

900,991.

Patented Oct. 13, 1908.

3 SHEETS—SHEET 1.



Fig. 2.

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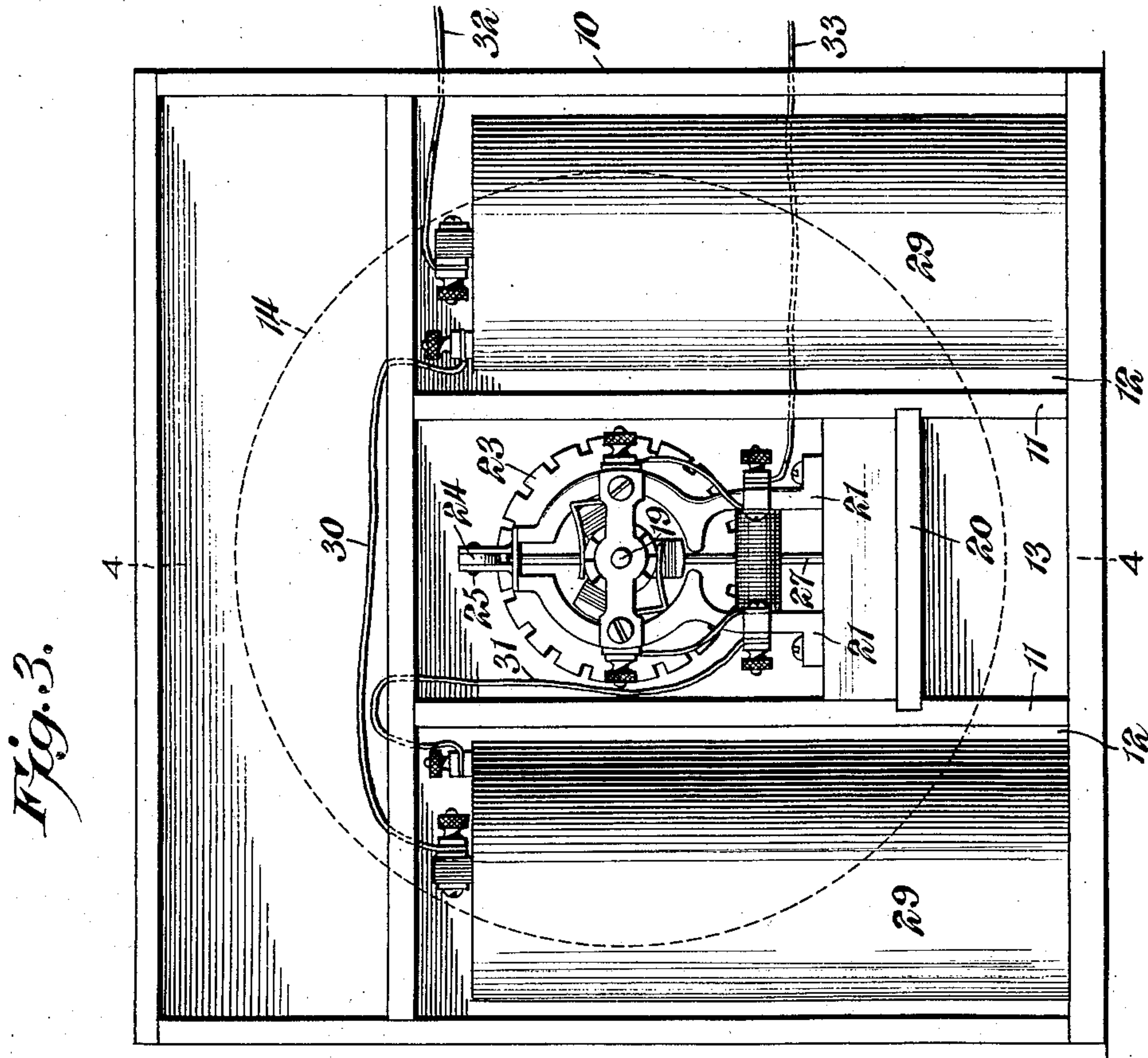
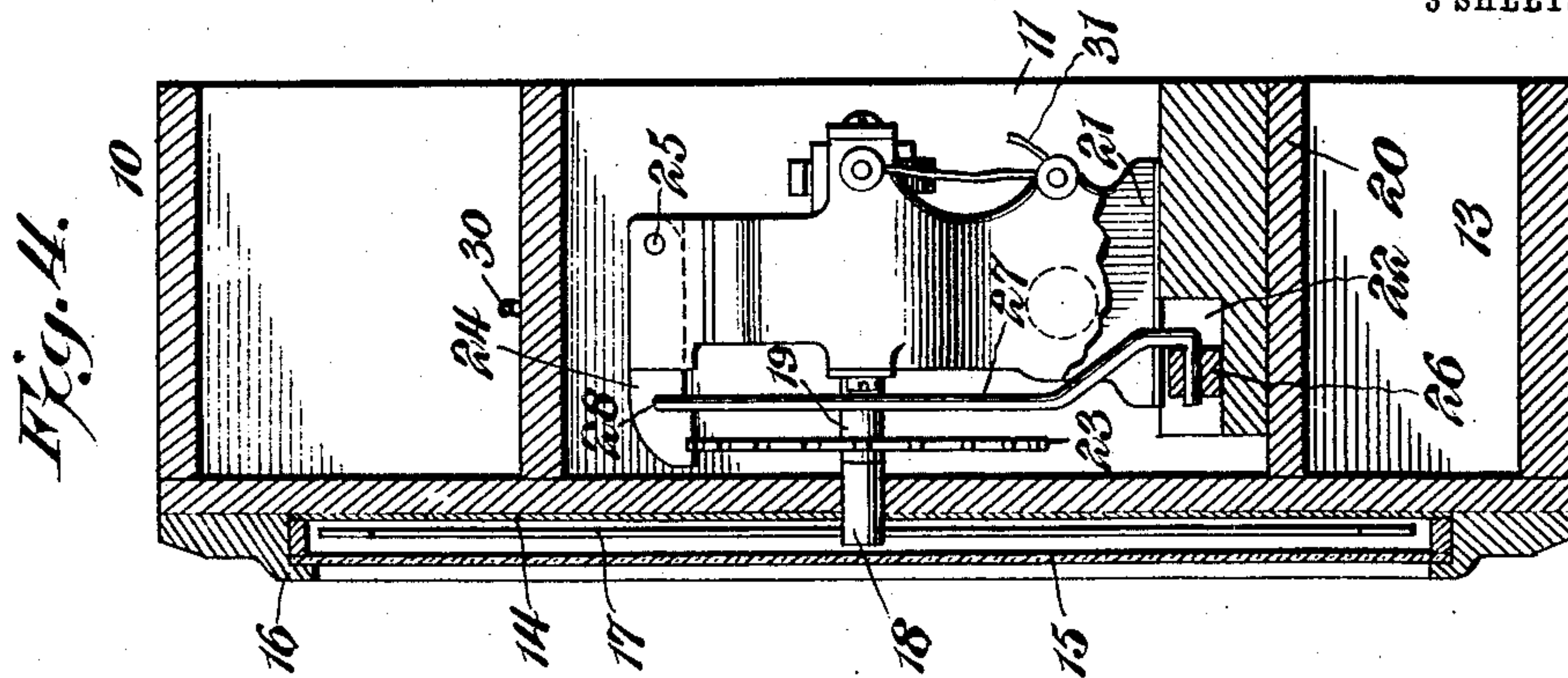
Attorney

