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Patented Nov. 5, 1901.

W. McDONALD & A. E. WRIGHT.
SLOT GUARD FOR COIN CONTROLLED GAS METERS.

(Application filed Feb. 13, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

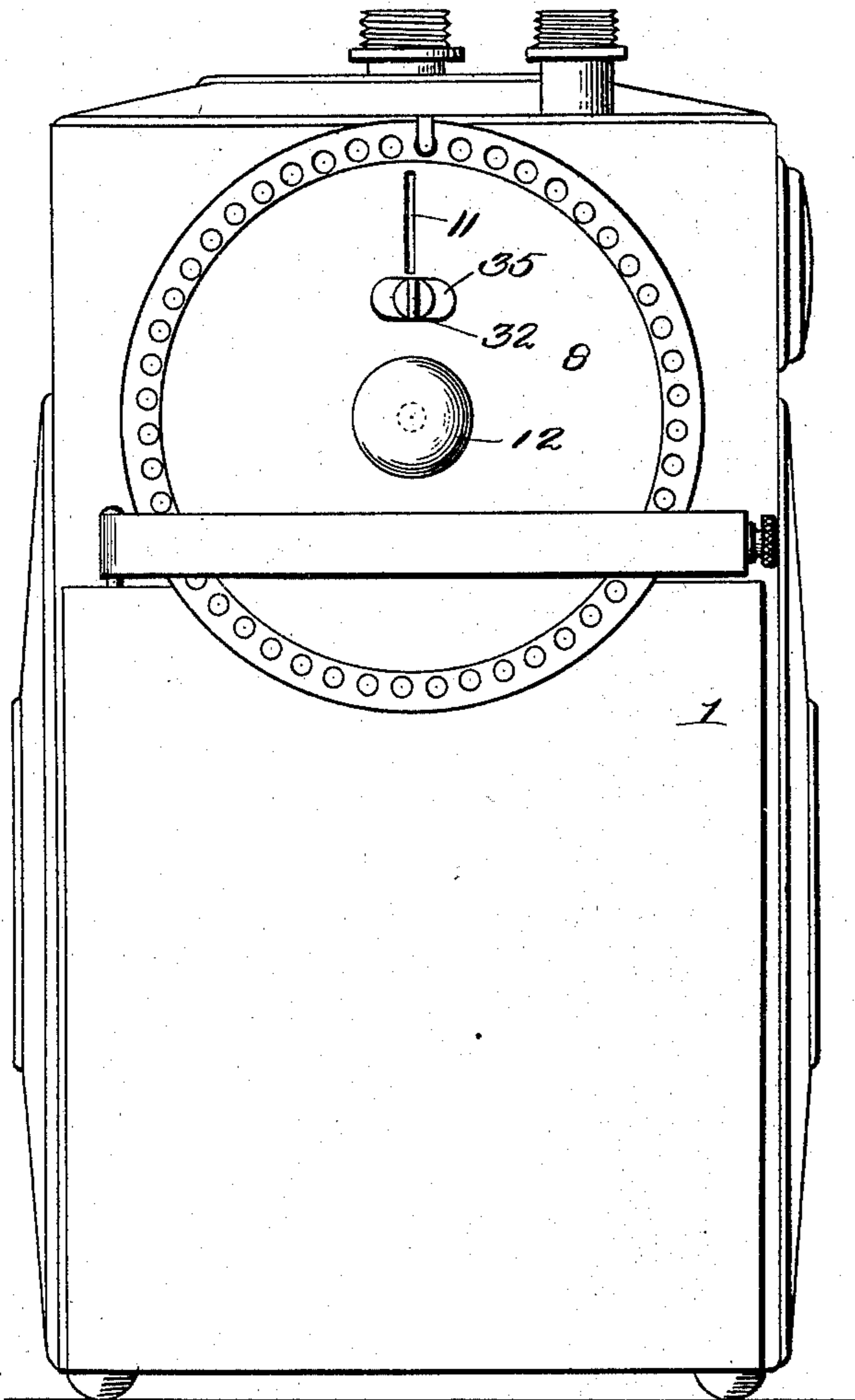
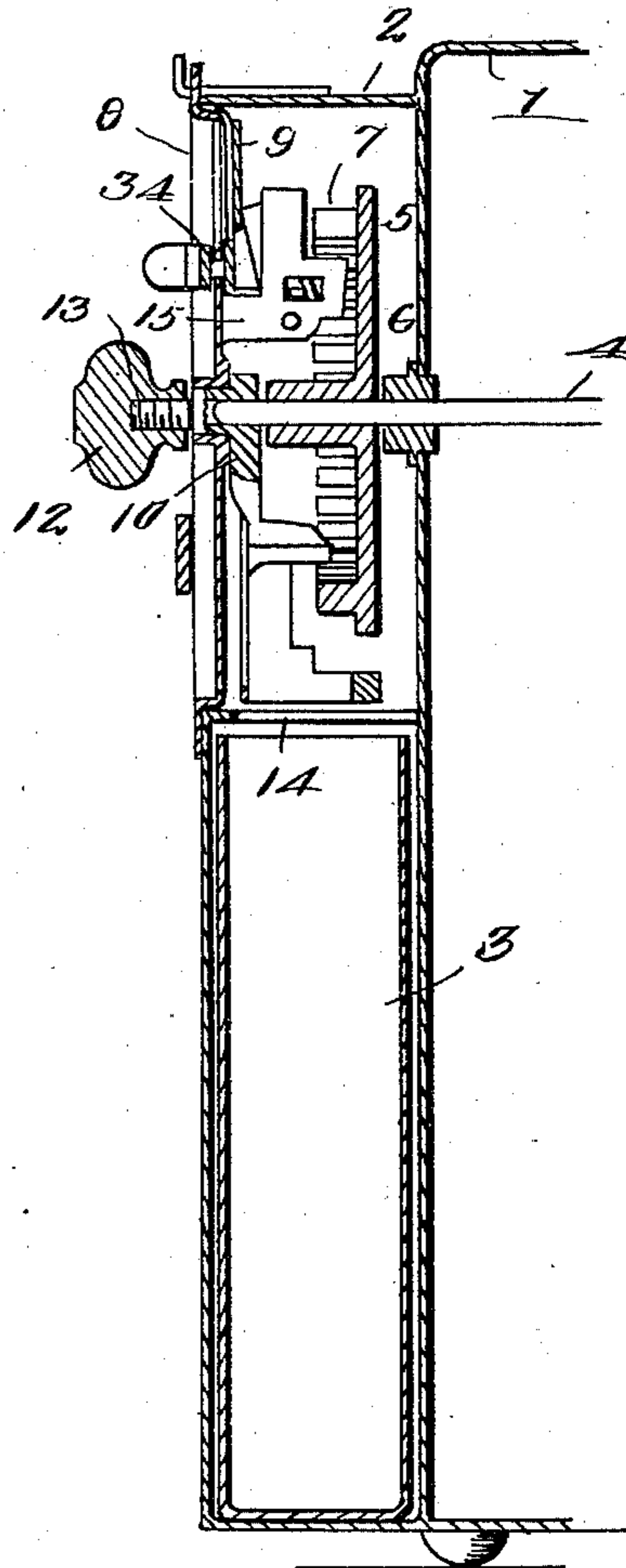


