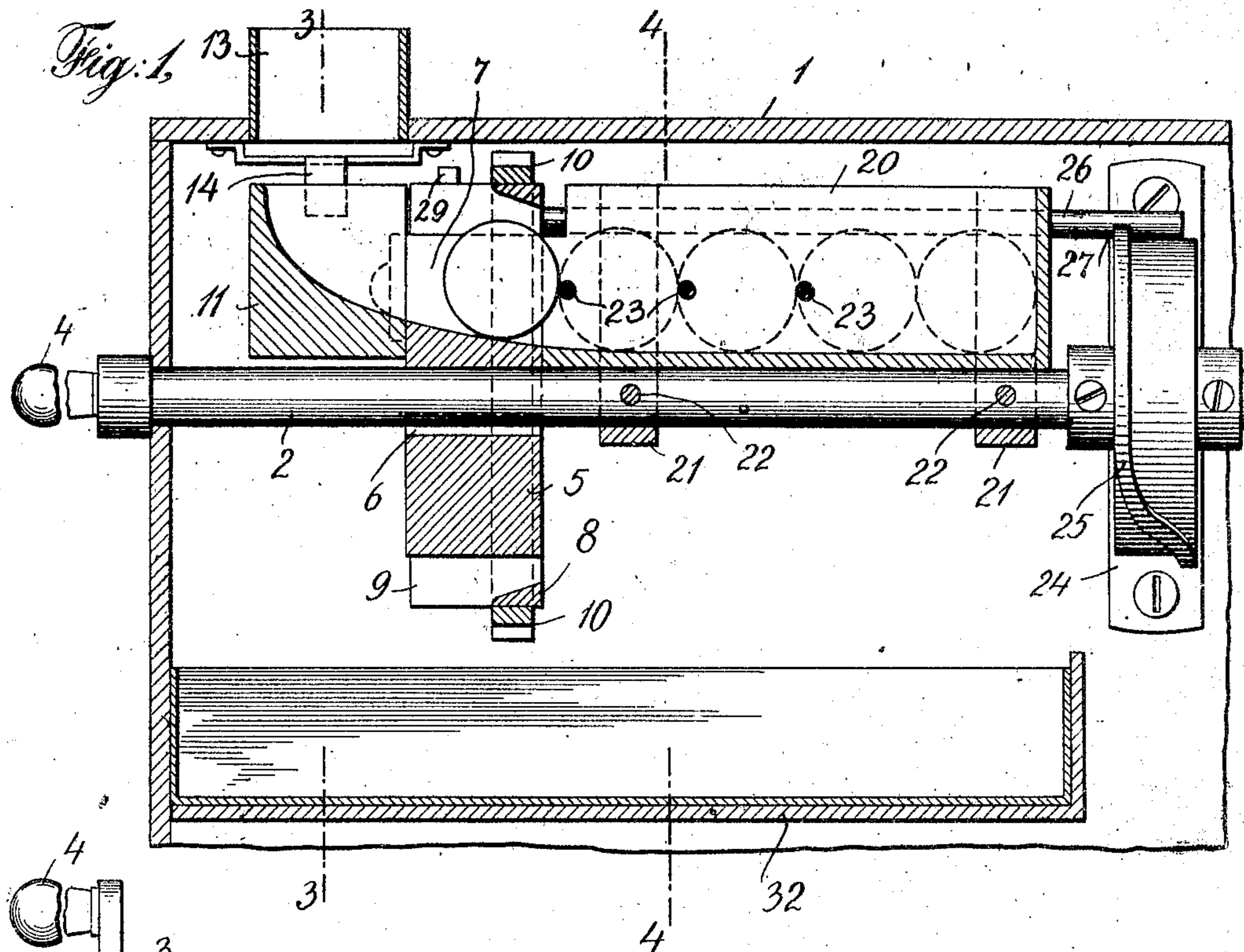


A. S. CARNELL.
COIN CONTROLLED APPARATUS.
APPLICATION FILED OCT. 23, 1909.

967,725.

Patented Aug. 16, 1910.