H. T. EMEIS.
REFUNDING ATTACHMENT FOR CASH REGISTERS.
APPLICATION FILED NOV. 7, 1907.

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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. 6.

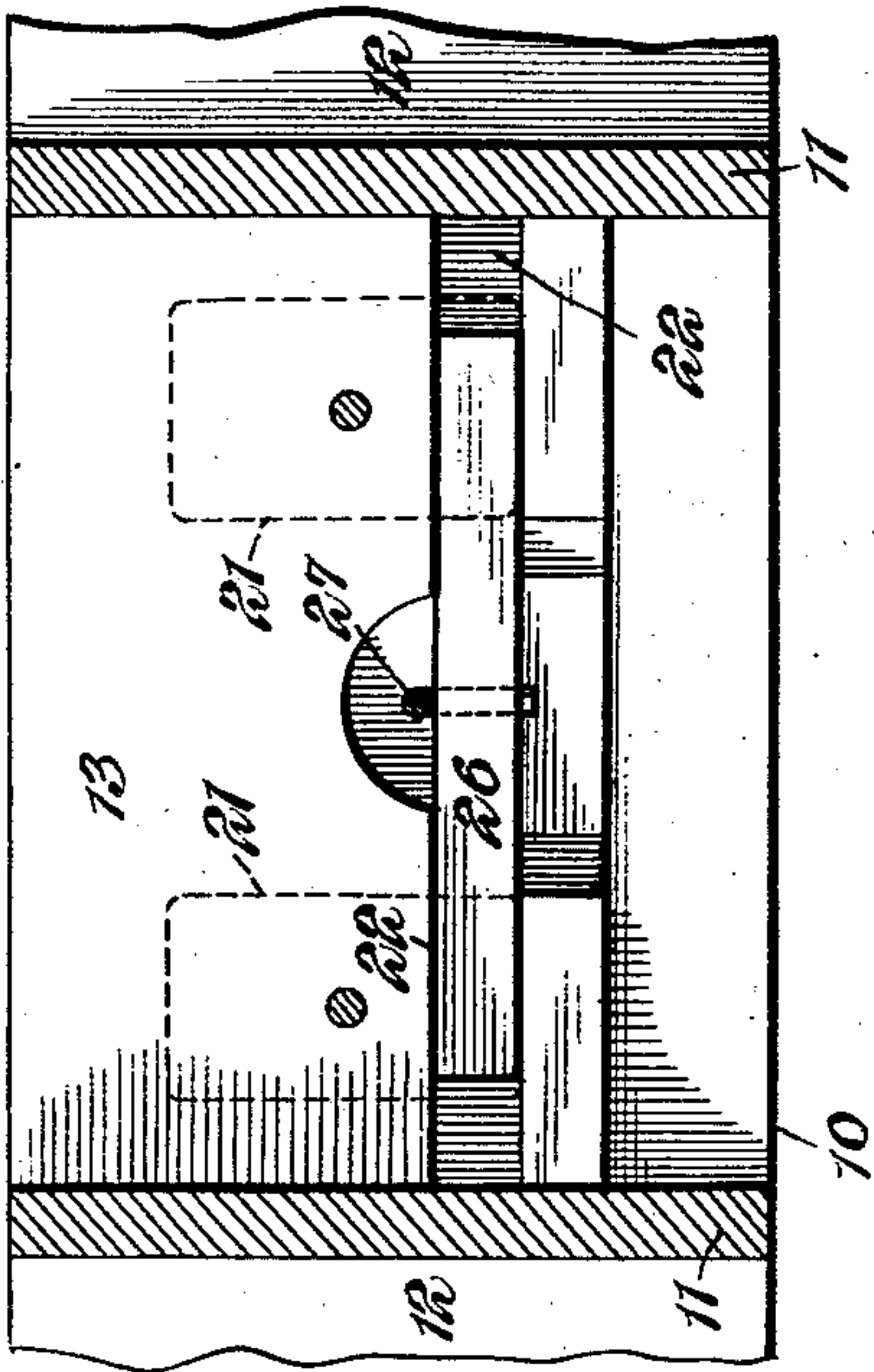


Fig. 7.

