J. B. FULLER.

Electric Meter for Measuring the Current of Electricity

No. 210,316. Patented Nov. 26, 1878.

FIG. 1.

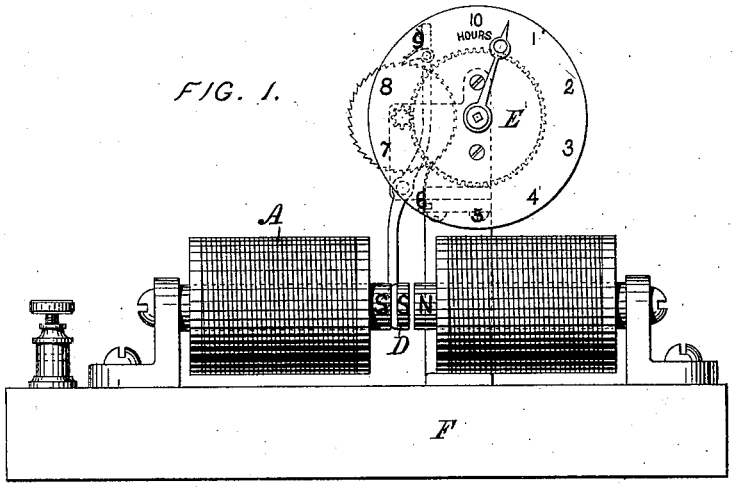


FIG. 2.

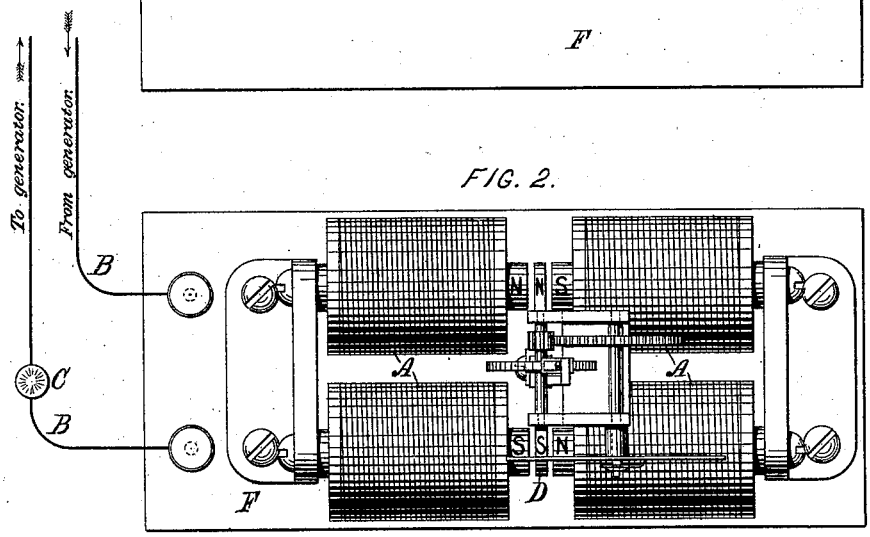
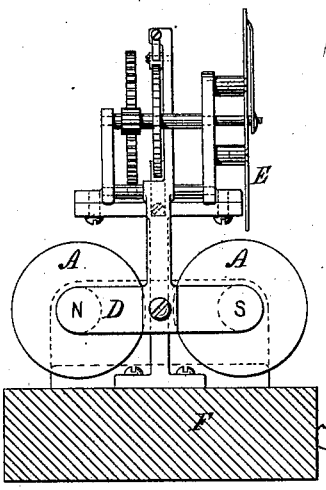


FIG. 3.



WITNESSES:

Andrew M. Kent.

INVENTOR:

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UNITED STATES PATENT OFFICE.

JIM BILLINGS FULLER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN ELECTRIC METERS FOR MEASURING THE CURRENT OF ELECTRICITY.

Specification forming part of Letters Patent No. **210,316**, dated November 26, 1878; application filed November 14, 1878.

To all whom it may concern:

Be it known that I, JIM BILLINGS FULLER, of Brooklyn, New York, have invented a new and useful Improvement in Electric Meters, of which the following is a specification:

The characteristic feature of this invention is the employment of electro-magnetic mechanism, operated by the current which produces the light in such a manner as to automatically indicate and register the number of hours of illumination, or other convenient units of measurement, whereby the value of the light may be computed.

This invention may be used in connection with electric lamps working direct from the electric generator, or it may be used in connection with lamps working in secondary circuits. It may be used with each lamp, or it may be placed near the generator in the main circuit, and register for all the lamps in the district supplied by the generator; and the apparatus must be operated in the circuit of an electric current flowing alternately in opposite directions. An armature of polarized steel is placed between these magnets, and connected by levers or other suitable contrivances with a ratchet or escapement, or other convenient device, whereby the motion of the armature will produce a forward movement of the registering mechanism, which may be of any convenient construction.

In the drawing, A represents two electro-magnets, coiled and connected, so as to produce the polarity shown at N and S while the currents flow in one direction, and so as to produce opposite polarity when the said currents are reversed. These electro-magnets are included in and form a portion of the circuit B with the lamp or lamps C.

D is a steel armature, permanently magnetized with polarity, as shown, and is arranged between the poles of the electro-magnets. This armature is attached to a lever, D, having a pawl, which engages a ratchet in connection with the registering apparatus, so that the movement of the armature caused by the change of polarity of the electro-magnets produced by the alternating of the currents will impart a forward movement to the registering mechanism. Any other form of electro-magnet may be used which will cause the vibratory motion of the polarized armature.

I am aware that the electric current has been employed for moving clock-work, and for measuring time and for measuring numbers, and indicating and registering the same. Therefore I do not claim the movement of clock-work or other mechanism by the electric current.

I claim—

In an electric-lighting system in which the light is produced by alternating currents, an electro-magnet placed in the main or induced current circuit, or in a shunt therewith connected and having a polarized armature, the vibrations of which actuate a train of register-wheels, substantially as and for the purpose specified.

JIM BILLINGS FULLER.

Witnesses:

ANDREW W. KENT,

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