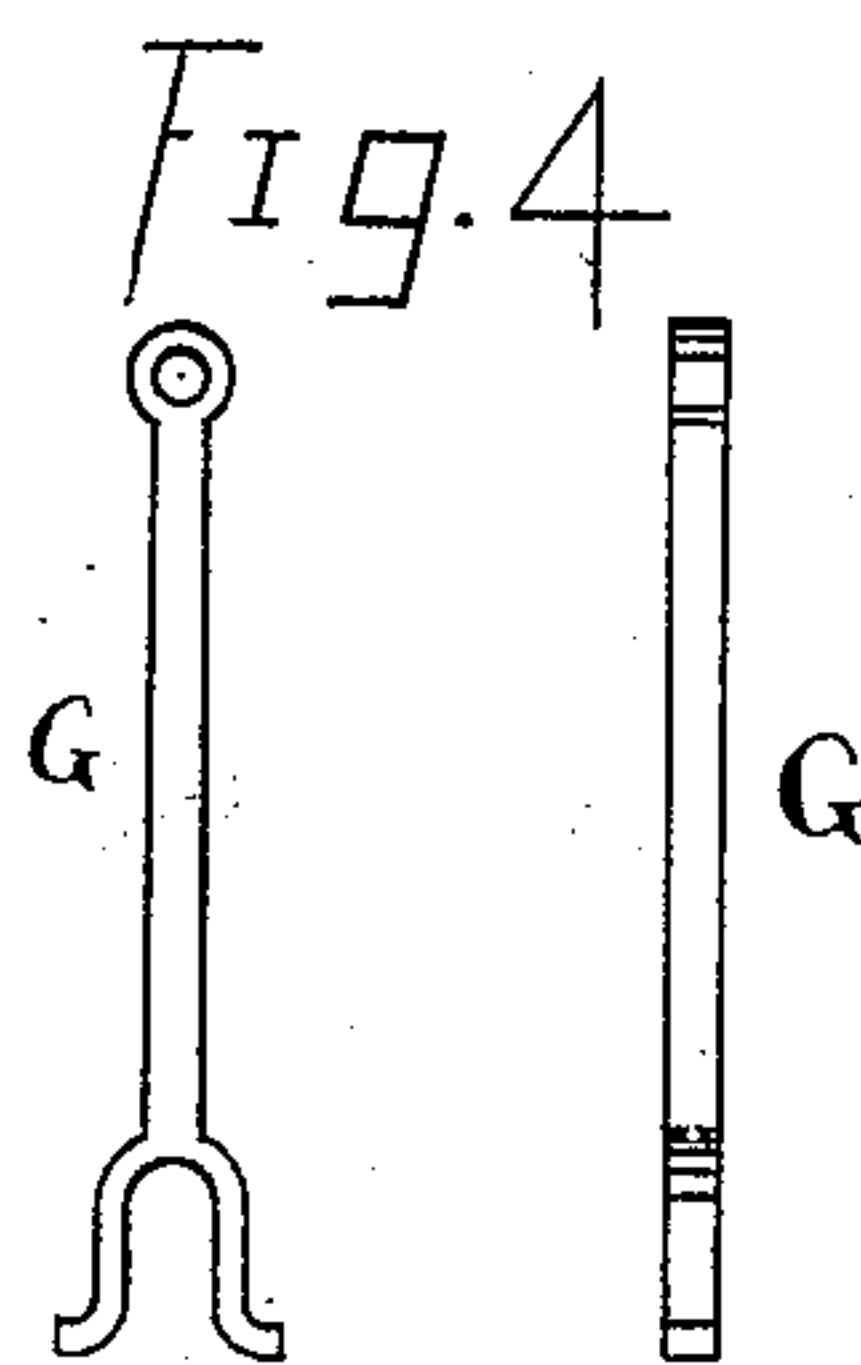
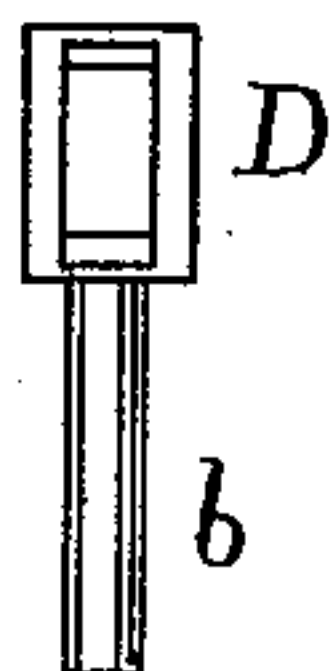