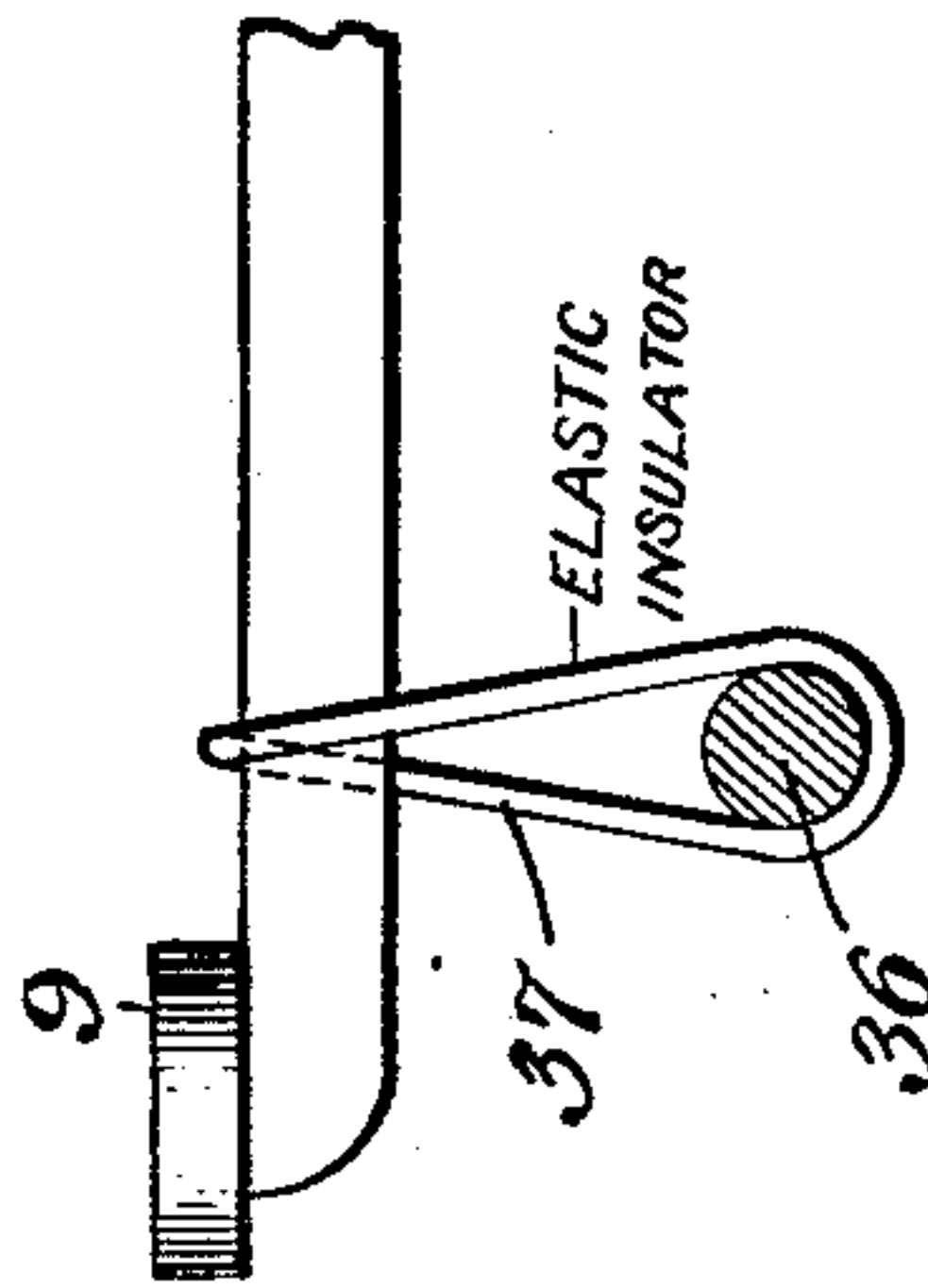