Fig. 2.



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2 Sheets—Sheet 2.

Fig. 3.

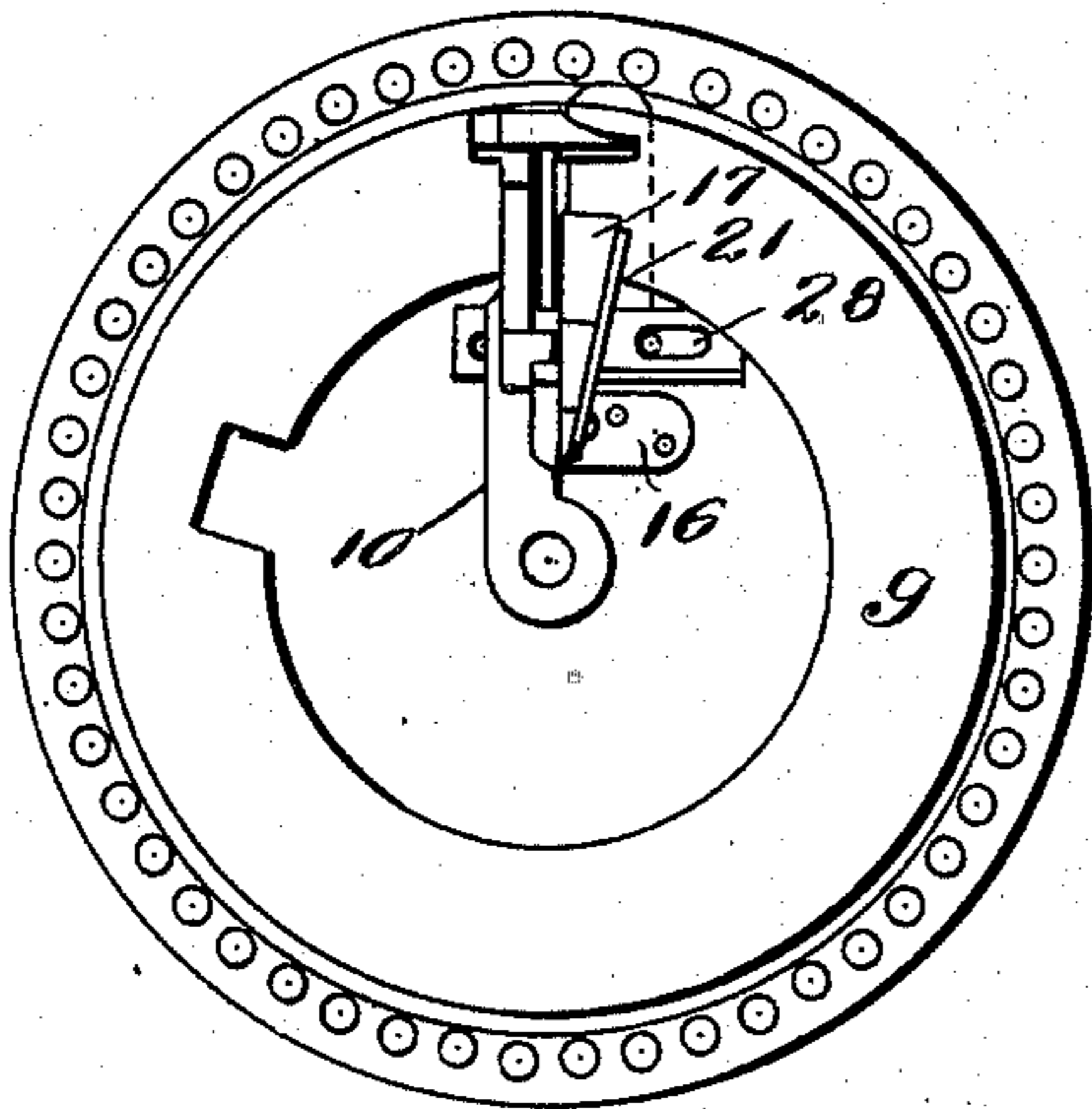


Fig. 5.

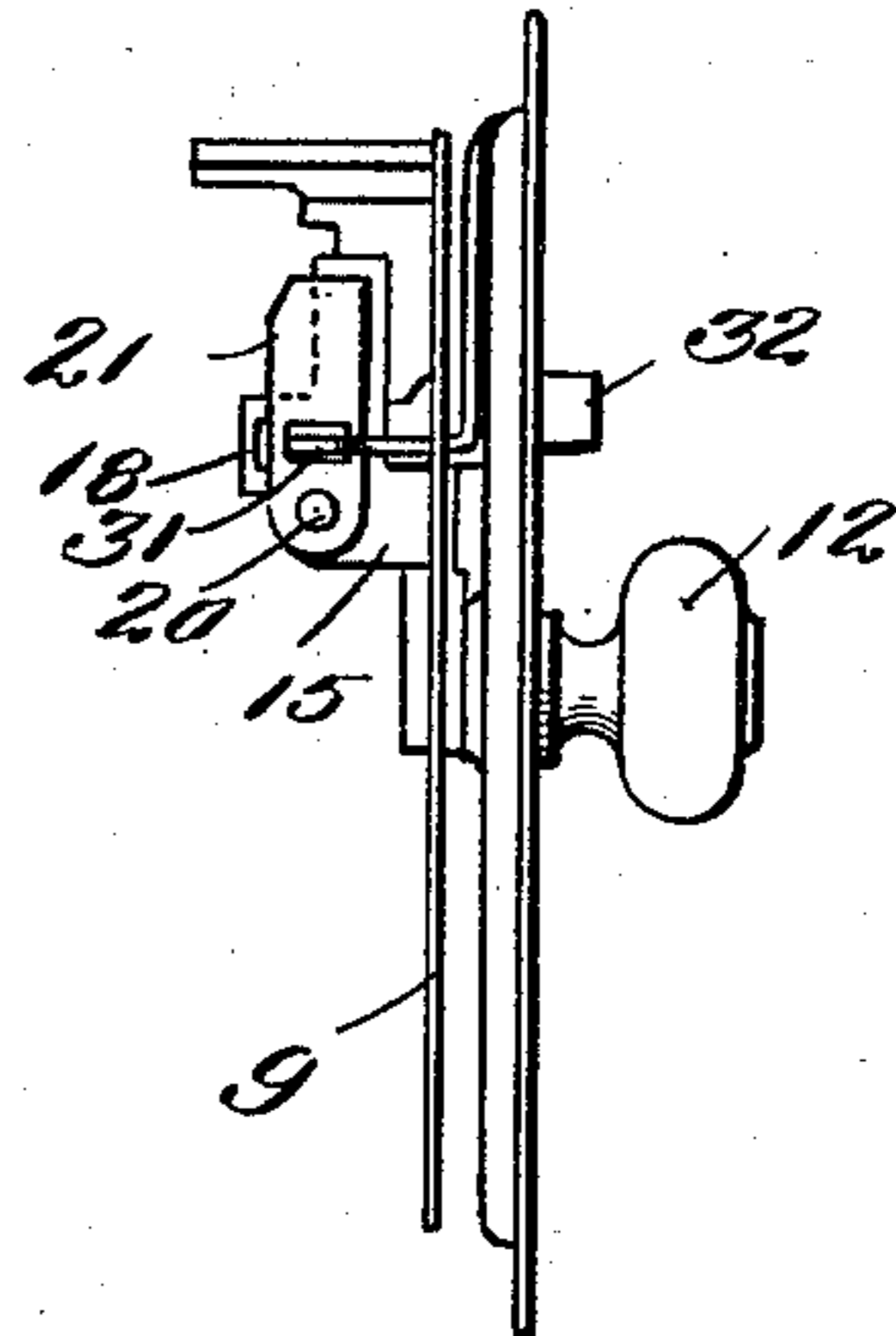


Fig. 4.