3 SHEETS—SHEET 1.



Witnesses:
Hans H. Doring
M. Mehl

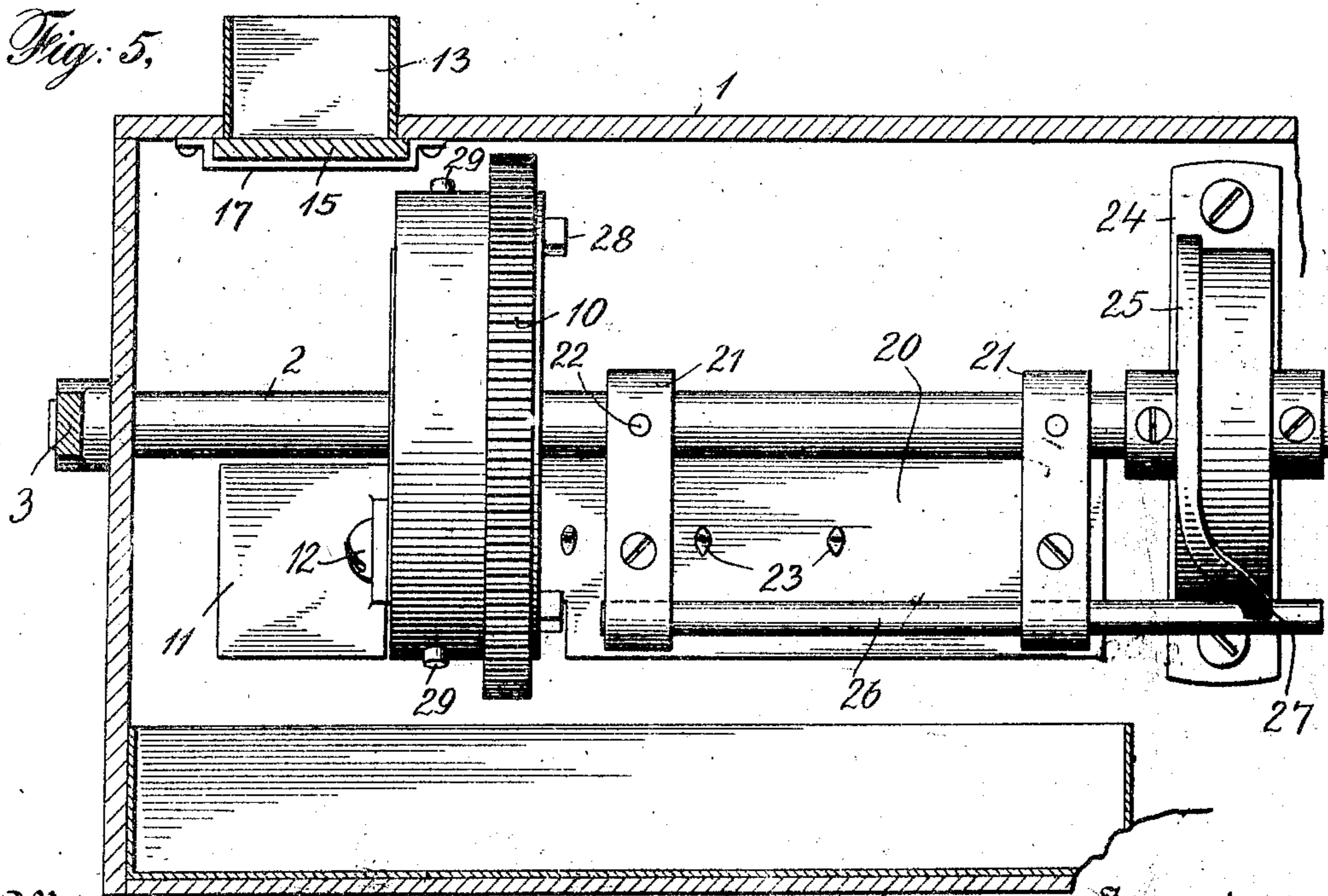
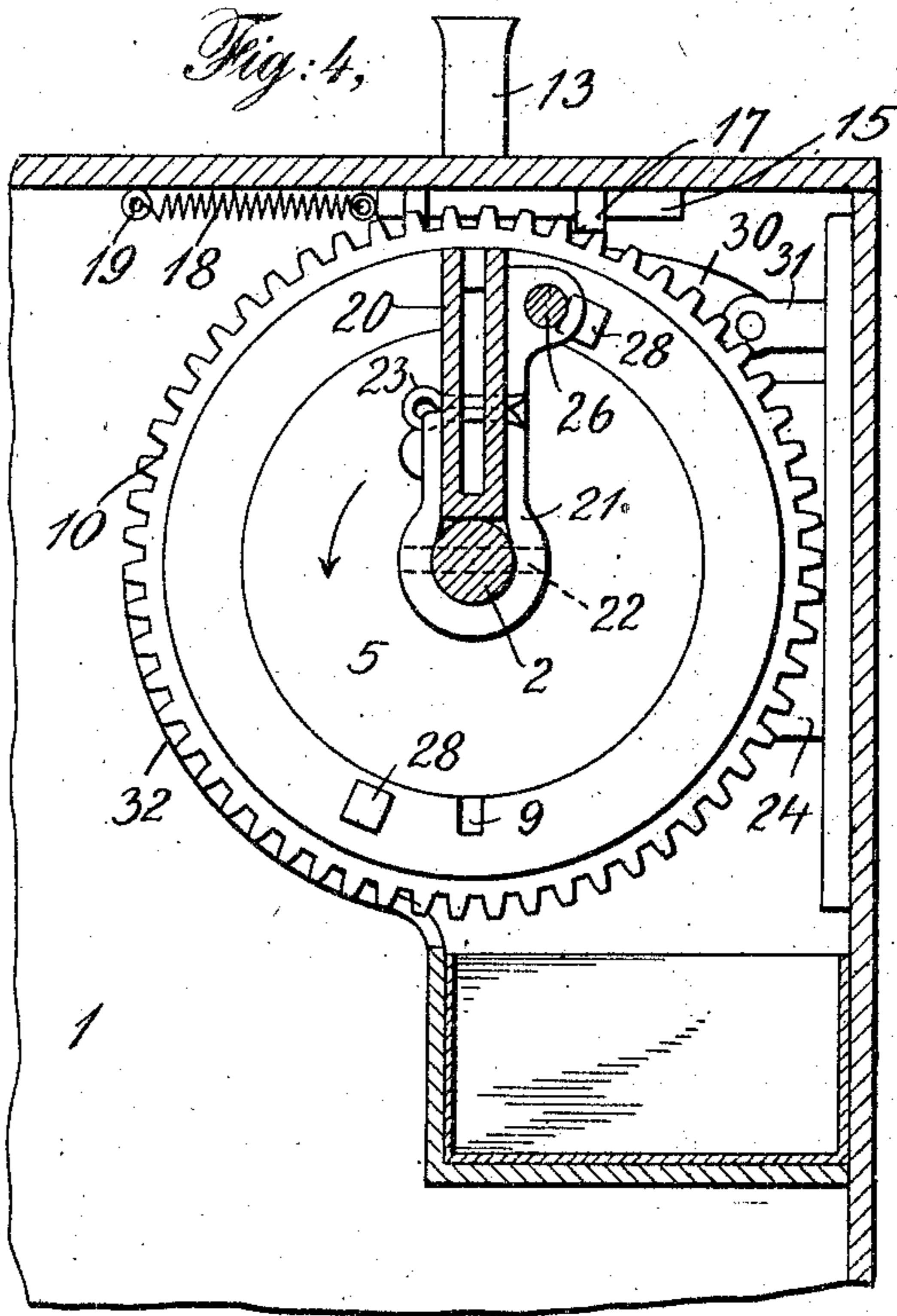
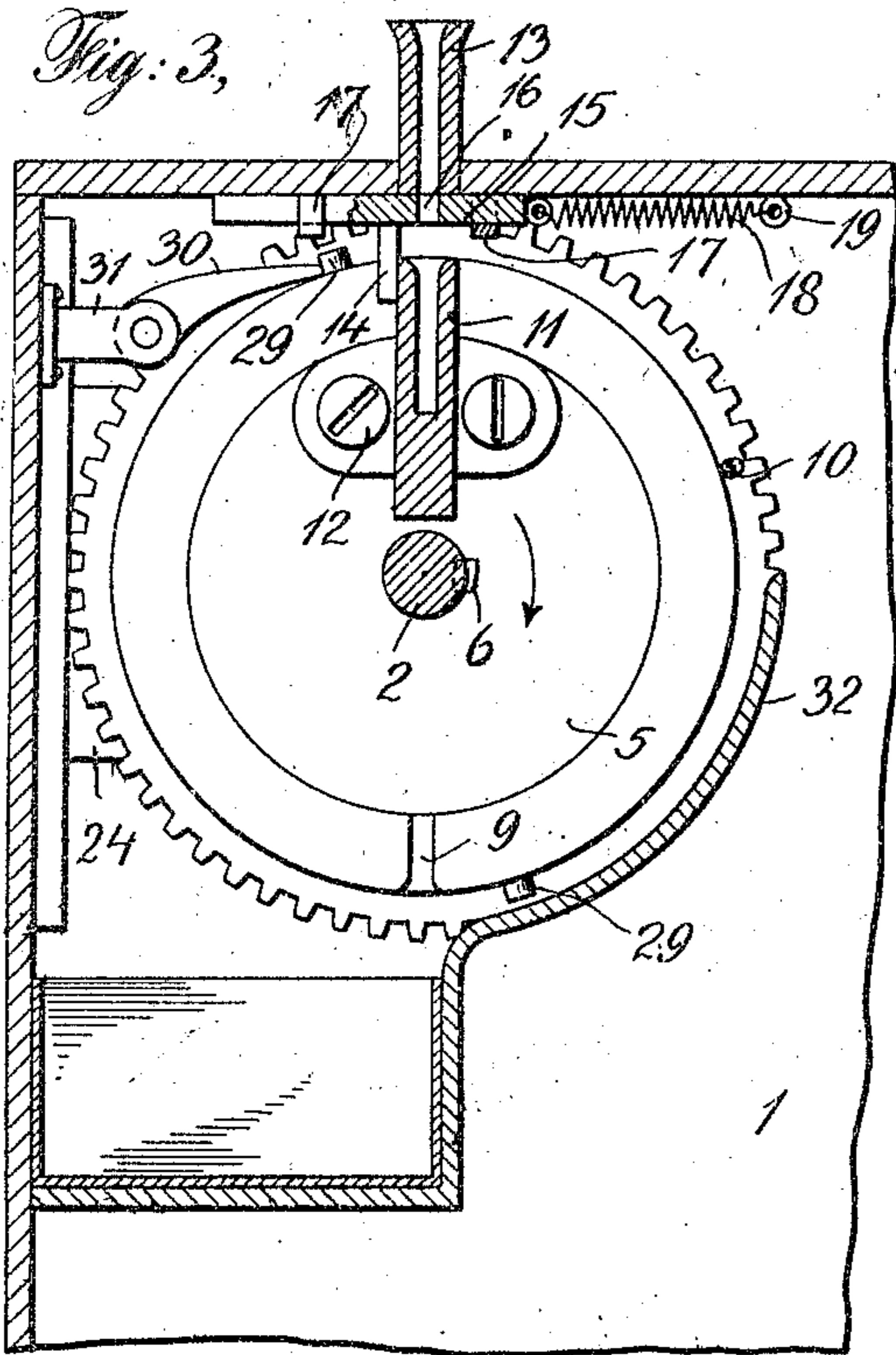
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By his Attorney
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3 SHEETS—SHEET 2.



