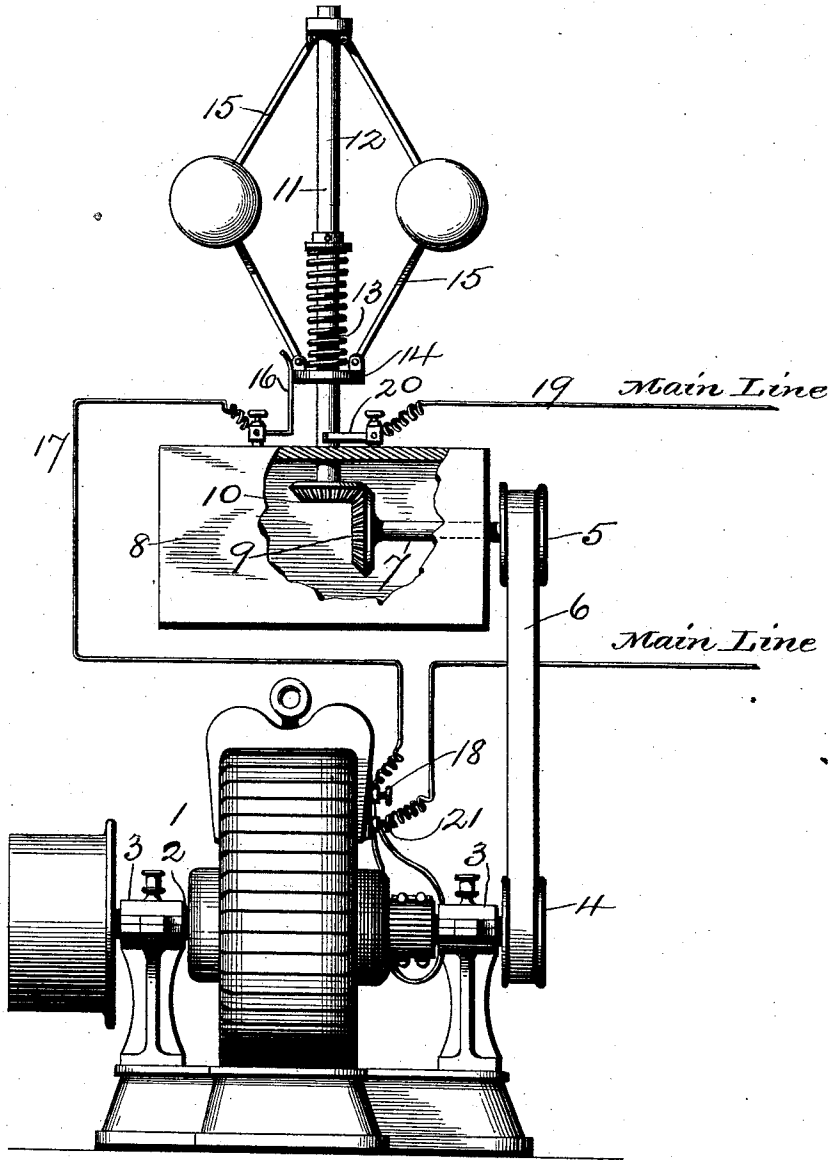
(No Model.)

L. H. LEBER.

SPEED REGULATOR FOR DYNAMOS OR MOTORS.

No. 469,257. Patented Feb. 23, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

LUTHER H. LEBER, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO DAVID J. RICHARDSON, OF SAME PLACE.

SPEED-REGULATOR FOR DYNAMOS OR MOTORS.

SPECIFICATION forming part of Letters Patent No. 469,257, dated February 23, 1892.

Application filed May 11, 1891. Serial No. 392,329. (No model.)

To all whom it may concern:

Be it known that I, LUTHER H. LEBER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Speed-Regulators for Dynamos and 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.

The nature of my improved regulator for dynamos and motors is fully set forth in the following description and claims.

The drawing represents in side elevation my improvement as applied to a motor and governor.

The design of my improvement is to electrically secure the automatic regulation of the speed of a dynamo or motor, and this is accomplished by connecting the motor by means of a belt and gearing with the center rod of a governor, in providing said governor-rod at one point with insulating material or forming a portion of said rod of insulating material, in connecting one side of the main-line wire to the governor-rod, and in connecting the continuous wire with a ring carried by the lower portion of the governor-arms. By this arrangement, when the machine runs overspeed the governor rises and brings one side of the connected line upon the insulated portion of the governor-rod and thereby cuts out the current until the speed is reduced to the proper ratio, when the governor-arms descend to bring the wire carried thereby into position to again restore the current.

1 represents any form of dynamo or motor employed, with which is connected a shaft 2, journaled in bearings 3 and carrying a pulley 4. From said pulley extends to a pulley 5 a belt 6. The pulley 5 is carried by a shaft 7, journaled in a box 8, and having thereon and within said box a cog-gear 9, which meshes with a similar gear 10, carried by the lower end of the center rod 11 of the governor 12, and whereby motion from the dynamo or other motor is transmitted to the governor-rod. The governor-rod is insulated at the point 13 in any suitable or known manner. With a ring or disk 14, carried by the lower ends of the governor-arms 15, is connected by spring-contact arm, as at 16, the wire 17, which from thence passes to a binding-post 18 on the motor. One side of the main-line wire 19 has spring contact, as at 20, to the center rod of the governor, and is in turn connected to a binding-post 21 on the motor. The battery connection with the wires is not shown, as that will be well understood and is unnecessary of illustration here.

While the motor continues to run at the desired speed, the parts remain in their normal positions, as shown in the drawings. When, however, the speed of the dynamo or motor increases beyond the degree desired, the accelerated motion will, through the belt and gearing already described, be transmitted to the governor-rod, thereby causing the governor-arms to expand and rise. As they so rise they will draw upward the ring or disk 14, with which the continuous wire 17 is connected, into contact with the insulated portion 13 of the governor-rod and thereby cut out the current. When the speed decreases and is reduced to the desired degree, the governor-arms descend to their normal position and bring the wires again into contact and restore the current and again start the motor. By this arrangement it will readily be seen that the motor is effectively prevented from running overspeed for any appreciable length of time, that as soon as it commences to run overspeed the current is automatically cut off until the proper speed is restored, and that an equable speed is automatically maintained by a simple, cheaply-constructed, and effective arrangement.

What I claim is—

1. An automatic electrically-controlled speed-regulator for dynamos and motors, consisting of a governor having its center rod insulated for a portion of its length, a main-line wire having connection with a suitable battery and having contact, respectively, with the governor-rod at a point thereof below the insulated portion and with a binding-post on the motor, a continuous wire connected, respectively, with a binding-post on the motor and with a ring or disk carried by the lower portion of the governor-arms, and gearing connecting the motor-shaft and the governor-

rod, substantially as and for the purpose set forth.

2. An automatic electrically-controlled speed-regulator for dynamos and motors, consisting of a motor having binding-posts thereon, a box, a governor having its center rod insulated for a portion of its length and having its lower end extended within said box and provided with a cog-gear, a shaft journaled within said box and having a cog-gear adapted to gear with the similar cog-gear on the governor-rod and having on its outer end a pulley, a belt connecting said pulley and a similar pulley on the motor-shaft, a ring or disk carried by the lower ends of the governor-arms, and current-wires connected, respectively, as described, with said binding-posts and with the uninsulated portion of the governor-rod and with the ring or disk carried by the governor-arms, substantially as and for the purpose set forth.

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

LUTHER H. LEBER.

Witnesses:
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