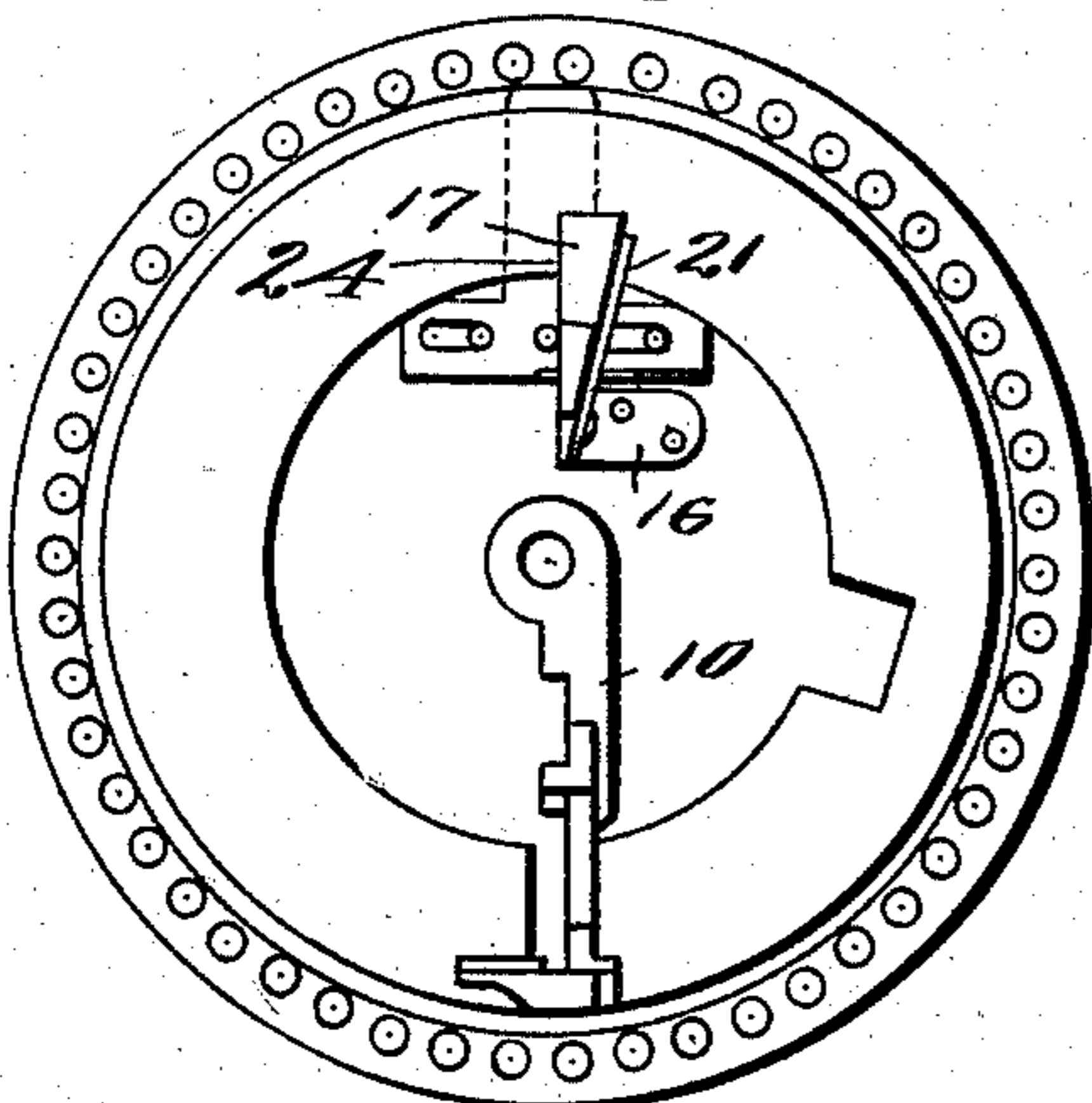


Fig. 6.

