

931,743.

Patented Aug. 24, 1909.
2 SHEETS—SHEET 1.

Fig. 1.

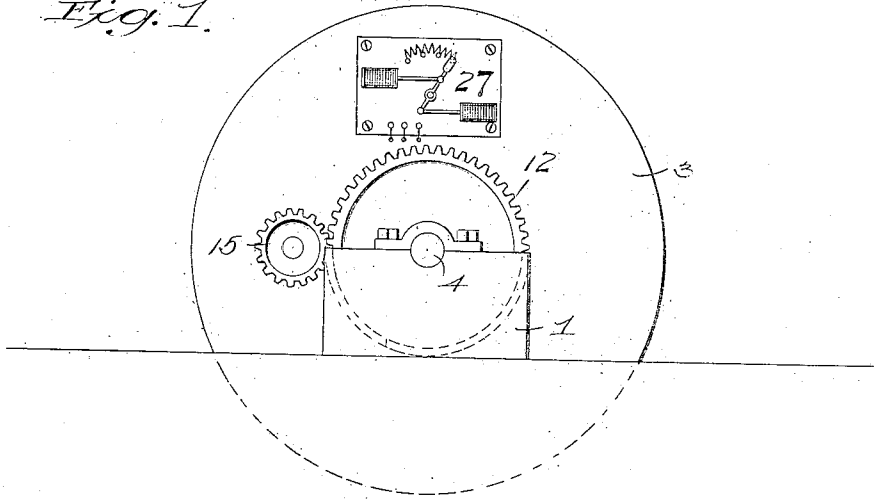
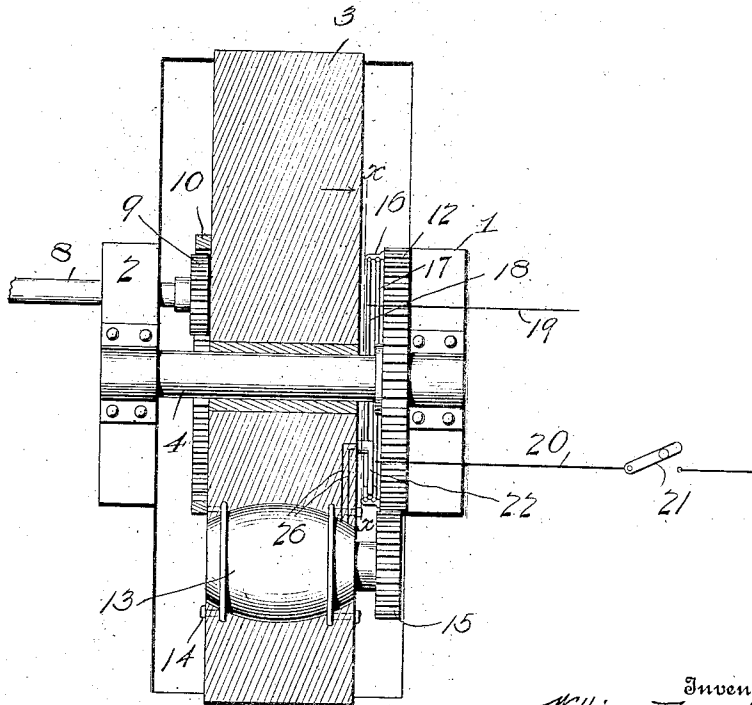


Fig. 2



Inventor
William Farrell

Witnesses

J. L. Mochane
T. C. Turner.

By

Edm Bros,

Attorneys

931,743.

Patented Aug. 24, 1909.
2 SHEETS—SHEET 2.

Fig. 3.

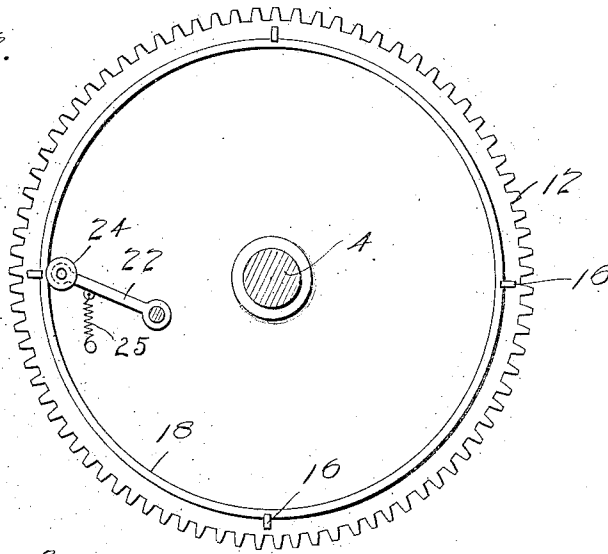


Fig. 4.