Witnesses:
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3 SHEETS—SHEET 3.

Fig: 6,

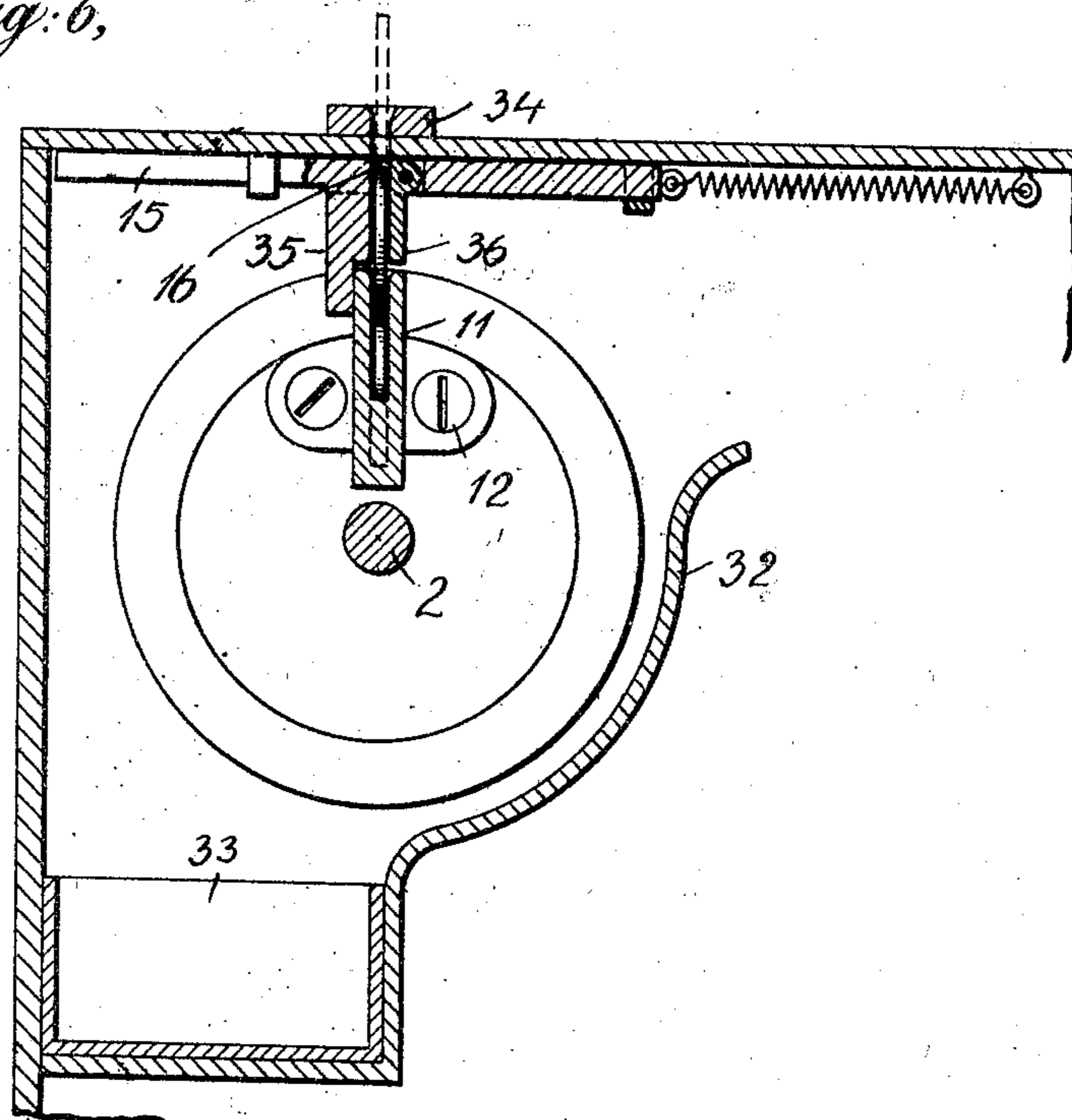
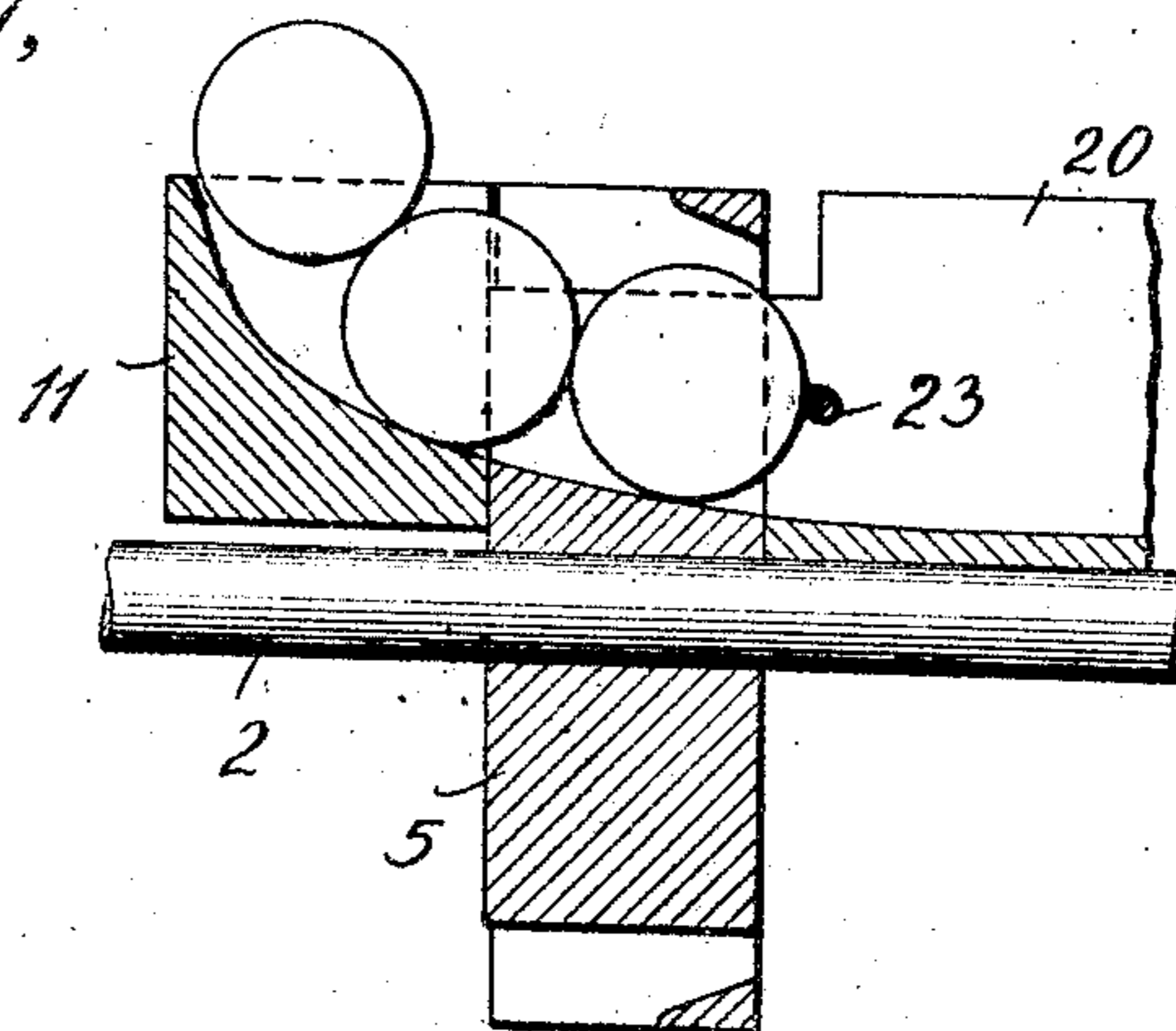