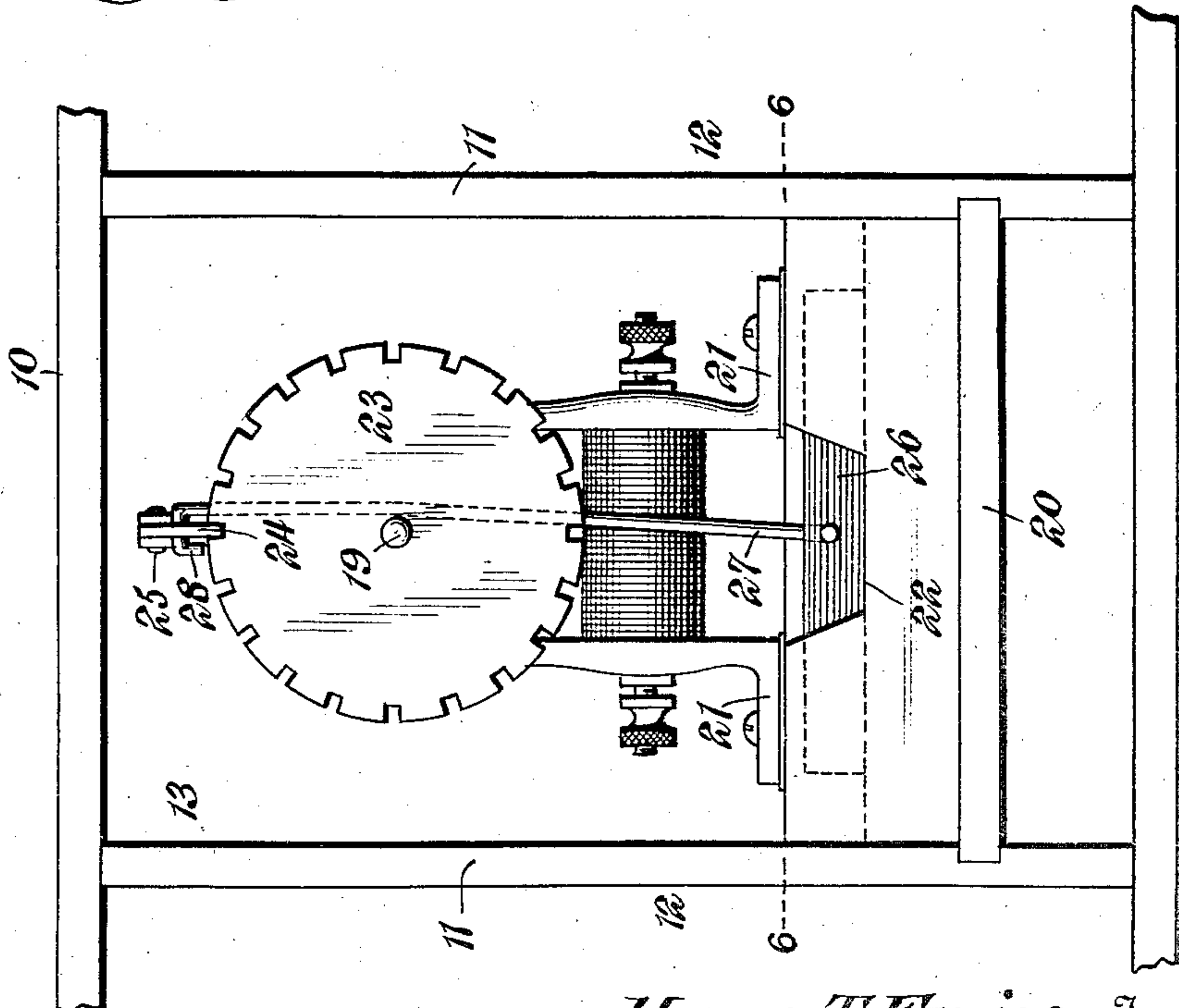


Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY T. EMEIS, OF SALT LAKE CITY, UTAH.

REFUNDING ATTACHMENT FOR CASH-REGISTERS.

No. 900,991.

Specification of Letters Patent.

Patented Oct. 13, 1908.

Application filed November 7, 1907. Serial No. 401,153.

To all whom it may concern:

Be it known that I, HENRY T. EMEIS, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented a new and useful Refunding Attachment for Cash-Registers, of which the following is a specification.

This invention relates to an attachment for cash registers, and the primary object of the invention is to provide a novel, simple and effective attachment in the form of an irregularly operating means which can be readily applied to any of the well known types of cash registers, and is intended to be used as a medium for encouraging cash sales, by the salesmen making the designations of such indicator under certain conditions advantageous to the purchaser, said indicating means being automatically thrown into operation upon the actuation of the register.

The preferred form of construction is illustrated in the accompanying drawings, wherein:

Figure 1 is a front elevation of the attachment shown applied to a cash register. Fig. 2 is a top plan view of the bank of keys of said register and the contact bar suspended therefrom. Fig. 3 is a rear elevation of the indicator and its associated parts. Fig. 4 is a vertical sectional view on the line 4-4 of Fig. 3. Fig. 5 is a front elevation of the mechanism, showing the dial and indicator or pointer removed. Fig. 6 is a detail horizontal sectional view on the line 6-6 of Fig. 5. Fig. 7 is a detail view showing the support for the contact bar.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated, the cash register, designated 8, may be of any well known type, and as usual is provided with a bank of keys 9 that are depressible. The indicator consists of a casing 10, the interior of which is divided by upright partition walls 11 into outer compartments 12 and a central compartment 13. A dial 14 constitutes the front wall of the casing, and has on it a circular series of numerals, as clearly shown in Fig. 1. This dial is preferably covered by a sheet of glass 15 or other transparent material mounted in a frame 16. The space between the glass and dial is sufficient as shown in Fig. 4 to permit the free rotation of an in-

dicator in the form of a pointer 17. This pointer has a hub 18 mounted on the shaft 19 of a small electric motor that is located in the central compartment 13 upon a shelf 20.

The motor may be of any form desired, and needs no particular description, except a statement that it has field magnets 21, which, as shown in Fig. 4, project over a recess 22 formed in the base of said motor. A toothed brake wheel 23 is mounted on the shaft 19, and cooperating with this wheel is a swinging dog 24 pivoted as shown at 25 upon the top of the motor. The dog, as clearly shown in Fig. 5, is arranged to engage between the teeth, and when so engaged, it will be evident that the motor and consequently the pointer or indicator is positively locked against rotation. An armature bar 26 is located in the recess 22 beneath the magnets 21, and this bar is connected to the lower end of a link 27, the upper end of which is pivotally engaged as shown at 28 with the dog 24. It will thus be evident that if the motor is in operation, the field magnets 27 thereof will be energized. Consequently the armature 26 being attracted thereby, will raise the brake dog 24 out of coaction with the wheel and the motor and pointer can rotate without interference therefrom.

A source of electrical energy, preferably in the form of dry batteries 29 placed in the compartments 12 of the casing, constitutes the means for operating the motor. These batteries are connected in series by a suitable wire 30. A connection 31 is made from one of the batteries to the motor. A lead 32 extends from the other battery and another lead 33 extends from the motor. One of these leads, as for instance 32, is grounded, as illustrated at 34 on the cash register, while the other is connected as illustrated at 35 to a contact bar 36, which is located beneath, and in the path of movement of the keys 9 of said cash register.

The bar may be supported in any suitable manner, but preferably rubber or elastic bands 37 are employed which surround the ends of said bar and also surround the outermost keys. It will thus be evident that the bar is yieldingly suspended from the keys. It will be evident therefore that the keys and the rod together constitute controlling means for the electric circuit above described, and while said circuit is normally open, if one of

the keys is depressed, it will be brought into engagement with the contact bar 36, and thus close said circuit.