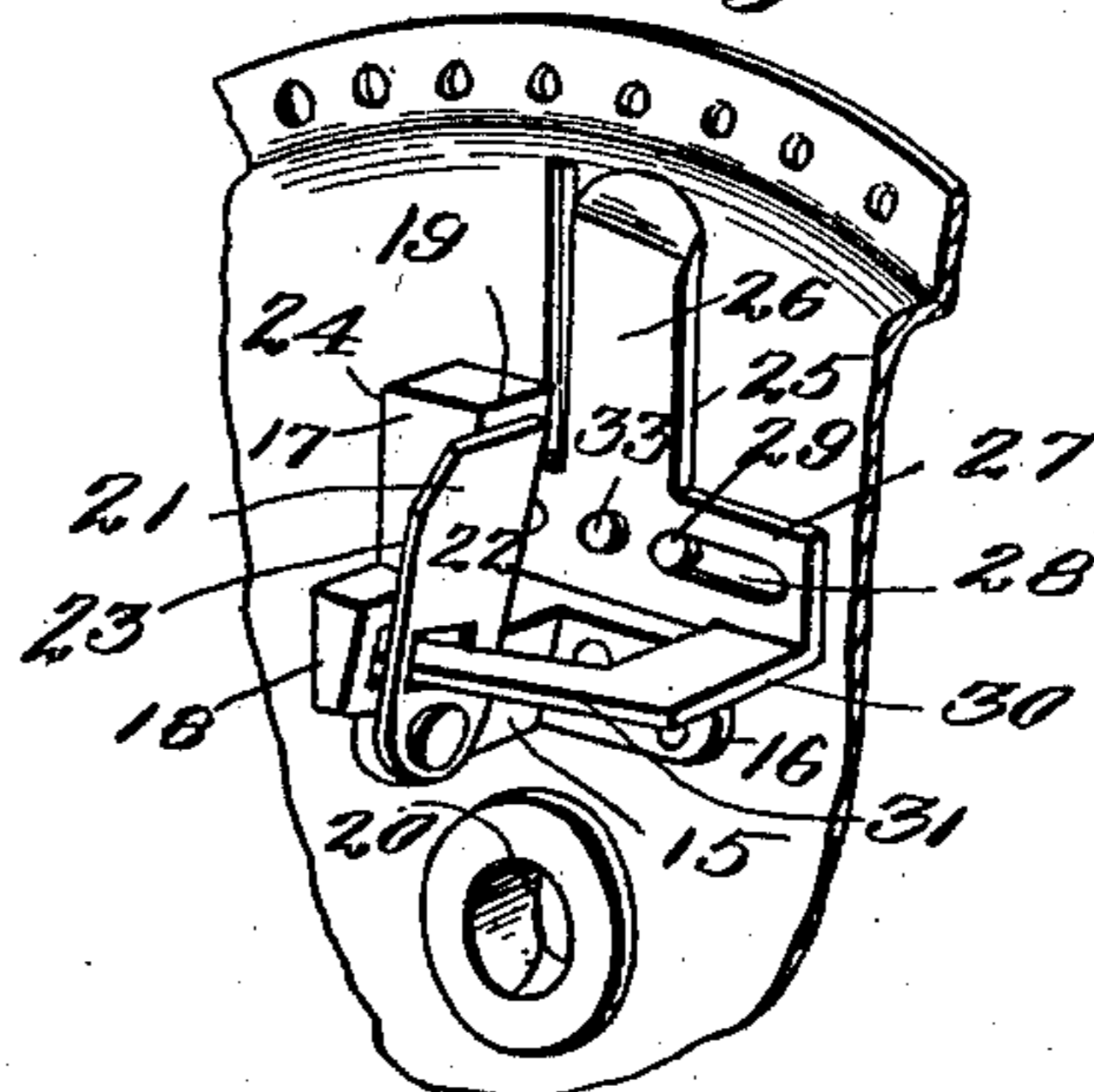


Fig. 7.