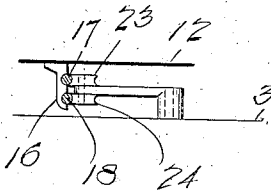
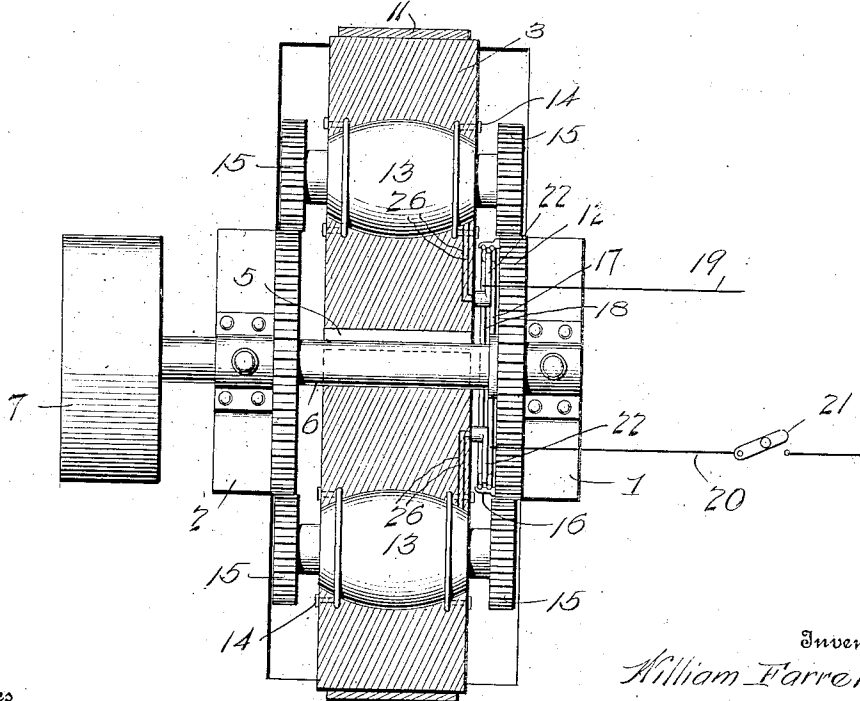


Fig. 5.



Witnesses

D. L. Mackay

V. E. Turner

Inventor

William Farrell

By

Edson Bros.

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM FARRELL, OF PHILADELPHIA, PENNSYLVANIA.

ELECTRIC ENGINE.

981,743.

Specification of Letters Patent.

Patented Aug. 24, 1909.

Application filed August 3, 1908. Serial No. 446,751.

To all whom it may concern:

Be it known that I, WILLIAM FARRELL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented an Electric Engine; 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.

My invention relates to electric motors, especially adapted for use in a power house to run dynamos.

In my invention the frame, armature and rheostat of a motor are all mounted on one revolving body so that the armature will travel around a stationary track when said body revolves. It is not my intention to interfere with the construction of the motor, but my idea is to mount the motor itself upon a revoluble body by which the revolutions of the armature of the motor are exchanged on a stationary body for the revolutions of the frame of the motor secured to the revolving body. The frame of the motor should of course be securely fastened to the revolving body. By placing the motor in this position, it is given an enormous mechanical purchase and is capable of making a full revolution around the center without a change or reverse in movement as is required by the piston rod of an engine for example. The momentum of the revoluble body, which is made solid and heavy, is much greater than the band wheel of an engine. Furthermore, the use of my motor will diminish the load of friction by doing away with counter-shaft pulleys, belts and belt tighteners.

My invention consists further in the features of construction and combinations of devices hereinafter described and specified in the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention: Figure 1 is a side elevation of a motor constructed in accordance with my invention. Fig. 2 is an enlarged plan view showing the revoluble body in central section. Fig. 3 is an enlarged sectional view taken on the line $x-x$ of Fig. 2 looking in the direction of the arrow and showing the construction and arrangement of the trolley engaging the circular wires. Fig. 4 is a broken detailed view showing the particular construction of the trolley and the arrange-

ment of the two wheels contacting thereon with two circular wires, and Fig. 5 is a plan view of a modified construction, the revoluble body being shown in central section as in Fig. 1.

Referring more particularly to the drawings, 1 and 2 designate stationary supports between which the revoluble body 3 is hung. Said revoluble body may be mounted to freely rotate upon a fixed shaft 4 as illustrated in Fig. 2 or it may be keyed, as at 5, or otherwise fixed to a revoluble shaft 6, as shown in Fig. 5. When the shaft is revoluble, it may be extended beyond its bearings on the supports and carry a drive pulley 7, see Fig. 5. When the shaft is fixed, power may be taken from the revoluble body by an auxiliary shaft 8 carrying a pinion 9 engaging an internal gear 10 fixed to the side of said revoluble body as shown in Fig. 2. In either arrangement the power of the motor may be transmitted directly from the revoluble body, as, for instance, by a belt 11 mounted thereon as illustrated in Fig. 5.

