

C. D. HASKINS.  
SYSTEM OF ELECTRIC DISTRIBUTION.  
APPLICATION FILED SEPT. 26, 1904.

904,776.

Patented Nov. 24, 1908.

Fig. 1.

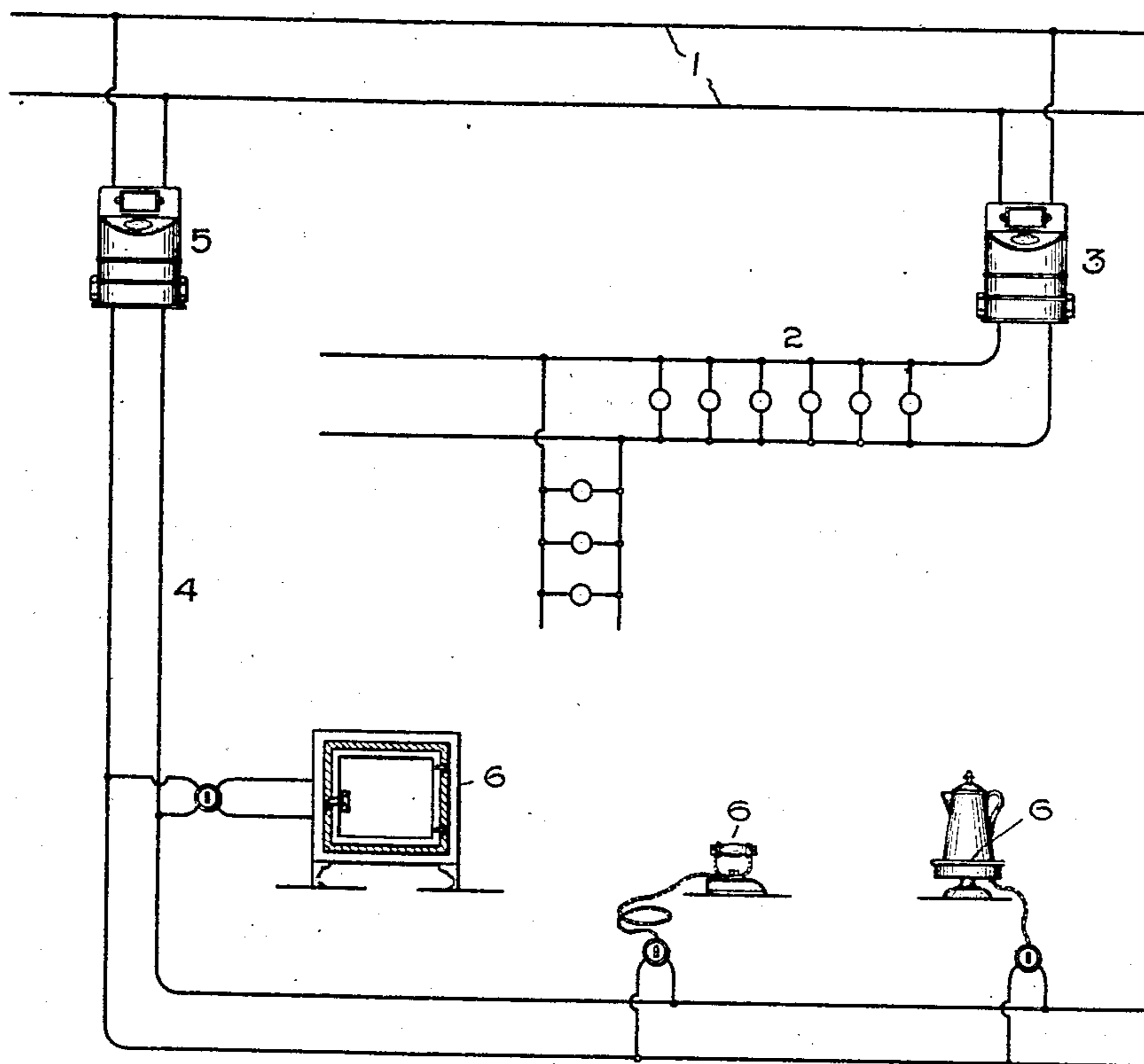
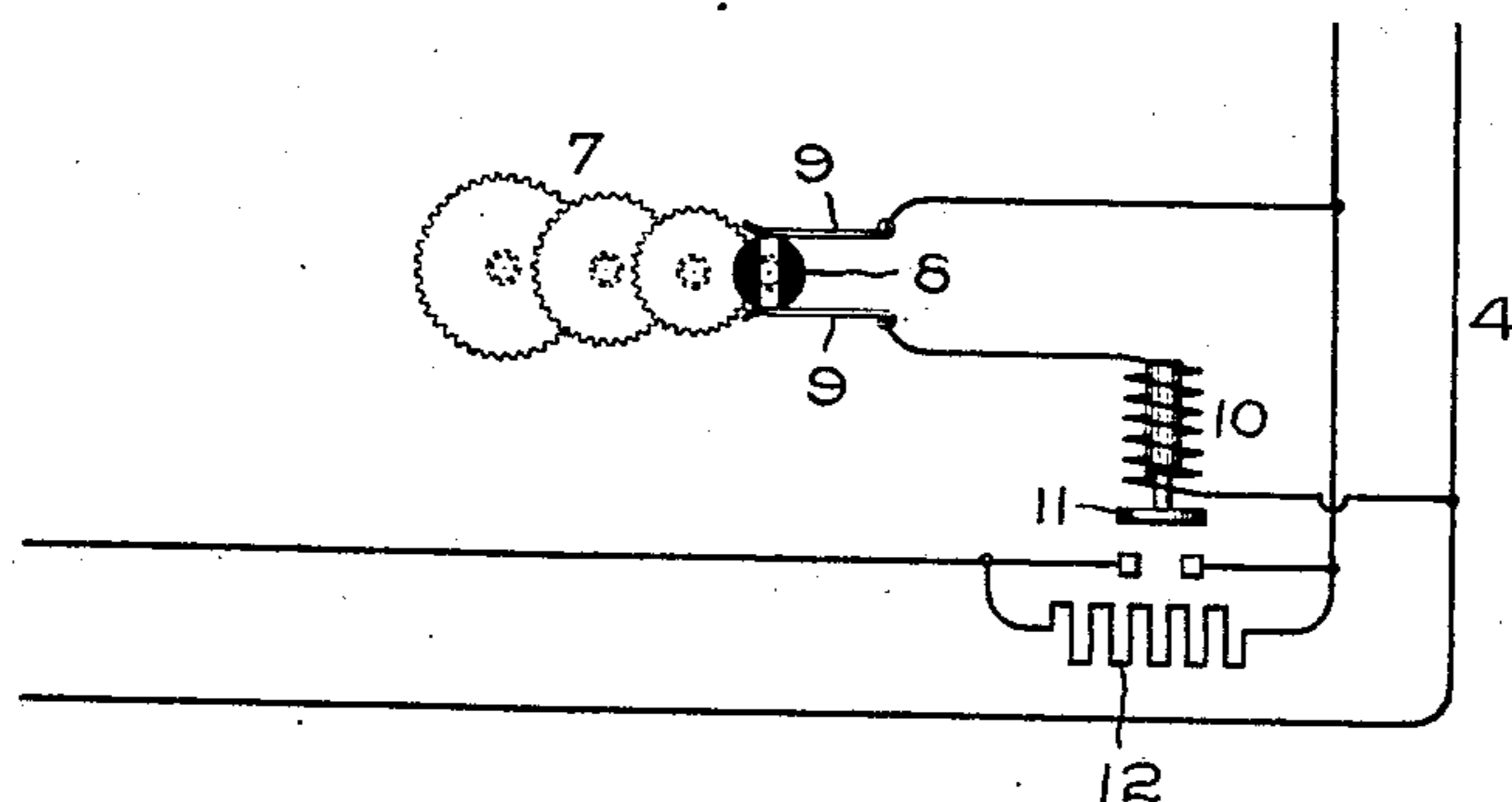