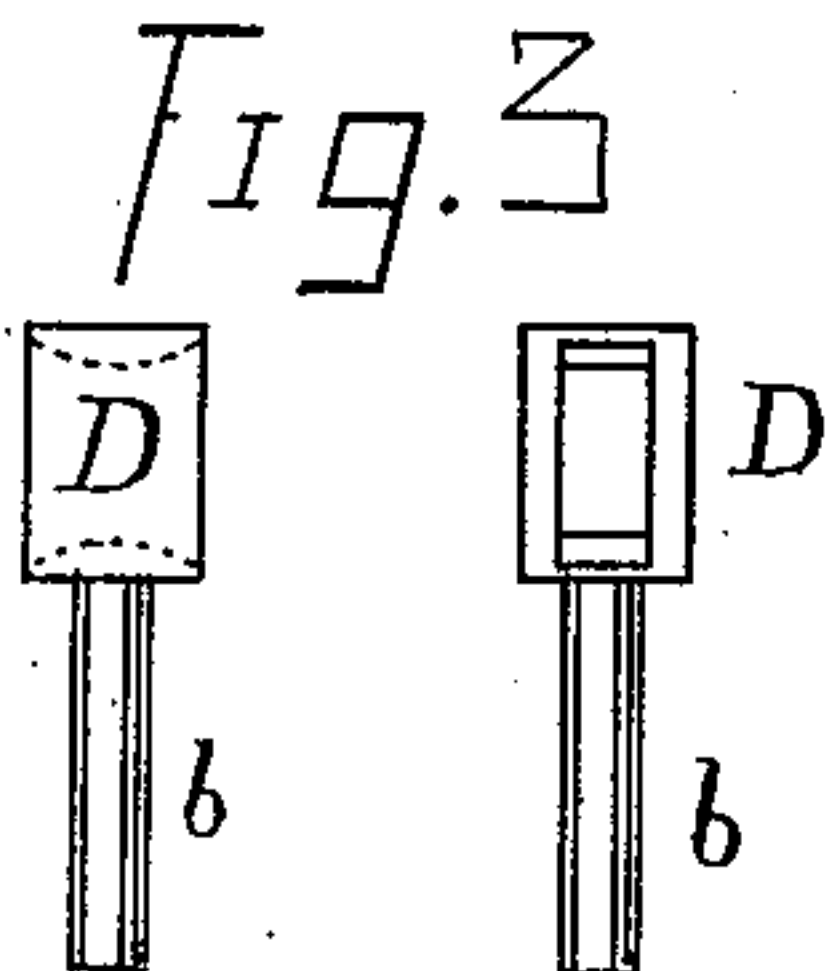
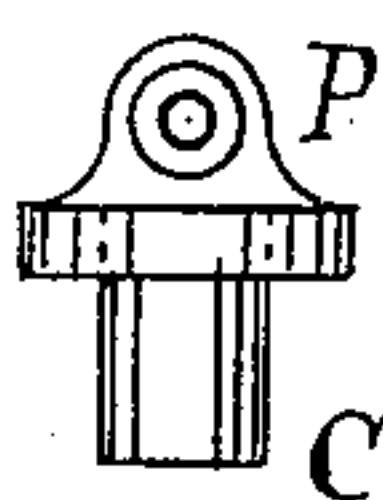