Fig: 7,



Witnesses:

Max P. Doring

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UNITED STATES PATENT OFFICE.

AMBROSE S. CARNELL, OF NEW YORK, N. Y.

COIN-CONTROLLED APPARATUS.

967,725.

Specification of Letters Patent.

Patented Aug. 16, 1910.

Application filed October 28, 1909. Serial No. 524,110.

To all whom it may concern:

Be it known that I, AMBROSE S. CARNELL, of New York, in the county of New York and in the State of New York, have invented a certain new and useful Improvement in Coin-Controlled Apparatus, and do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates particularly to a coin-controlled apparatus designed to be used in connection with machines for vending large articles, and especially publications, such as newspapers, periodicals, etc.

The object of my invention is to provide a simple mechanism of the character described which may be adjusted so that it may be operated by one or a number of coins of a given denomination.

A further object of my invention is to arrange the apparatus in such a manner as to prevent an excessive number of coins from interfering with the operation of the apparatus.

I have shown my invention in the accompanying drawings, in which—

Figure 1 is a vertical cross-section of the coin-controlled apparatus; Fig. 2 is a horizontal cross-section of the same; Figs. 3 and 4 are vertical transverse cross-sections of the same taken on lines 3—3 and 4—4 of Fig. 1; Fig. 5 is a vertical longitudinal cross-section showing the parts in the position in which the coins are discharged into the coin tray; Fig. 6 is a transverse vertical cross-section of the modification of a certain portion of the apparatus; and Fig. 7 is a diagrammatic detail of a portion of the apparatus showing the location of the coins therein.

