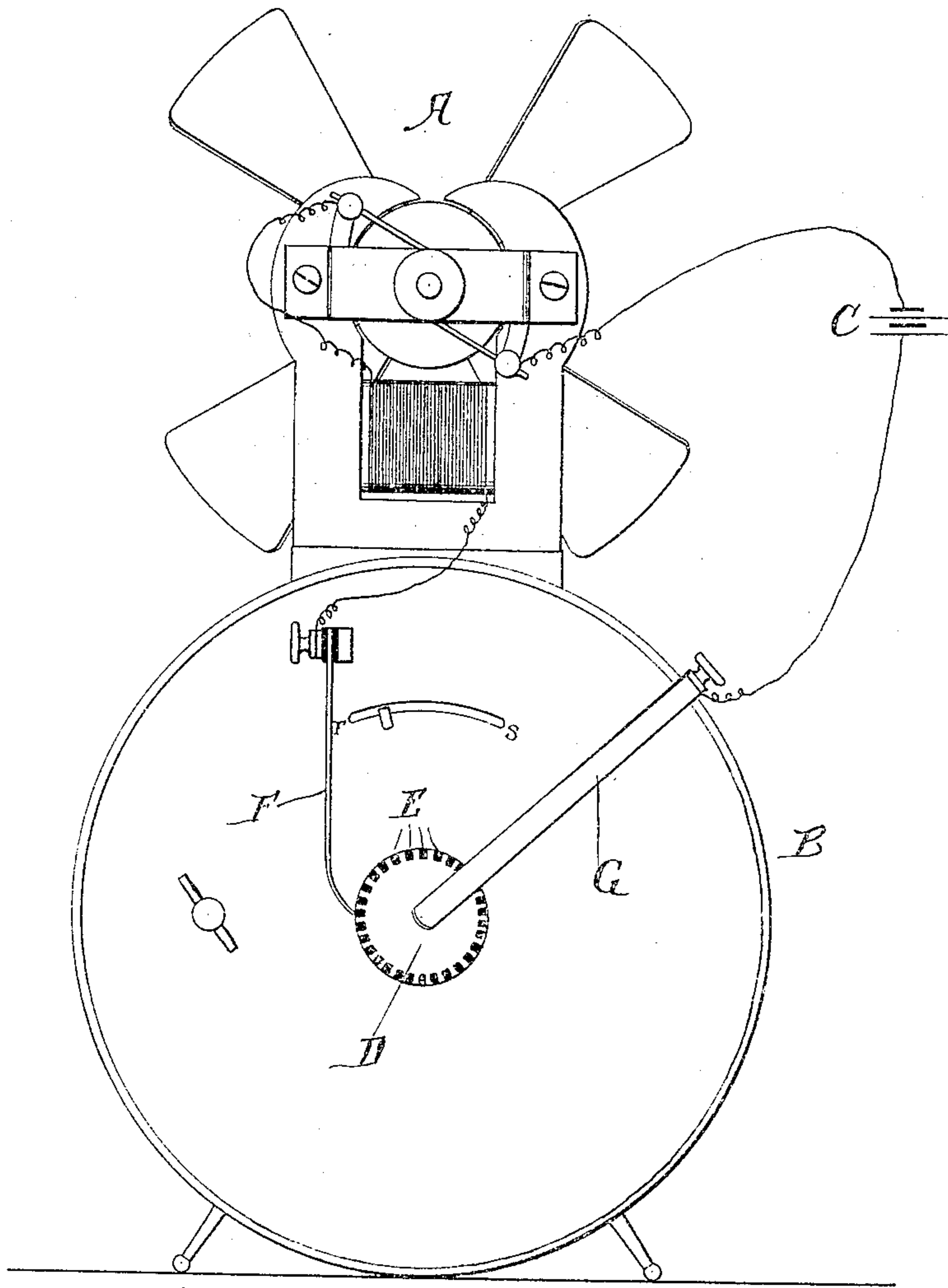


No. 816,903.

PATENTED APR. 3, 1906.

S. D. EARL.
COMBINATION CLOCK AND FAN.
APPLICATION FILED MAY 5, 1905.



Witnesses:

H. B. Hallock,
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Inventor
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By

W. P. Williamson

Att'y.

