No. 712,673. Patented Nov. 4, 1902.

J. HARRIS.

PROCESS OF OPERATING ELECTRIC MOTORS.

(Application filed Jan. 23, 1902.)

(No Model.)

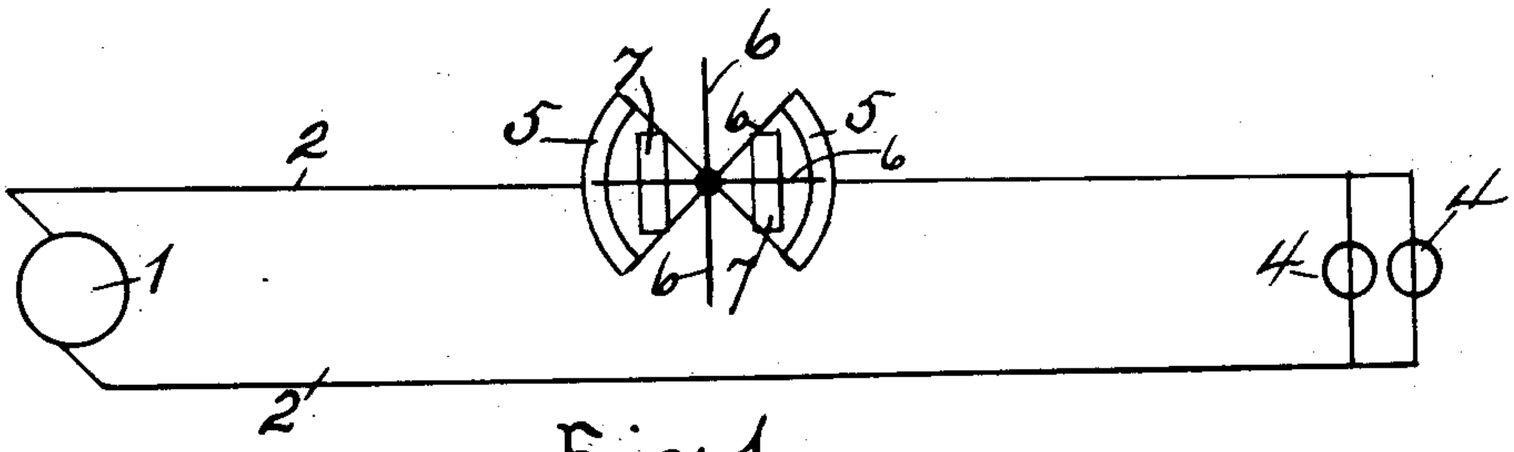

Fig: 1.

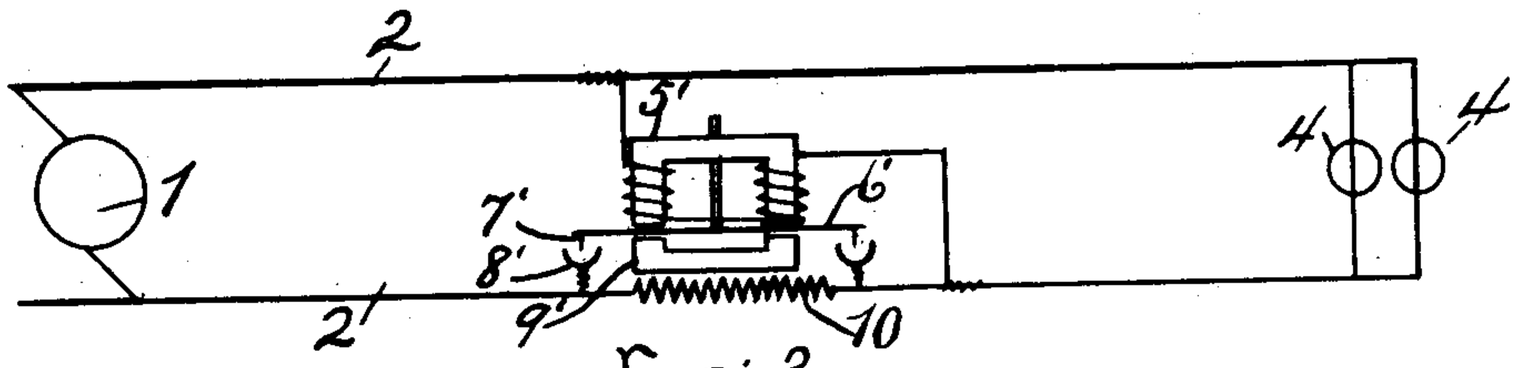

Fig: 2.