In the drawings, 1 is a casing containing a shaft 2 adapted to be operated by means of a crank 3 having a handle 4. The shaft 2 has keyed thereto a slotted cylinder 5 by means of a key 6, the cylinder 5 being provided with a coin-receiving slot 7. Upon the exterior of the cylinder 5 there is loosely supported an outer cylinder 8 having diametrically-opposed slots 9 therein and carrying upon its periphery a gear-wheel 10. The gear-wheel 10 meshes with one of the gears of any desired type of vending machine. An inclined chute 11 is attached to one face of the cylinder 5 by means of screws 12. The inclined chute 11 is designed to receive the coins inserted into the machine through a coin-guide or slot 13

projecting through the top of the casing 1. When the parts are in the position in which they are adapted to receive coins through the guide 13, as shown in Fig. 1, the top of the inclined chute 11 is designed to contact with a projection 14 carried upon the under-surface of a slide 15 carrying a slot 16 adapted to register with the opening in the guide 13. The slide 15 is secured to the underside of the top of the casing 1 by means of slide brackets 17. When the top of the inclined chute 11 is pressed against the projection 14, the slot 16 is maintained in alinement with the opening in the guide 13, but at other times the slot 16 is moved out of alinement with the opening in the coin-guide 13 through the agency of a spring 18 attached at one end to the slide 15, and at the other end to an eyelet 19 attached to the inside of the casing 1.

When a coin is fed into the guide 16 while the parts are out of position, as shown in Fig. 1, the coin will pass through the inclined chute 11, through the cylinder 5 and into at least a portion of a coin chamber 20, which is attached to the shaft 2 by means of yokes 21 carrying pins 22 passing through said shaft. A plurality of transverse pins 23 are provided passing through the walls of the coin chamber 20. The pins 23 are removable so as to permit the machine to be operated by a varying number of coins.

The shaft 2 is supported at one end by a bearing bracket 24 supported from the side of the casing 1, which bracket carries upon its exterior a cam surface 25. A rod 26 having a notch 27 is designed to run over the cam surface 25, the rod 26 being supported in slide brackets 27 carried by one side of the coin chamber 20. The other end of the rod 26 is designed to engage with one of a pair of diametrically-opposed projections 28 carried by one face of the outer cylinder 8. The outer cylinder 8 is provided upon its exterior with a pair of diametrically-opposed pins 29, which cooperate with a pawl 30 pivotally supported upon a bracket 31 secured in the side of the casing 1.

A shield 32 is provided at one side of the rotating parts attached to the shaft 2, in order to guide the coins into a receiving tray 33 located beneath the shaft 2.

In the modification shown in Fig. 6, the parts are constructed exactly like the parts shown in the preceding figures, except that

provision is made to prevent the apparatus from being thrown out of operation by the insertion of greater than the required number of coins. In order to effect this result, a shorter coin-guide 34 is provided which discharges into the slot 16 of the slide 15, and in this modification the slot 16 is located between a wide projection 35 at one side of the slide and a hinged gate 36 at the other side thereof.

In the operation of the apparatus, assuming that the parts are in the position as shown in Fig. 1, and that all of the pins 23 are present in the coin-receiving chamber 20, a coin upon being inserted in the coin-guide 13 passes downwardly through the slot 16 in the slide 15 into the inclined chute 11, and finally into the slot 7 in the cylinder 5, where the coin extends slightly beyond the slot 7 into one of the slots 9 in the outer cylinder 8. In case one or more of the pins 23 have been removed, then the first coin will pass beyond the position indicated above until it contacts with the nearest remaining pin. A sufficient number of additional coins is then inserted to cause the last coin to occupy a position in the slot 7 and over-lapping the same into the slot 9 carried by the outer cylinder 8. In case all of the pins 23 have been removed, the machine will operate as a five coin machine. In case the pin 23, shown at the right of Fig. 1, is the only one left in the machine, the machine will be a three coin device. If the middle pin is left in, the machine will be set for operation by two coins, and if all of the pins are left in, a single coin will cause the machine to operate. If now the shaft 2 is operated by means of the crank 3 in the direction shown by the arrow in Figs. 3 and 4, the outer cylinder 8 will be caused to rotate in unison with the cylinder 5. The first effect of this rotation will be to cause the inclined chute 11 to release the spring-operated slide 15, so as to throw the slot 16 out of alinement with the slot in the coin-guide 13. A further rotation of the shaft 2 will bring the coins opposite the guard 32, which will prevent the coins from being discharged until the shaft has been rotated 180 degrees, so as to bring the coin chamber 20 immediately above the coin tray 33. When this position is reached, the coins will be discharged into the tray. In this position of the parts the rod 26 will have been withdrawn through the agency of the cam surface 25 from engagement with the projection 28. Further rotation in the same direction is prevented by the contact of the end of the rod 26 with the stationary bearing 24. It is, therefore, only possible to rotate the shaft 2 in the reverse direction. The parts are moved in this direction in order to re-set them for receiving additional

