

# UNITED STATES PATENT OFFICE.

JAMES W. HAMMOND, OF FREDONIA, NEW YORK.

## ELECTRIC-CURRENT REGULATOR.

SPECIFICATION forming part of Letters Patent No. 714,893, dated December 2, 1902.

Application filed July 23, 1902. Serial No. 116,689. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES W. HAMMOND, a citizen of the United States, residing at Fredonia, in the county of Chautauqua and State of New York, have invented a new and useful Electric-Current Regulator, of which the following is a specification.

My invention relates to certain improvements in devices for regulating electric currents, and has for its object to provide an improved form of automatic governor for changing the resistance in an electric circuit in accordance with the speed of rotation of the dynamo or generator, the device being applicable for use in regulating the current supplied to lamps, motors, or other devices where the current is to be utilized.

A further object of the invention is to provide a simple form of governing mechanism which may be adjusted to suit any special requirements and in which a greater or less quantity of resistance may be placed in the circuit in accordance with the speed of rotation of the generator or the speed or load of a motor.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a current-regulating mechanism constructed in accordance with my invention. Fig. 2 is a longitudinal sectional elevation through the central portion of the revolving governor, illustrating the construction of the governor-adjusting devices.

Referring to the drawings, 1 indicates a hollow shaft mounted in bearings in suitable standards 2 and provided with a collar having a plurality of lugs 3, to which are pivoted a number of weighted arms 4, the weights being preferably in the form of spheres 5, secured at or near the free ends of the arm and adapted to spread outwardly from the shaft under the influence of centrifugal force. On the hollow shaft is a sliding collar 6, connected by links 7 to the governor-arms, the links being pivoted to both the arms and the sliding collar in order to permit the free pivotal move-

ment of the arms. The shaft is provided with diametrically opposing slots 8, through which extends a cross-bar 9, rigidly secured to the sliding collar. This cross-bar, together with the sliding collar, is normally held at or near the outer ends of the slots by a compression-spring 10, arranged in the hollow shaft, one end of the spring bearing against a disk 11, carried by an adjustable screw 12, adapted to a threaded portion of the shaft, the screw being movable in either direction to increase or decrease the stress of the spring and being locked in any position to which it may be adjusted by a jam-nut 13. The hollow shaft is provided with a pulley 14 or a gear-wheel, to which motion is transmitted from a revoluble portion of the dynamo, motor, or other device forming the actuating medium for the governor.

To the cross-bar 9 is secured a rod 15, extending out through the end of the hollow shaft and adapted to a guiding and supporting bracket 17, having an opening in which said rod may freely revolve and which will permit free longitudinal movement of said rod as the latter is actuated by the governor. On the rod is secured a grooved collar 18, in which fits a sleeve 19, the sleeve being provided with a pin or bolt 20, on which is pivoted an oscillatory arm 21, one end of which is bent downwardly at a right angle to the upper portion of the rod and carries a contact block or brush 22.

On a suitable base is a standard 23, having at its upper end a headed bolt or pin 24, adapted to receive the slotted end of the arm 21, the slot permitting free movement of the arm as the latter is oscillated by the longitudinal movement of the rod 15. To the standard is pivoted a switch-lever 25, having a suitable operating-handle and adapted to be moved into or out of contact with a binding-post 26, connected to a line-wire 27, which in the present instance is shown as connected to a number of arc-lamps 28 and a dynamo 29, although the connection may be with a motor or any other device where the current is to be utilized.

At a point adjacent to the revolving governor is placed a commutator 31, comprising a plurality of metallic blocks 32, insulated from each other and connected in series with



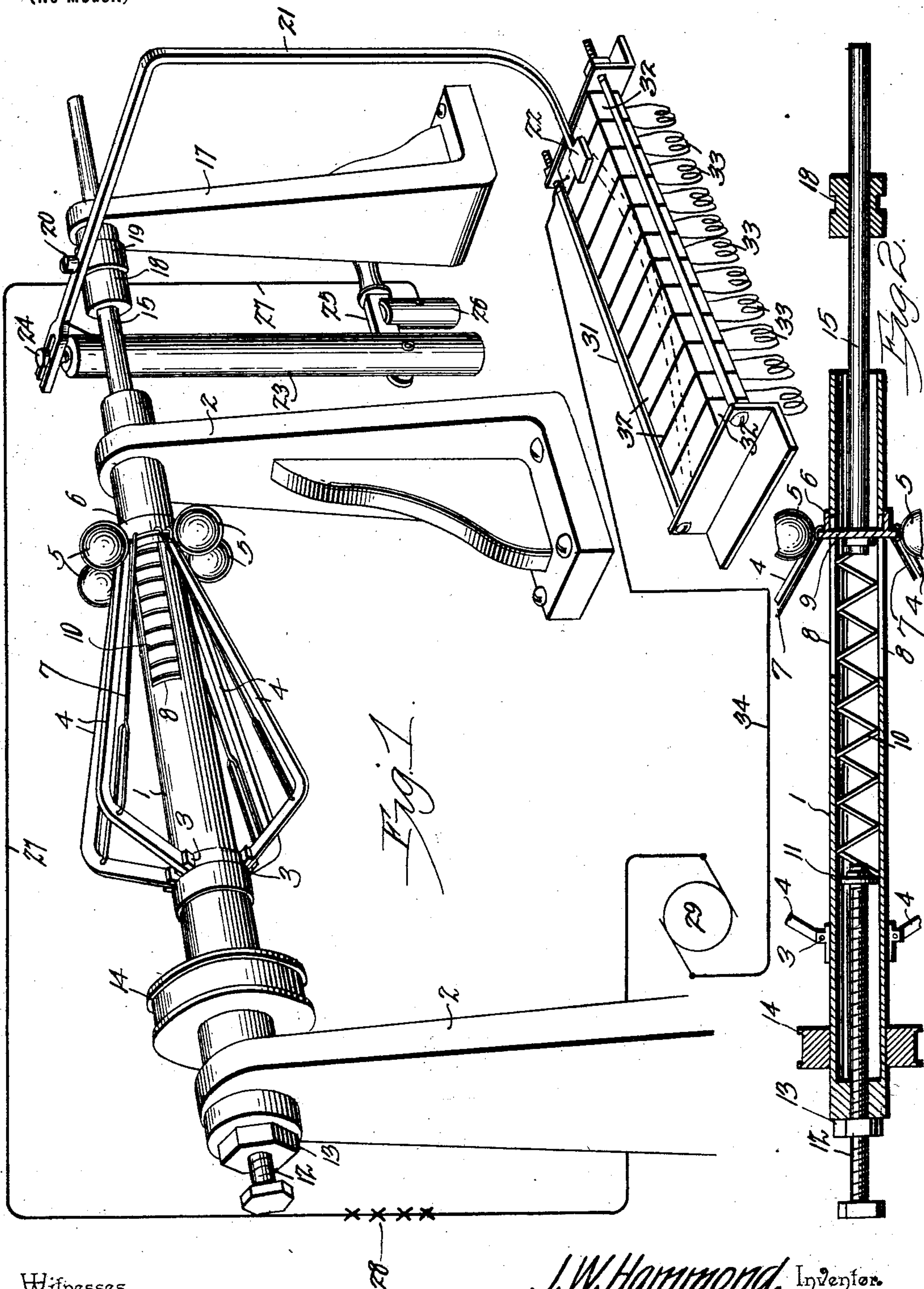
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ELECTRIC CURRENT REGULATOR.

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Witnesses  
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