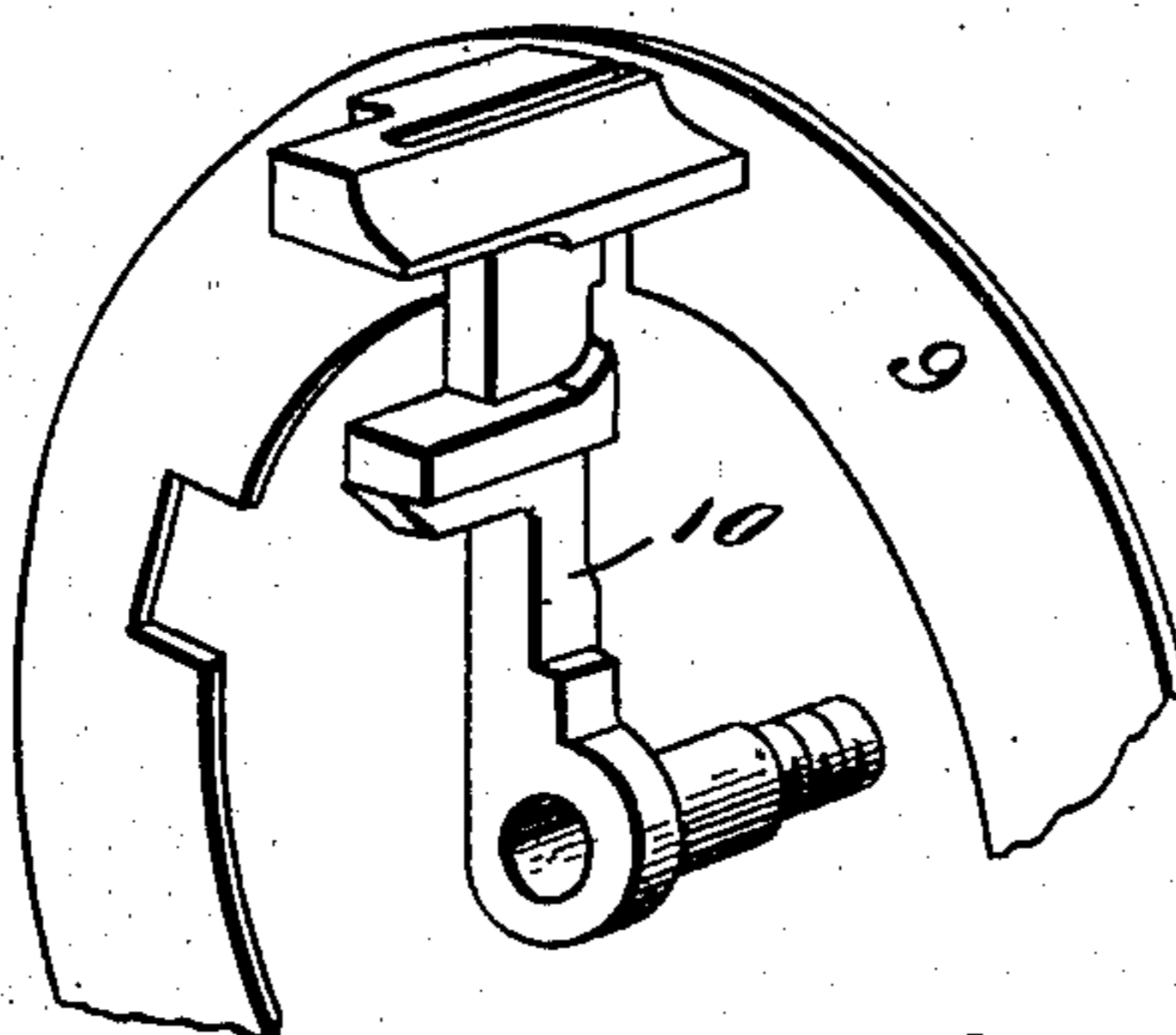
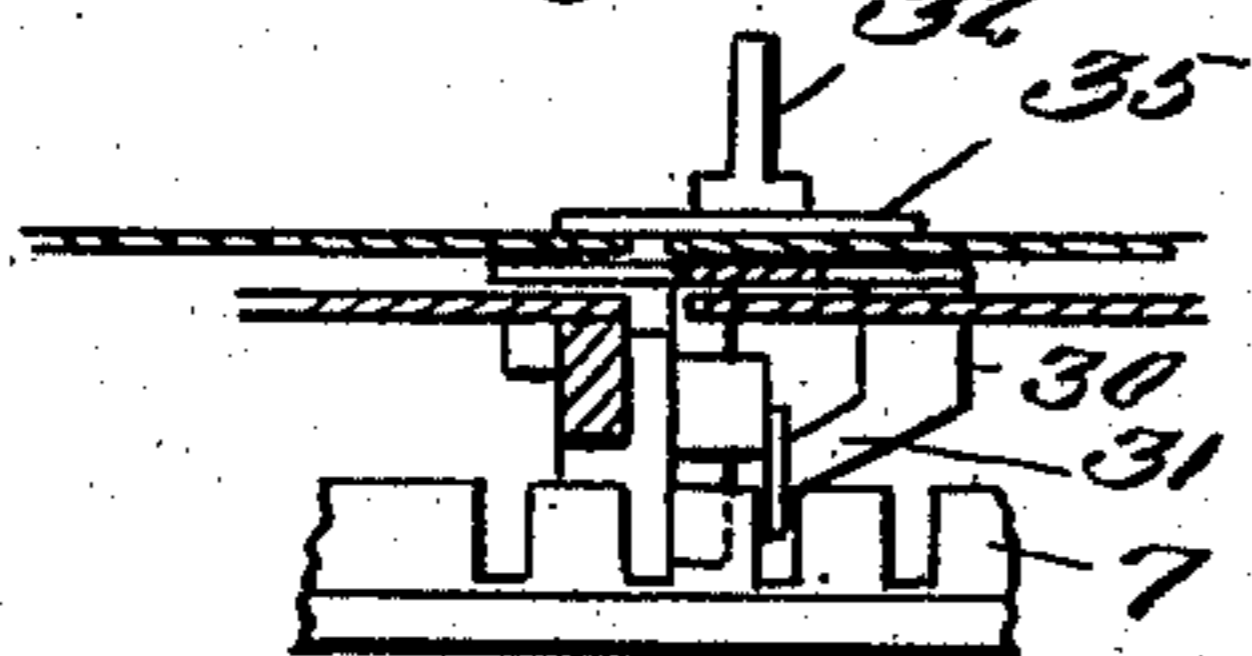


Fig. 8.



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UNITED STATES PATENT OFFICE.

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SLOT-GUARD FOR COIN-CONTROLLED GAS-METERS.

SPECIFICATION forming part of Letters Patent No. 686,112, dated November 5, 1901.

Application filed February 13, 1901. Serial No. 47,138. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM McDONALD, residing at Albany, in the county of Albany and State of New York, and ALBERT E. WRIGHT, residing at Portland, in the county of Multnomah and State of Oregon, citizens of the United States, have invented new and useful Improvements in Slot-Guards for Coin-Controlled Gas-Meters, of which the following is a specification.

This invention relates to slot-guards for coin-controlled gas-meters, and has for its object to provide an improved construction of mechanism operatively connected to a slide for closing the coin-slot, whereby when the slide is moved to uncover the coin-slot the vending apparatus will be automatically locked in position and cannot be operated until the slide has been moved to cover the slot again.

Other objects of the invention relate to details of construction and to combinations of parts, all of which will be hereinafter described.

That which is regarded as new will be set forth in the claims.