UNITED STATES PATENT OFFICE.

SPENCER D. EARL, OF NORRISTOWN, PENNSYLVANIA.

COMBINATION CLOCK AND FAN.

No. 816,903.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed May 5, 1905. Serial No. 258,993.

To all whom it may concern:

Be it known that I, SPENCER D. EARL, a citizen of the United States, residing at Norristown, county of Montgomery, and State of Pennsylvania, have invented a certain new and useful Improvement in Combination Clocks and Fans, of which the following is a specification.

My invention relates to a new and useful improvement in combination electric clocks and fans, and has for its object to provide an electric fan designed to be operated, preferably, by a primary battery, and a make-and-break apparatus is included in the circuit, which is operated by the clock, so as to cause the fan to run intermittently—that is, the fan will be operated for a predetermined length of time and then the circuit will be open a predetermined length of time, these operations occurring alternately.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawing, forming a part of this specification, in which is illustrated a rear elevation of a clock and fan attached thereto incorporating my improvement.

A represents an electric fan which may be of any desired shape or construction.

B represents a clock, which also may be of any desired construction, and while the fan is shown resting upon the top of the clock it is obvious that the fan can be separate therefrom and removed from the same any distance, and there may be any number of fans, the running of which will be operated from one clock.

C is a source of electricity, preferably a primary battery.

D represents the knob at the rear of the clock which is ordinarily used for setting the hands of the clock. The knob in this case is made of metal, and around the periphery of this knob are arranged small blocks of insulating material E, which are an equal distance apart, and bearing against the periphery of this knob is a spring-strip F, the other end of which is secured to the clock-frame, but insulated therefrom.

G is a spring-strip secured at one end to

the clock-frame, and the inner or free end bears against the surface of the knob D, so that said spring-strip is always in contact with said knob while the knob is turning. A wire extends from the spring-strip F through the field and armature of the motor to one terminal of the battery C, and a wire leads from the other terminal of the battery to the strip G. Thus it will be seen that when the spring-strip F is in contact with the metallic portion of the knob D between any two blocks of insulating material a circuit will be established through the material which will operate the fan; but this knob D, being connected to the same arbor as that upon which the hands of the clock are located, will turn slowly, and as the metallic portion of the knob passes from out of contact with the strip F one of the insulating-blocks will pass into contact therewith, and the circuit will be broken and remain broken until the knob D has turned sufficiently to bring another metallic portion in contact with the strip F, and so on alternately opening and closing the circuit. Of course the relative time in which the fan will operate and the circuit will be open can be regulated by arranging the insulating-blocks around the periphery of the knob. The advantage of this will be at once apparent, as it is well known that ordinary primary open-circuit batteries will very quickly polarize and become useless if the circuit is closed for any great length of time; but these batteries will last a comparatively long time if the circuit is closed for a short time, then opened and closed again, the batteries recuperating during the time the circuit remains open, and this will give almost the same effect as if the fan runs continuously and at the same time will enable a small number of primary batteries to be used, and these batteries will last a comparatively long time.

Of course I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of the invention.

Having thus fully described my invention, what I claim as new and useful is—

1. The combination of an electric fan, clock and source of electricity, with make-and-break apparatus included in the circuit and adapted to be operated from one of the wheels of the clock to make and break the circuit alternately, as specified.

2. In a device of the character described,

in an electric fan, a clock, a metallic disk se-
cured upon the same shaft as one of the hands
of the clock and adapted to turn therewith,
blocks of insulating material arranged an
5 equal distance apart around the periphery of
the disk, the outer surface of the insulating-
blocks being flush with the metallic portion
between the blocks, a spring-finger, the end
of which is in spring-contact with the periph-
10 ery of the disk, a source of electricity, one
terminal of which is permanently in electrical
connection with the metallic disk, a wire lead-

ing from the other terminal of the source of
electricity, and after passing through the
fan-motor being connected to the spring-fin- 15
ger, as specified.

In testimony whereof I have hereunto af-
fixed my signature in the presence of two sub-
scribing witnesses.

SPENCER D. EARL.

Witnesses:

HARY JAMES HANNAWAY,
SIDNEY H. STEINER.