coins. As the shaft is rotated in the reverse direction, the end of the rod 26 passes completely over the end of the projection 28, and as this movement is continued and the coin chamber 20 approaches its vertical position, the rod 26 is again moved inwardly until it contacts with the other projection 28 and causes the other slot 9 of the outer cylinder 8 to come in perfect alinement with the slot 7 of the cylinder 5. Simultaneously the top of the inclined chute 11 contacts with the projection 14, so as to bring the slot 16 into alinement with the slot in the coin-guide 13. The parts are prevented from moving farther than the position indicated in Fig. 1 by the presence of the pawl 30, which coöperates with the stops 29 carried by the periphery of the outer cylinder 8. When the shaft has thus been rotated in a reverse direction for 180 degrees, the parts are again in position to receive coins.

The modification shown in Fig. 6 operates in a similar manner, except that should one more coin be inserted than necessary, the insertion of more than one coin in excess being impossible, the rotation of the parts would cause the one additional coin first to be released from the slide 15 by automatically raising the gate 36 into a horizontal position, and then by discharging the additional coin from the inclined chute 11, when contact is made with the edge of the coin guard 32. When this coin has thus been discharged from the coin-guide 11, it slides downwardly edgewise between the rotating parts and the coin-guard 32 into the coin tray 33.

While I have described my invention above in detail, I wish it to be understood that my invention is a broad one and capable of many changes without departing from the spirit thereof.

I claim:—

1. In a device of the character described, the combination of a slotted member, a wheel carried upon the outside of said first-mentioned wheel and provided with one or more slots registering with the slot in said first-mentioned wheel, a plurality of movable pins in said slotted member adapted to require the insertion of one or a plurality of coins to operate the device.

2. In a device of the character described, a rotary shaft, a slotted wheel thereon, a second slotted wheel adjacent thereto and movable relative thereto, and means for causing the slots to be brought into registry upon the rotation of the shaft, comprising a pin projecting from the second slotted wheel, and a slide-bar attached to the first-mentioned slotted wheel.

3. In a device of the character described, a rotary shaft, a slotted wheel thereon, a second slotted wheel adjacent thereto and

movable relative thereto, and means for causing the slots to be brought into registry upon the rotation of the shaft, comprising a pin projecting from the second slotted wheel and a slide-bar attached to the first-mentioned slotted wheel adapted in one position thereof to be moved out of the path of the pin.

4. In a device of the character described, a rotary shaft, a slotted wheel thereon, a second slotted wheel adjacent thereto and movable relative thereto, and means for causing the slots to be brought into registry upon the rotation of the shaft, comprising a pin projecting from the second slotted wheel and a slide-bar attached to the first-mentioned slotted wheel adapted in one position of the rotary shaft to be moved out of the path of the pin.

5. In a device of the character described, a rotary shaft, a slotted wheel thereon, a second slotted wheel adjacent thereto and

movable relative thereto, and means for causing the slots to be brought into registry upon the rotation of the shaft, comprising a pin projecting from the second slotted wheel and a cam-actuated slide-bar attached to the first-mentioned slotted wheel adapted in one position of the rotary shaft to be moved out of the path of the pin.

6. In a device of the character described, the combination of a coin guide, a movable slotted member for receiving the coins from said guide, and a guard attached to the underside of the guide to prevent the insertion of coins when the guide and slotted member are not in registry and a stop upon said slotted member to actuate the guard.

In testimony that I claim the foregoing I have hereunto set my hand.

AMBROSE S. CARNELL.

Witnesses:

M. MEIKLE,

A. NEWCOMB.