

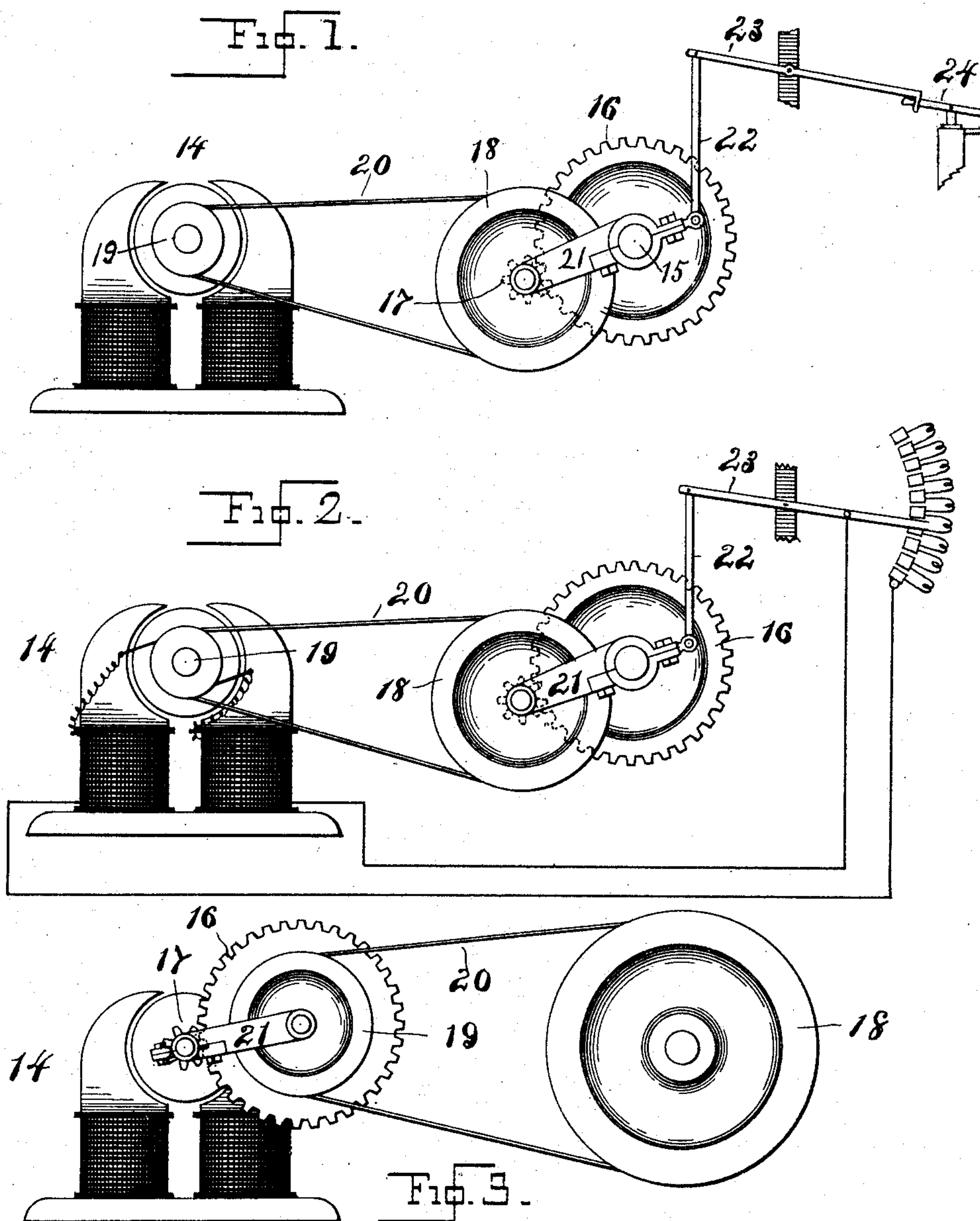
(No Model.)

J. C. HENRY.

REGULATOR FOR DYNAMO ELECTRIC MACHINES.

No. 504,216.

Patented Aug. 29, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN C. HENRY, OF NEW YORK, N. Y.

REGULATOR FOR DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 504,216, dated August 29, 1893.

Application filed April 29, 1892. Serial No. 431,206. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. HENRY, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Electric Regulators, of which the following is a specification.

My invention relates to a combined power-transmitting and electric regulating device which I will first fully describe with reference to the accompanying drawings.

In the accompanying drawings, Figures 1, 2 and 3 are views (in elevation) of three forms of my invention.

In Fig. 1, 14 may represent a stationary dynamo driven by an engine-shaft 15, through intermediate speed reducing gear 16 and pinion 17, pulleys 18, 19 and belt 20, (preferably elastic.) The pinion 17 is held against the gear 16 by hangers 21. To these hangers I connect a rod 22, which by means of lever 23 is adapted to operate the valve 24 of the steam engine driving the dynamo. It will thus be seen that the increase of load on the dynamo, causing the pinion 17 to travel out of a straight line between the shaft 15 and the armature-shaft, will operate the valve 24, the operation being in proportion to the amount of such deflection, and consequently in proportion to the changes of load on the dynamo. In Fig. 2 a similar arrangement is shown except for the substitution of a rheostat for the steam engine valve, so that the operation of the lever 23 controls the resistance of the circuit including the field magnets of the dynamo, and consequently regulates the electro-motive force or current of the dynamo as desired.

The two preceding figures have shown power transmitting mechanism whereby the speed is geared up between the driving-shaft 15, and the dynamo-shaft, the belt being a high speed one, and the gearing part of the mechanism running at low speed. Fig. 3 represents a transposition of these parts, wherein a powerful slow speed belt 20 is used to transmit power to a gear 16, which intermeshes with pinion 17, directly on the dynamo-shaft. The mechanism is therefore capable of use where power is to be transmitted with any change of speed. It is exceedingly compact, and can be used where large pulleys, belts, and counter-shafts are impossible. When applied to the regulation of steam engines, it does away with the present complicated system of governors or cut-offs, and simplifies the construction of the engine. The connection of the regulating device herein shown may be either to the throttle-valve or to the cut-off of the steam-engine.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

The combination of a power transmitting gearing, consisting of a gear and pinion held to intermesh, but one free to rotate about the other, belt and pulley connected to and adapted to drive one of said members, and a regulating device connected to the free member of the gearing, and adapted to operate substantially as set forth.

JOHN C. HENRY.

Witnesses:

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