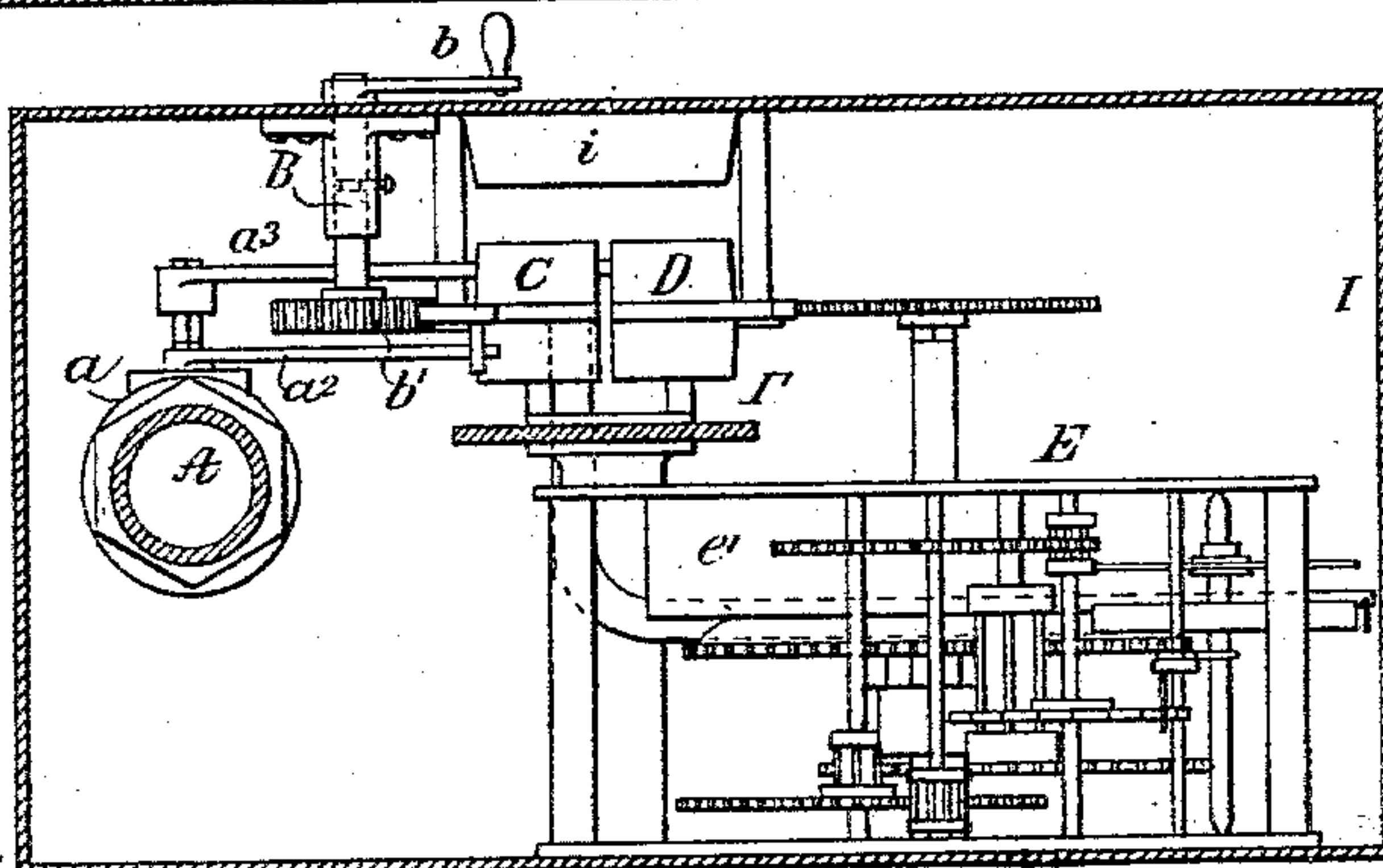