The operation of the mechanism is as follows. When a cash purchase is made, the salesman depresses the proper key or keys of the register in the ordinary manner. As a result, the circuit through the source of electrical energy and the motor will be closed. This, as already stated, will energize the field magnets 21, which will raise the armature 26, and throw the brake dog to an inoperative position with respect to the wheel. The motor will thereupon rotate and rotate the pointer. As soon as the depressed keys of the cash register are released, the circuit will be broken. The magnets will be deenergized, the motor will be stopped, and the pointer or indicator locked. The teeth are so disposed that said pointer must stop at one of the numerals on the dial. Any previous arrangement may be made between the salesman and his customers. For instance, it may be agreed that if the pointer stops at the amount of the purchase or in other words, if the indicator of the register agrees with the indicator of the attachment, then a certain refund may be made, or an additional amount of merchandise given.

It will thus be evident that the device in question will encourage cash sales, because of the chance of securing the additional advantage or prize, which of course would not be given on credit sales. A still further and important advantage resides in the fact that the purchaser is more apt to notice the indicator of the register, and see that the proper amount of his purchase was registered, thus preventing a clerk making a false entry.

From the foregoing, it is thought that the construction, operation, and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In mechanism of the character described, the combination with a cash register having a plurality of depressible actuating keys, of an indicator, a motor independent of the register mechanism for operating the indicator, and means for throwing the motor into operation upon each actuation of any key and continuing its operation while such key is depressed.

2. In mechanism of the character described the combination with a cash register having a plurality of actuating keys, of an in-

indicator, a motor for operating the indicator, and means including a device located in the path of movement of and engaged by the keys for throwing the motor into operation upon each actuation of any key, said means continuing the operation of the motor while any key is engaged with it.

3. In mechanism of the character described, the combination with a cash register having a plurality of keys, of an indicator, and means for actuating the indicator including a device suspended from certain of the keys and disposed in the path of movement of said plurality of keys.

4. In mechanism of the character described, the combination with a cash register having a plurality of keys, of an indicator, and means for actuating the indicator including a device yieldingly suspended from certain of the keys and disposed in the path of movement of said plurality of keys.

5. In mechanism of the character described, the combination with a cash register having a plurality of keys, of an indicator, and means for actuating the indicator including a bar located beneath the keys, and elastic bands suspending said bar from certain of the keys.

6. In mechanism of the character described, the combination with an indicator, of an electric motor for operating the same, a cash register having keys, and an electrical circuit including the motor, a source of electrical energy, and a controller that is operated upon each actuation of any key to set the motor into operation and operate the indicator irregularly and inconsistently with the operation of the registering mechanism.

7. In mechanism of the character described, the combination with an indicator, of an electric motor for operating the same, a cash register having keys, and an electric circuit including the motor, a source of electrical energy and a controller that comprises the keys and a device located in the path of movement of said keys and is operated by every actuation of each of said keys to effect irregular operations of the indicator inconsistent with the registering mechanism.

8. In mechanism of the character described, the combination with an indicator, of an electric motor for operating the same, a cash register having keys, and an electric circuit including the motor, a source of electrical energy, and a controller that comprises a bar yieldingly suspended from the keys and located in the path of movement thereof.

9. In mechanism of the character described, the combination with an indicator, of an electric motor for operating the same, a cash register having keys and an electric circuit including the motor, a source of electrical energy, one line of said circuit being grounded on the register and a bar connected to the

other line and yieldingly suspended and insulated from certain of the keys, being disposed in the path of movement of said keys.

10. In mechanism of the character described, the combination with a cash register, of a dial, and a rotary indicator operating over the same, a rotary motor for operating the indicator, and means controlled by the operation of the cash register to throw the motor into operation and operate the indicator irregularly and inconsistently with the corresponding operation of the registering mechanism.