In order that the invention may be clearly understood, we have illustrated the same in the accompanying drawings, in which—

Figure 1 is a view in elevation of a meter provided with our improvements. Fig. 2 is a transverse vertical sectional view of the same. Fig. 3 is a view in rear elevation, showing the circular shield carrying the coin-carrier, the latter being adjacent to the stop. Fig. 4 is a similar view to Fig. 3, but showing the coin-carrier turned to a position to allow the coin to fall therefrom. Fig. 5 is an edge view of the parts shown in Fig. 3. Fig. 6 is an enlarged perspective detail view of the slot-guard and the mechanism connected therewith. Fig. 7 is a broken perspective view of the circular shield carrying the coin-carrier, and Fig. 8 is a sectional plan view of the parts shown in Fig. 3.

Our invention is designed to be applied to that form of coin-controlled apparatus for prepayment-meters described and illustrated in the patent to R. T. Glover and J. G. Glover, No. 539,734, dated May 21, 1895, to which patent reference is to be made for a more complete

understanding of the invention. Our improvement, however, may be applied with or without modification and without departing from the spirit thereof to other forms of coin-controlled apparatus than that shown in said patent and to coin-controlled apparatus applied to vending devices other than gas-meters.

We will now describe our invention in detail, referring to the accompanying drawings, wherein the numeral 1 indicates the casing of a gas-meter, 2 the casing of the coin-controlled apparatus, and 3 a money holder or till, the parts 2 and 3 being attached to the side of the meter and the till being arranged immediately below the casing 2, all as shown.

The numeral 4 indicates the main operating-spindle, which may be connected to any known device operated by the ordinary meter mechanism for stopping the supply of gas—for instance, such device as that shown and described in Letters Patent No. 535,330, dated March 5, 1895, and granted to R. T. Glover and J. G. Glover aforesaid. The spindle 4 projects from the meter-case 1 into the casing 2 and is operated by means of a circular gear-plate 5, mounted on said spindle and secured thereto by means of a pin 6 or other means. Said gear-plate has a circular series of teeth or projections 7 on the side facing the cover or price-changer 8, as in the first-named patent referred to.

Between the gear-plate 5 and the price-changer 8 and immediately behind the latter is a circular shield 9, to which is secured a coin carrier or pocket 10, into which a coin is passed through the slot 11 of the price-changer to rest in one of the notches between the teeth 7 on the gear-plate 5, and so cause the gear-plate and coin-carrier 10 to move together when the handle 12 is turned. Said handle is screwed upon an outwardly-projecting stem 13 of the coin-carrier 10. The shield 9 serves to prevent the insertion of a coin through the coin-slot 11 so long as the coin-carrier 10 is out of coincidence with the coin-slot 11. The shield 9, carrying the coin-carrier 10, is loosely mounted upon the extremity of the spindle 4, so that when no coin is inserted said shield and coin-carrier can be turned without turning or in any manner affecting the gear-plate 5.

A suitable stop is provided to limit the movement of the coin-carrier, so that the coin carried thereby may fall through an opening 14 in the casing 2 into the money-holder 3.

5 In order that the coin-carrier may be turned to have its pocket register accurately with the slot 11, we provide on the rear face of the price-changer 8 a stop 15, against which the coin-carrier will strike and be caused to register with said slot when it is desired to insert a coin. The stop 15 has a base portion 16, secured to the price-changer, as by rivets, and an upright portion or lug 17, which is located a suitable distance inward from the rear face of the price-changer to bring it in proximity to the teeth 7, projecting from the gear-plate 5. Near the base of the lug 17 is provided a transverse elongated slot 18. Pivoted at its lower end to an inclined side 19 of the lug 17, as indicated at 20, is a dog 21, having a rectangular opening 22, alining with but narrower or shorter than the slot 18. The dog 21 is in the form of a flat metal plate of about the height of the lug 17 and having its rear or working edge sharpened or beveled off, as indicated at 23, to facilitate the entrance of the blade between the teeth 7 of the gear-plate 5. The inclined side 19 of the lug 17 is radial to the spindle 4, and as the dog 21 lies flush against the side 19 said dog will also be substantially radial to the spindle 4, which is the center of the gear-plate 5, and will therefore have the same inclination or pitch as said teeth, so that it may enter readily between them. The opposite side 24 of the lug 17 is parallel with one edge of the slot 11 and in line therewith and serves as a guide for the coin inserted in the slot 11 and also as a lateral support for the same until the coin-carrier is moved away.