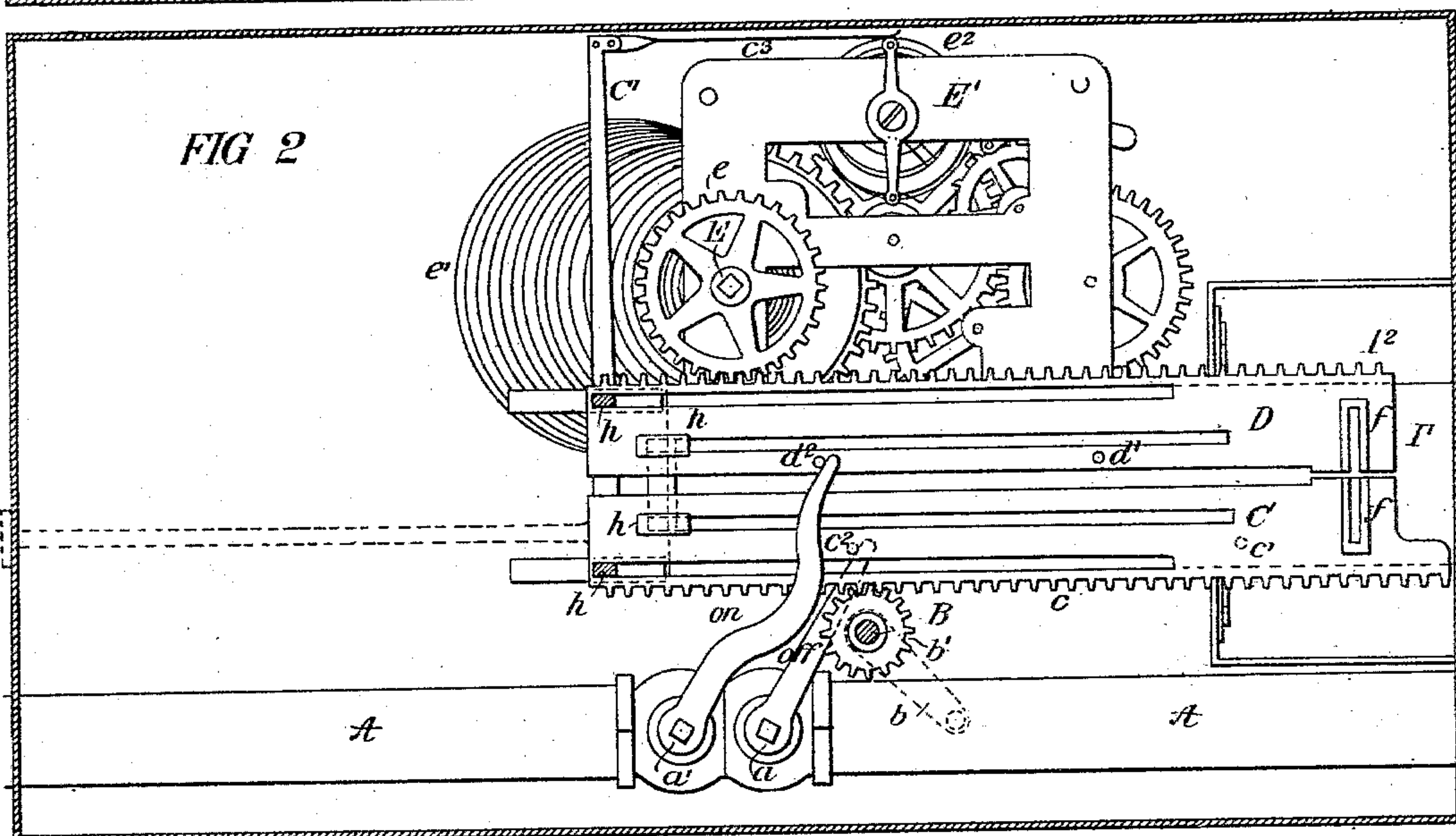