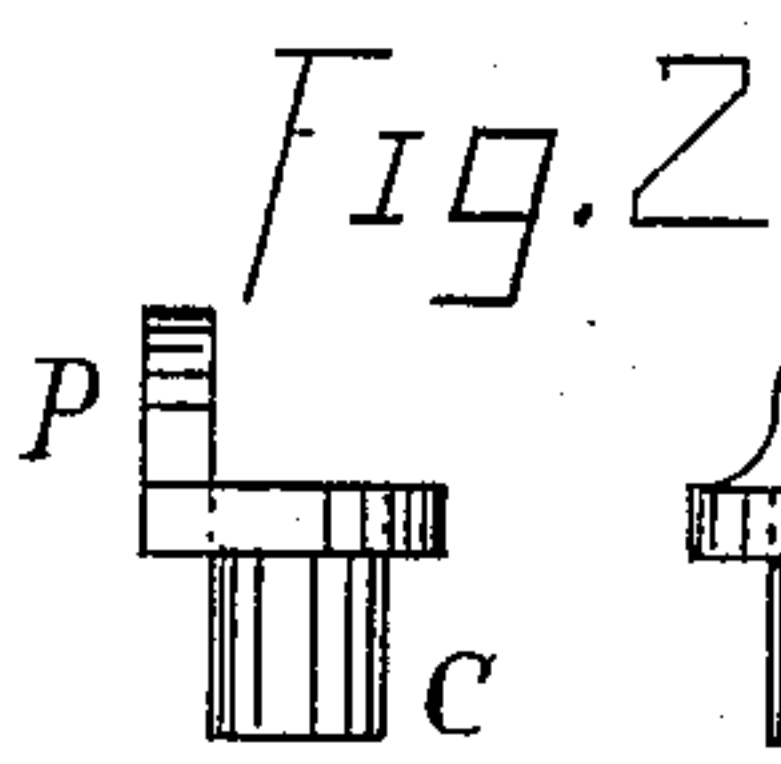
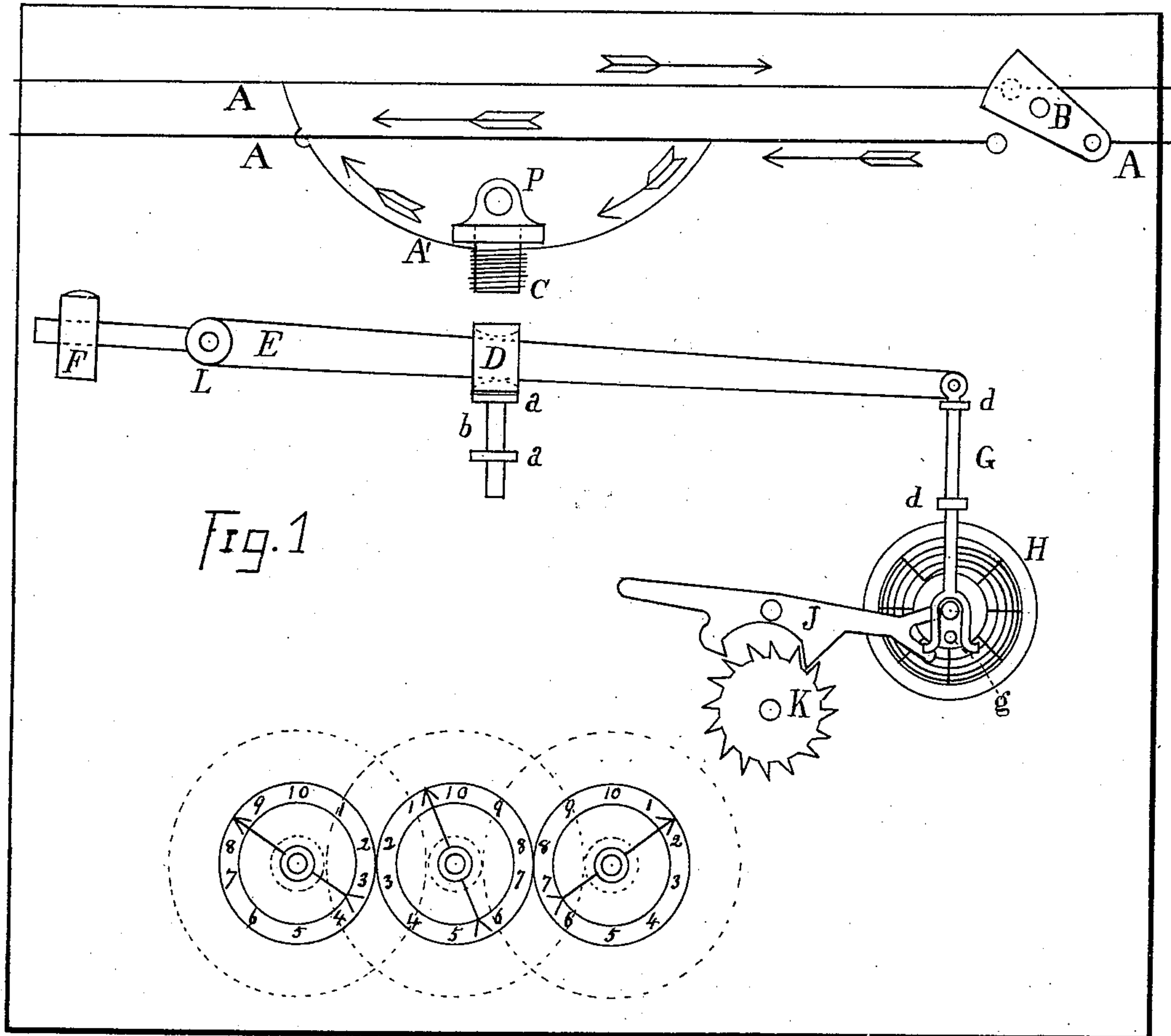