The numeral 25 indicates a slide-plate for covering and uncovering the slot 11. This slide-plate is in the form of the letter T, the stem or vertical portion 26 of which constitutes the cover for said slot, while the horizontal portion or head 27 is provided on opposite sides of the stem 26 with elongated slots 28, extending into each of which is a pin 29 for guiding the movement of the slide-plate and limiting its movement in either direction. The pins 29 are riveted in the price-changer and project from its rear face, as shown. Extending inward from the bottom of the horizontal portion 27 of the slide-plate and from one end thereof is a lug 30, and extending from the outer end of said lug toward the opposite end of the horizontal portion 27 is an operating-arm 31, which is adapted to be inserted in the opening 22 and the slot 18 and to work therein. The arm 31 is inclined outwardly from the horizontal portion 27, and its opposite side edges are parallel and in engagement with the opposite sides of the opening 22, so that as the slide-plate 25 is moved back and forth the dog 21 will be swung back and forth upon its pivot 20. In other words, as the slide-plate is moved to

one side to uncover the slot 11 the dog 21 will be forced outward by the operating-arm 31 and its beveled edge will pass into one or the other of the spaces between the teeth 7 of the gear-plate 5 and lock said gear-plate against rotation so long as the slot 11 remains uncovered. Thus it will be impossible to fraudulently actuate the vending apparatus by inserting an implement through the slot 11. Upon moving the slide-plate to cover the slot 11 the dog 21 will be withdrawn by the operating-arm 31 from engagement with the teeth of the gear-plate, and said gear-plate may then be rotated through the medium of the handle 12, provided a coin has previously been inserted, the coin operating by passing between the teeth 7 to temporarily lock the coin-carrier and gear-plate together, as in the patented device referred to. The slide-plate is preferably made from a single sheet of metal stamped and bent, respectively, to have the construction and shape shown. This slide-plate is operated by means of a button 32, having a stud 33 secured thereto and working in a slot 34, formed in the price-changer below the slot 11, said stud being secured to the slide-plate. The stud 33 preferably passes through a plate 35, which extends from opposite sides of the button 32 and is slid back and forth on the face of the price-changer in the movements of the button 32 and operates to cover at all times the slot 34. The plate 35 might be made integral with the button 32, if desired.

It will thus be seen that our invention provides a simple and economical means for locking the vending apparatus when the coin-slot is open or uncovered. Furthermore, the button 32 can be moved to operate the slide-plate without reference to the position of the coin-carrier, and hence no part of the apparatus can be injured by opening or closing the slot at any position of the coin-carrier, as might be the case if it were necessary that the pocket of the coin-carrier should first register with the slot 11 before the slide-plate could be moved. Finally the button 32, with its plate 35, are not liable to be wrenched or broken off or bent or otherwise injured, as they project only a slight distance from the face of the price-changer, and this relative position is never changed, as would be the case were a pivoted door employed for closing the slot or device which would require to be moved outward or away from the apparatus to uncover the slot.

Having thus fully described our invention, what we claim as new is—

1. In coin-controlled apparatus, in combination with the vending apparatus, a casing having a coin-slot, a slide for covering and uncovering said slot, and separate mechanism operated by said slide to lock said vending apparatus when the slot is uncovered and to release it when the slot is covered.

2. In coin-controlled apparatus, in combination with the vending apparatus, a casing

having a coin-slot, a slide for covering and uncovering said slot, and pivoted mechanism operated by said slide to lock said vending apparatus when the slot is uncovered and to release it when the slot is covered.

3. In coin-controlled apparatus, in combination with the vending apparatus, a casing having a coin-slot, a slide for covering and uncovering said slot, and a pivoted dog adapted to be moved back and forth by said slide to lock said vending apparatus when the slot is uncovered and to release it when the slot is covered.

4. In coin-controlled apparatus, in combination with the vending apparatus, a casing having a coin-slot, a slide for covering and uncovering said slot and mechanism adapted to be moved by said slide in a direction at right angles thereto to lock said vending apparatus when the slot is uncovered and to release it when the slot is covered.

5. In coin-controlled apparatus, in combination with the vending apparatus including a toothed wheel, a casing having a coin-slot, a slide for covering and uncovering said slot and mechanism operated by said slide to engage the teeth of said wheel when the slot is uncovered and to be withdrawn from engagement with said teeth when the slot is covered.

6. In coin-controlled apparatus, in combination with the vending apparatus, a casing having a coin-slot, a support on said casing, a dog pivotally mounted on said support and having an opening, a slide for covering and uncovering said slot and an arm carried by said slide and working in said opening and operating to move said dog into engagement with the vending apparatus when the slot is

uncovered and to withdraw said dog when the slot is covered.

7. In coin-controlled apparatus, in combination with the vending apparatus, a casing having a coin-slot, a support on said casing, a dog pivotally mounted on said support and having an opening, a slide for covering and uncovering said slot and an inclined arm carried by said slide and working in said opening and operating to move said dog into engagement with the vending apparatus when the slot is uncovered, and to withdraw said dog from such engagement when the slot is covered.

8. In coin-controlled apparatus, in combination with the vending apparatus having a toothed wheel, a casing having a coin-slot, a support on said casing, a dog pivotally mounted on said support radial to the center of said wheel and having an opening, a slide for covering and uncovering said slot and an inclined arm carried by said slide and working in said opening and operating to move said dog into engagement with the teeth of said wheel when the slot is uncovered and to withdraw the dog from such engagement when the slot is covered.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

WILLIAM McDONALD.

ALBERT E. WRIGHT.

Witnesses to signature of Wm. McDonald:

DONALD McDONALD,

JOSEPH A. MURPHY.

Witnesses to signature of Albert E. Wright:

FRANK SCHLEGEL,

GEORGE B. VAN WATERS.