2 Sheets—Sheet 1.

No. 559,737.

Patented May 5, 1896.



Inventor:
William N. Milsted
By his Attorneys
Howson & Howson.

Witnesses:
Wm. A. Barr.
J. D. Goodwin

(No Model.)

2 Sheets—Sheet 2

W. N. MILSTED.
PREPAYMENT GAS CONTROLLER.

No. 559,737.

Patented May 5, 1896.

FIG. 3.

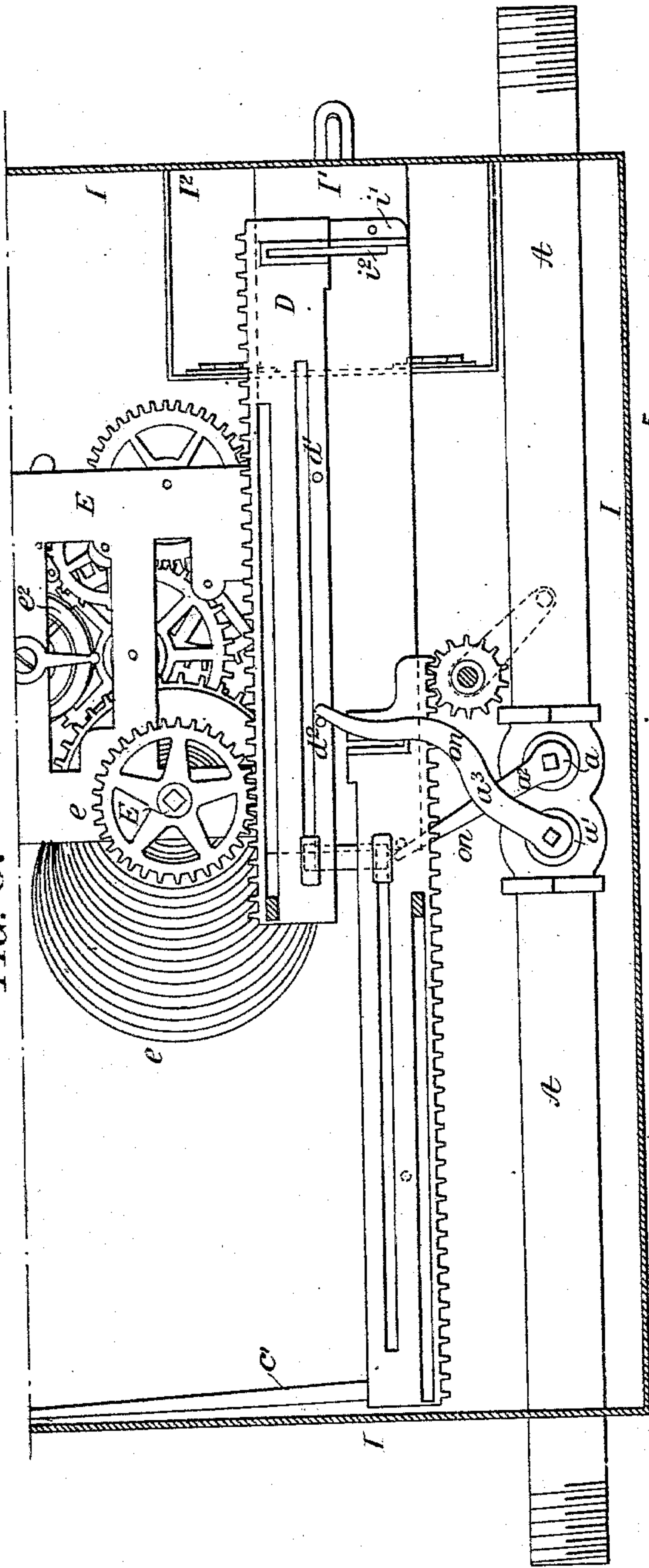
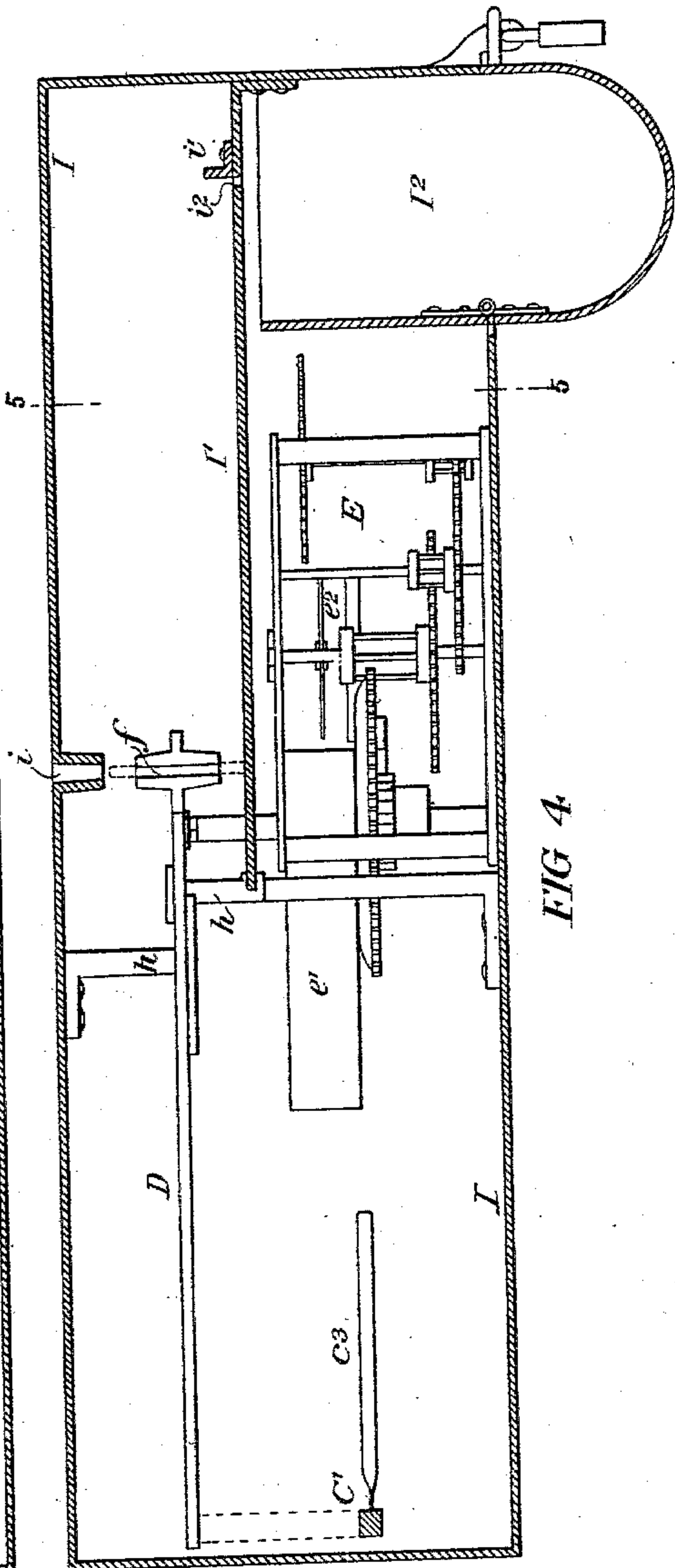