(No Model.)

W. McKINNEY.
ELECTRIC METER.

No. 407,414.

Patented July 23, 1889.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM MCKINNEY, OF SCHUYLKILL FALLS, PENNSYLVANIA.

ELECTRIC METER.

SPECIFICATION forming part of Letters Patent No. 407,414, dated July 23, 1889.

Application filed April 19, 1889. Serial No. 307,828. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MCKINNEY, a citizen of the United States, residing at Schuylkill Falls, county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Timing Electric Currents, of which the following is a specification.

My invention relates to a class of apparatus employed for registering the time a continuous current of electricity is passing over a wire; and it consists in the combination of an automatic and electrically-operated stop and starting device with a lever-operated clock-movement for operating the hands on two, three, or more dials, to record the time a current is flowing over the wire that controls the clock-movements, as is illustrated in the accompanying drawings, in which—

Figure 1 represents a front view of my improvement and the manner of connecting the same with a lever clock-movement working three dials. Figs. 2, 3, and 4 are parts shown in detail.

Similar letters refer to similar parts throughout the several views.

A represents the electric cable; B, the switch.

C is a round piece of soft iron fastened in an insulated stand P.

E is a lever pivoted on the stud L. This lever has an adjusting-weight F at the left-hand end.

D is a band of soft iron, constructed, as shown in Fig. 3, with a shaft *b*, that fits loosely in the guides *a a*, Fig. 1.

G is a rod made of a shape as shown in Fig. 4. This rod is connected to lever E by a small stud-pin, as shown in Fig. 1. The rod G is fitted to slide freely in guides *d d*, Fig. 1.

H is the balance-wheel, J the escape-lever, and K the escape-wheel, which connects with the train of wheels that move the hands on the dials.

The operation is as follows: When the switch B is connected, the current of electricity is supposed to flow in a direction indicated by the arrows. A part of the current leaves the main wire A, and by wire A' charges the magnet C, which attracts the keeper D on

lever E, draws it up against C, raises the rod G, thereby permitting the clock-movements to operate and register the hours on the dials the current is flowing. When the current is cut off by the switch B, the magnet C and armature D will separate, and lever E will drop so as to rest on the top guide *a*. This will cause the forked end on rod G to force down the roller-pin *g* on the balance-wheel H and stop the clock-movements. When the current is turned on, the rod G is raised, as before described, and the spring on balance-wheel H is in such a position as will start the clock-movements, and will operate until the current is cut off, when the clock will stop, as before described.

I prefer a clock having at least an "eight-day movement."

The drawings show the rod G with a forked end; but it may be made straight and set to drop on the end of the escape-lever J; but I prefer it forked and made to act on the roller-pin *g*.

It is obvious that the main wire A may be coiled around the magnet C, thus dispensing with the wire A'.

It is obvious that the lever E may be dispensed with by placing the armature D on the rod G; but I think the arrangement with the lever preferable.

In a machine for registering the time an electric current is passing over a wire or cable, I claim—

1. A conducting wire or cable, a cut-off switch, electro-magnet having its armature connected to a lever, and a forked rod, in combination with a roller-pin and balance-wheel of a lever clock-movement, as shown and described, and for the purpose specified.

2. The conducting wire or cable, cut-off switch, electro-magnet, and an armature connected to a rod having a forked end, in combination with a roller-pin and balance-wheel of a lever clock-movement, as shown and described, and for the purpose specified.

WILLIAM MCKINNEY.

Witnesses:

JOHN SHINN,
HARRY M. SORBER.