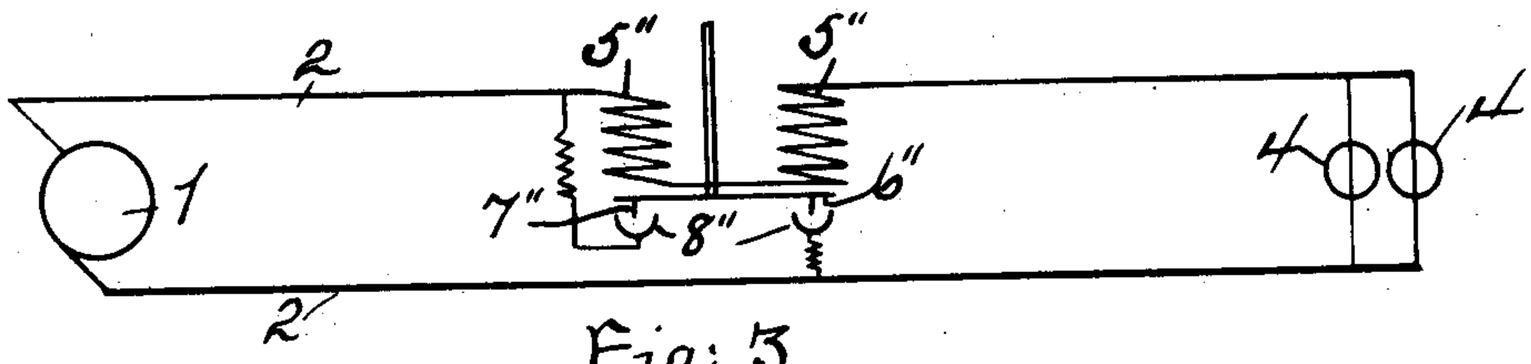

Fig: 3.

Witnesses:
James H. Brown
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Inventor:
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UNITED STATES PATENT OFFICE.

JESSE HARRIS, OF RENSSELAER, NEW YORK.

PROCESS OF OPERATING ELECTRIC MOTORS.

SPECIFICATION forming part of Letters Patent No. 712,673, dated November 4, 1902.

Application filed January 23, 1902. Serial No. 90,906. (No specimens.)

To all whom it may concern:

Be it known that I, JESSE HARRIS, a citizen of the United States, residing at Rensselaer, New York, have invented certain new and useful Improvements in Processes of Operating Electric Motors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a new and improved process or method of operating electric motors.

In the drawings I have shown a diagram of my process or method, in which—

Figure 1 shows in plan one method; Fig. 2, a side elevation of Fig. 1, showing more fully the plan; and Fig. 3, different connections resulting in the same end.

This invention consists in passing a current of electricity through a fluid conductor and then through recurring paths to a second fluid conductor and from thence to the main line, using a revolving member whose ends or portions thereof dip into the conducting fluid at intervals in succession, cutting as they revolve the magnetic flux produced by the current in the field-circuit.

In Fig. 1 the numeral 1 shows a source of electrical power, 2 2 the line, and 4 4 lamps or translating devices; 5, cups or receptacles containing the fluid conductor, preferably mercury; 7, magnetic poles forming the field, and 6 arms forming the movable or revoluble member, having their ends successively coming in contact with the fluid conductor.

In Fig. 2, 5′ shows an electromagnet; 6′, a movable or revoluble member having portions of it, as 7′, dipping into mercury-cups 8′; 9′, a path for the magnetic flux, and 10′ a resistance in shunt with the armature-circuit.

In Fig. 3, 5″ shows coils in series with the line; 6″, a movable member having portions of it, 7″, dipping into mercury-cups 8″, the cups being connected in derivation and in series with the resistance.

The diagrams do not show specific constructions of devices, but simply electrical connections and relations that may be used in carrying out my process.

In Fig. 1 it will be seen that the arms 6, forming the recurring paths, are so set and arranged that there is never a moment when the ends of said arms are not in electrical connection with the mercury in the vessels 5 5, and therefore the power that drives the motor is constant and not intermittent, and the current flows as a continuous unbroken current.

The source of current may be either primary or secondary or any source of electric power desired.

In this specification I do not claim the specific devices shown, having made these the subject of another application, Serial No. 90,907, filed January 23, 1902; but

What I do claim is—

The method of operating motors as herein described which consists of passing an electric current into separated bodies of fluid conductors; conducting the current from the said separate bodies of fluid conductors through recurring paths; a plurality of said paths being always in electrical connection with a plurality of the fluid bodies, the paths cutting a magnetic field substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JESSE HARRIS.

Witnesses:
JAMES M. BROWN,
J. F. HARRIS.