FIG 4.



Witnesses:
Will. A. Bass.
H. D. Goodwin

Inventor:
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By his Attorneys
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UNITED STATES PATENT OFFICE.

WILLIAM NEVE MILSTED, OF NEW YORK, N. Y., ASSIGNOR TO THE PREPAYMENT APPLIANCE COMPANY, OF BURLINGTON, NEW JERSEY.

PREPAYMENT GAS-CONTROLLER.

SPECIFICATION forming part of Letters Patent No. 559,737, dated May 5, 1896.

Application filed June 19, 1894. Serial No. 515,048. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM NEVE MILSTED, a citizen of the United States, and a resident of New York city, New York, have
5 invented a certain Prepayment Gas-Controller, of which the following is a specification.

The object of my invention is to construct
10 the mechanism which controls the flow of gas through a pipe in such a manner that on the insertion of a coin and moving of a handle the gas will be turned on and clock mechanism will be wound, so as to allow the use of
15 gas for a certain period controlled by the clock mechanism, which cuts off the gas after a certain interval.

My invention is especially applicable to pipes connected to gas stoves or heaters or to fixtures in apartments or flats; but it will be
20 understood that it can be used in any place where a prepayment device is required. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

25 Figure 1 is a sectional plan view through the box, showing my improved prepayment mechanism in elevation, the parts being in position to receive a coin. Fig. 2 is a similar view to Fig. 1, with the parts moved to a position to release the coin. Fig. 3 is a view
30 similar to Fig. 1, showing the hand-wheel returned, so as to open the valve and allow the gas to pass through the pipe. Fig. 4 is a sectional elevation. Fig. 5 is a transverse section on the line 5 5, Fig. 4.

35 A is the gas-pipe, which may lead from any source of gas supply.

40 a is a gas-valve controlled by the hand-wheel, and a' is a gas-valve controlled by the clock mechanism.

B is a shaft having a handle b, by which it is turned, and on this shaft is a pinion b', gearing into a rack c on a slide C.

45 On the valve a is an arm a², which is actuated by pins c' c² on the slide C. These pins are so set that they will throw the valve at the end of either the forward or return movement. At one side of the slide C is a slide
50 D, having a rack d, engaging with the gear-wheel e on the shaft E of the clock mechanism E'. This clock mechanism may be of the

usual construction, having a mainspring e' and an escapement e², but with the spring so arranged as to rotate the winding-arbor in the opposite direction when running down to
55 that given the arbor in winding the clock up. On the stem of the valve a' is an arm a³, which is acted upon by pins d' d² on the slide D. These pins are so set on the slide that they actuate the valve as the slide reaches either
60 of its extreme positions. In each slide is a coin-slot f, so shaped as to receive a coin of the proper denomination, which is passed through the coin-slot i in the case I, Fig. 4. The coin rests upon a platform I' within the
65 case, and when in position shown by dotted lines in Figs. 4 and 5 the coin locks the slides C and D together, so that they will travel forward as the handle is turned in the direction of the arrow, Fig. 1, motion being imparted
70 to the gear-wheel e of the clock mechanism, so as to wind the spring.