Fig. 2.



Witnesses:

*Benjamin B. Hice,*  
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Inventor:

Caryl D. Haskins,  
by *Albert B. Davis,*  
Att'y.

# UNITED STATES PATENT OFFICE.

CARYL D. HASKINS, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

## SYSTEM OF ELECTRIC DISTRIBUTION.

No. 904,776.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed September 26, 1904. Serial No. 225,920.

*To all whom it may concern:*

Be it known that I, CARYL D. HASKINS, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Systems of Electric Distribution, of which the following is a specification.

This invention relates to systems of distribution of electric energy for lighting and heating. It is possible for electric light and power companies to sell current for certain special applications, such as heating and cooking, at much lower prices than for lighting, because the demand for such current is distributed through the day and drops off at about the time when the lighting load comes on. Owing to the difference in the rates of charge for the two currents, it is desirable to measure the heating current on a separate meter from the lighting current. The danger is, however, that a dishonest customer will attach to the lines leading from this low rate meter, lamps and other load which should be paid for at the higher rate.

This invention consists in means for rendering the low-rate current practically useless for lighting and similar purposes, without impairing its efficiency for heating and cooking. This is accomplished by a device which automatically and periodically interrupts or diminishes the heating current, which will make it unfit for lighting purposes but does not interfere with its use for heating or cooking. I prefer to make this device a part of the meter which measures the current: though a variety of schemes for effecting the same result will occur to one skilled in the art.

In the accompanying drawing, Figure 1 is a diagram of circuits embodying my invention. Fig. 2 is a diagrammatic representation of the circuit controlling device.

From the mains 1 the lighting circuit 2 is fed through a meter 3, all as usual. A separate circuit 4 is fed through a separate meter 5 for supplying current to heating and cooking devices, some of which are sketched at 6.

Geared to some moving part of the meter, such as the registering train 7, is a make-and-break switch, such as a wheel 8 composed of conducting and non-conducting segments. Two light brushes 9 bear on the wheel and

form the terminals of a shunt across the leads 4. In the shunt is included an electromagnet 10 which when energized opens a line switch 11 in one of said leads. The line switch is preferably shunted by a non-induction resistance 12; though this is not needed when the circuit is to be actually interrupted and not simply dimmed.

The operation is obvious. The heating and cooking devices are supplied with current through the leads 4. The wheel 8 is geared to make, say, two revolutions a minute. Every time it reaches the position shown in Fig. 2 the circuit of the electromagnet 10 is momentarily closed as it opens the switch 11, thereby cutting in the resistance 12 and diminishing the current to such an extent that a lamp would go out or glow very faintly. As this occurs every thirty seconds, it is evident that this circuit is practically useless for lighting. The momentary reductions of current do not, however, seriously affect the heating and cooking devices, which do not require a constant current. The system therefore affords the distributing company complete protection against a customer who might try to defraud it by attaching his lamps to the heating circuit.

What I claim as new and desire to secure by Letters Patent of the United States, is,—

1. In a system of electric distribution, the combination with a circuit and a motor meter having a rotatable member actuated in response to current in said circuit, of means controlled by said member for periodically varying the current flowing in said circuit.

2. In a system of electric distribution, the combination with a circuit and a motor meter having a rotatable member actuated in response to current in said circuit, of a switch for controlling the circuit, and means controlled by said member for periodically opening and closing said switch.

3. In a system of electric distribution, the combination with a circuit and a motor meter having a rotatable member actuated by current in said circuit, of a switch for controlling said circuit, a resistance in shunt to said switch, and means controlled by said member for periodically opening and closing said switch.

4. The combination with an electric circuit, of a motor meter having a rotatable

member actuated by current in said circuit,  
a line switch controlling said circuit, an elec-  
tromagnet for operating said line-switch,  
and a make-and-break switch actuated by  
5 said member and in circuit with said electro-  
magnet.

5. The combination with an electric cir-  
cuit, of a motor meter having a rotatable  
member actuated by current in said circuit,  
10 a line switch controlling said circuit, an elec-  
tromagnet connected across the circuit for

operating said line switch, a make-and-break  
switch in circuit with said magnet and ac-  
tuated by said member, and a resistance in  
shunt to said line switch.

In witness whereof, I have hereunto set  
my hand this 24th day of September, 1904.

CARYL D. HASKINS.

Witnesses:

BENJAMIN B. HULL,  
HELEN ORFORD.