11. In mechanism of the character described, the combination with a cash register, of a dial, and a rotary indicator operating over the dial, an electric motor connected to the indicator for operating the same, and means controlled by the operation of the cash register to throw the motor into operation and operate the indicator irregularly and inconsistently with the corresponding operation of the registering mechanism.

12. In mechanism of the character described, the combination with a cash register, of a dial, a rotary indicator cooperating with the dial, an electric motor connected to the indicator for operating the same, a bar yieldingly suspended and insulated from the keys, said bar being disposed in the path of movement thereof, and an electric circuit including a source of electrical energy and the motor, said circuit having one pole grounded on the register and another pole grounded on the bar.

13. In mechanism of the character described, the combination with a dial, of a rotary indicator cooperating therewith, an electric motor connected to the indicator, and an electric circuit including a source of electrical energy and circuit closing means for holding the circuit closed and maintaining a continuous operation of the motor and indicator as long as said circuit is closed.

14. In mechanism of the character described, the combination with a dial, of a rotary indicator coacting therewith and having a shaft, an electric motor connected to the shaft, and an electric circuit including a source of electrical energy, the motor, and circuit controlling means.

15. In mechanism of the character described, the combination with a casing, of a dial mounted on the same, a rotary pointer operating over the dial, an electric motor located in the casing, and connected to the pointer, a battery in the casing and an electric circuit including the battery, the motor, and a cash register, said cash register having means for controlling the circuit and effecting irregular movements of the indicator inconsistent with the corresponding operation of said cash register.

16. In mechanism of the character de-

scribed, the combination with a movable indicator, of a motor for connecting the indicator, a brake for the indicator operated by the motor, and means for controlling the operation of the motor and through the motor, the operation of the brake.

17. In mechanism of the character described, the combination with a movable indicator, of a motor for connecting the indicator, a brake for the indicator operated by the motor, and a cash register having means for controlling the operation of the motor and through the motor, the operation of the brake.

18. In mechanism of the character described, the combination with a movable indicator, of an electric motor for operating the same, said motor having a magnet, a brake for the indicator, and an armature operated on by the motor magnet and constituting means for actuating the brake.

19. In mechanism of the character described, the combination with a rotary indicator, of an electric motor for operating the same, said motor having a magnet, a rotary brake wheel carried by the indicator, a brake movable into and out of coaction with the wheel, and an armature operated on by the motor magnet and constituting means for actuating the brake.

20. In mechanism of the character described, the combination with a movable indicator, of an electric motor for operating the same, and a brake for said indicator, and electrically operated means for holding the brake inoperative, while the motor is in operation.

21. In mechanism of the character described, the combination with a dial, of a rotary pointer coacting with the dial and having a shaft, an electric motor connected to the shaft and having a magnet, a toothed wheel connected to the shaft, a swinging brake dog cooperating with the teeth of the wheel, and an armature operated on by the motor magnet and having a link connection with the dog.

22. In mechanism of the character described, the combination with a movable indicator and an electric motor for operating the same, of a contact bar arranged to be supported from the keys of a cash register in the path of movement thereof, and means for electrically connecting the motor to the bar and to said cash register.

23. In mechanism of the character described, the combination with a cash register having a bank of depressible keys, of a dial, a rotary pointer cooperating with the dial, a rotary electric motor connected to the pointer, a source of electrical energy, a bar located beneath the keys of the register, yielding insulators supporting the bar from

certain of said keys, an electric circuit which includes the keys, the bar; the source of electrical energy and the motor, a brake for holding the pointer when the motor is in-
5 active, and operating means for the brake actuated by the motor.

In testimony, that I claim the foregoing

as my own, I have hereto affixed my signature in the presence of two witnesses.

HENRY T. EMEIS.

Witnesses:

S. B. WESTERFIELD,
MARION JOHNSON.