When the coin reaches a stop i' on the platform I', the slides have reached the limit of their forward movement and the coin drops
75 through the slot i² in the platform into the receiving-box I², which is provided with a suitable door for the removal of the collected coins. The slides D and C are in the present instance slotted and are guided by projec-
80 tions h, extending from the fixed portion of the apparatus; but other methods of guiding the slides may be employed without departing from my invention. As the two slides are moved forward, being connected by the
85 coin, they wind the spring of the clock mechanism, as remarked above, and as soon as the coin is discharged, as indicated in Fig. 2, the slide C is returned to its normal position by turning back the shaft B. The object of this
90 arrangement is to compel the person using the device to always return the slide C to its normal position, so that when the slide D is returned by the clock mechanism it will aline with the slide C and the coin-slots in the slide
95 will be directly under the coin-slots in the casing.

The valves are so set in respect to the slides that when the slide C is in the position shown in Figs. 1 and 3 its valve a will be open and
100 when the slide D is in the position shown in Fig. 1 its valve a' will be closed, so as to pre-

vent the passage of gas through the pipe without a coin is first dropped into the coin-slot and the two slides connected.

When the two slides are in the position shown in Fig. 2, the valve a' is open, but the valve a is closed, and before the gas can be used the slide C must be returned to its normal position, as shown in Fig. 3, in which view both valves are shown open, allowing the gas to pass through the pipe.

On the slide C is an arm C' , carrying a flexible finger c^3 , which may engage with the escapement-wheel e^2 of the clock mechanism, as shown in Fig. 2. In order to stop the mechanism when gas is not required, the finger can be moved in position by simply turning the handle forward, moving the slide C in the position shown in Fig. 2, without interfering with the slide D. If, for instance, the mechanism is so set that on the insertion of a coin of the denomination of a quarter of a dollar it will run six hours before cutting off the gas, the valves will be opened for this length of time and as much gas can be used as passes through the pipe within this time. If, however, it is only wished to burn the gas for two hours at one time, the gas can be cut off by closing the valve a and moving the slide C forward, so that the finger c^3 will come in contact with the escapement e^2 . Thus the mechanism is stopped until the gas is again wanted, when by simply turning back the handle and the slide C the gas will be turned on and the clockwork set in motion.

It will be understood that the details of the apparatus may be modified without departing from my invention, and the slides may be operated by a push-rod, as shown by dotted lines in Fig. 2, instead of the shaft B and the gearing, and the coin-slot for the insertion of a coin may be formed so as to prevent the insertion of a blank and to prevent tampering with the internal mechanism.

In some instances the valve a may be dispensed with and the valve a' only used, or a compound valve may be used controlled by both slides.

I claim as my invention—

1. The combination of two slides C and D, clock mechanism geared to the slide D and

spaced pins or lugs on the slides with a gas-pipe having a valve mechanism provided with two arms, the pins or lugs on one slide operating one of said arms, and the pins or lugs on the other slide operating the other of said arms, the slides being adapted to be coupled on the insertion of a coin.

2. The combination of the pipe A, the valves a a' , arms on said valves, a slide C having a rack, a hand-operated shaft having a pinion engaging with the rack, a slide D situated adjacent to the slide C, a coin-slot in each slide, a rack on said slide D, clock mechanism geared to said rack, lugs on the slide C engaging with the arm on the valve a , and lugs on the slide D engaging with the arm of the valve a' , substantially as described.

3. The combination of the hand-operated slide C, a valve controlled thereby, a clock mechanism, and a slide D adapted to wind the clock mechanism on its forward movement and adapted to be returned to its normal position by the unwinding of the clock mechanism, with a valve controlled by said slide D, an arm on the slide C adapted to stop the clock mechanism when the gas is cut off by closing its valve a , substantially as described.

4. The combination of the casing having a coin-slot and a coin-receptacle with a platform I' discharge-opening for the coin, two slides situated side by side above the platform, and each having a coin-slot, means for moving one slide, and clock mechanism geared to the other slide so that on the insertion of a coin in the coin-slot the two slides will be coupled together, and on the forward movement of the hand-operated slide the clock mechanism will be wound, and on the limit of said forward movement the coin will drop clear of the slides and thus disconnect them, and a valve or valves controlled by the slides, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM NEVE MILSTED.

Witnesses:

EDITH J. GRISWOLD,
GEORGE BAUMANN, Jr.