A stationary track or gear wheel 12 is cast on or rigidly secured to one of the supports and is arranged parallel to the side face of the revoluble body.

An electric motor 13 of any ordinary or suitable construction is mounted in a cavity in the revoluble body with its frame or casing securely bolted as at 14 or otherwise secured to said body. The armature of the motor carries a wheel or pinion 15 engaging or meshing with the stationary track or gear wheel 12. By this arrangement, it will be seen that when the armature of the motor revolves the pinion 15 will travel around the stationary gear wheel 12 and will cause the body 3 to rotate.

Supported by brackets 16 on the inner face of the stationary gear are arranged two parallel circular wires 17 and 18 respectively. These wires are charged with electricity through the feed wires 19 and 20 which may be passed through the stationary gear and one of which carries a controlling switch 21. A trolley 22 is pivotally mounted on the revoluble body and carries two wheels 23 and 24 contacting respectively with the circular wires 17 and 18. Said wheels are kept pressed against these wires by means of a spring 25 connected at its opposite ends to the revoluble body and trolley. The current collected by the wheels on the trolley from

the circular wires is carried to the motor by means of the wires or connections 26.

From the foregoing description it will be seen that when the switch 21 is turned on the current from a source of supply will pass through the feed wires 19 and 20, the circular wires 17 and 18, the trolley and its wheels and the wires 26 to the motor. The armature of the motor will thereupon begin to revolve and the gear carried thereby begin to travel around the stationary track or gear wheel thereby causing the revolution of the body 3. After said body has made a few revolutions it will develop a great momentum which will require only a small power derived from the motor to continue the rotation of said revoluble body.

Where it is desired to develop a greater horse power than can be obtained from the use of a single motor, two or more motors may be mounted on the revoluble body and connected with the stationary track and driven in a similar manner as the single motor. In Fig. 5 I have illustrated two motors mounted on the revoluble body. In this figure I have also shown two stationary tracks, one at each side of the revoluble body. The motors in this construction carry pinions on each of the ends of their armatures so that the pinions at one side engage one stationary track and those on the other side the other track.

I am aware that other changes may be made in the constructions shown and described in this application without departing from the spirit or sacrificing the advantages of my invention. I, therefore, do not confine myself to the exact constructions and arrangements herein set forth.

As illustrated in Fig. 1, a suitable automatic rheostat 27, may be mounted on the revoluble body so that the three parts of the electric motor are placed on said revoluble body and work together in the revolution thereof.

I claim:

1. The combination, with a revoluble body, of a stationary circular track, an electric motor mounted within said revoluble body, a wheel carried by the armature of said motor and engaged with said stationary track, electric connections to said motor, and means to transmit power from said revoluble body.

2. A device of the character described consisting of a revoluble body, said revoluble body mounted on a horizontal shaft, a motor mounted within said revoluble body, a gear wheel secured to said motor, a circular stationary track adjacent to said revoluble body, said gear wheel engaging said track for the purpose specified.

3. A device of the character described consisting of a revoluble body, said revoluble body being mounted on a horizontal engine

shaft, means for transmitting power from said shaft, an electric motor mounted within said revoluble body, a gear wheel secured to the armature of said motor, a stationary circular track adjacent to said revoluble body, said gear wheel engaging said track, and means for transmitting an electric current to said motor as shown and specified.

4. The combination, with a revoluble body, of a stationary circular track arranged at each side of said body, an electric motor mounted within said revoluble body, wheels carried by the opposite ends of the armature of said motor and engaging the opposite track, respectively, and electric connections to said motor.

5. The combination, with a revoluble body, of a stationary circular track, an electric motor mounted within said revoluble body, a wheel carried by the armature of said motor and engaged with said stationary track, two circular wires secured to the inner face of said stationary track, and a trolley contacting with said wires and having electric connections with the motor.

6. The combination, with a revoluble body, of a stationary circular track, an electric motor mounted on said revoluble body, a wheel carried by the armature of said motor and engaged with said stationary track, two circular wires secured to the inner face of said stationary track, a trolley contacting with said wires and having electric connections with the motor, feed wires to said circular wires and a controlling switch on one of said feed wires.

7. The combination, with a revoluble body, of a stationary circular track, an electric motor mounted on said revoluble body, a wheel carried by the armature of said motor and engaged with said stationary track, two circular wires arranged parallel to one another and secured to the inner face of said stationary tracks, a trolley carrying two wheels, each adapted to contact with one of said wires, means to hold said wheel against said wires, and electric connections from said trolley to the motor.

8. The combination, with a revoluble body, of a stationary circular track, an electric motor mounted on said revoluble body, a wheel carried by the armature of said motor and engaged with said stationary track, electric connections from said track to said motor, a gear on the side of said revoluble body, and a transmission shaft carrying a pinion meshing with said gear for the purpose specified.

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

WILLIAM FARRELL.

Witnesses:

WILLIAM NOLAN,
JAMES J. MURPHY.