The Canadian Patent Office Record

Vol. XI.—No. 9. SEPTEMBER, 1883. { Price in Canada $2.00 per An. / United States - $2.50 "

CONTENTS.

INVENTIONS PATENTED..... 313
ILLUSTRATIONS..... 333
INDEX OF INVENTIONS..... I
INDEX OF PATENTEES..... II

INVENTIONS PATENTED.

NOTE—Patents are granted for 15 years. The term of years for which the fees have been paid, is given after the date of the patent.

No. 17,408. Dynamo and Magneto Electric Machine. (*Machine electro dynamique et magnétique.*)

William Hochhausen, New-York, N. Y., U. S., 26th July, 1883; 15 years.

Claim.—1st. The combination, with an adjustable commutator, on a dynamo electric machine, of an electric motor geared to said commutator and reversing appliances for automatically reversing the direction of movement of said motor simultaneously, with any change in the normal strength of the current of said machine. 2nd. The combination, with an adjustable commutator and a rotary electric motor geared thereto, of a circuit controller for controlling the direction of the current flowing through said motor, and an armature which actuates the circuit controller and is energized or controlled directly or indirectly by variations in the electro magnetic action of currents supplied from the machine. 3rd. The combination, with an adjustable commutator, of an electric motor geared thereto and placed in a branch of the main current, and means for automatically reversing the direction of movement of said motor upon a variation in the current flowing in the circuit supplied by the machine. 4th. The combination, with *an adjustable frame or support for the commutator brushes*, of a segmental gear formed upon or attached to said frame and actuating devices gearing with said rack and reversed in accordance with variations in the current flowing in the circuit supplied by the machine. 5th. The combination, with an adjustable commutator on a dynamo electric machine, of a rotary motor geared thereto and means for reversing said motor controlled by an armature that is supported by the field magnet and arranged to be actuated by the magnetic attraction thereof. 6th. The combination, with an adjustable commutator on a dynamo electric machine, of a rotary motor, a reducing gear interposed between the motor and the commutator, and means for reversing the motor automatically as the currents in the main circuit rise or fall above the normal. 7th. The combination, with an adjustable commutator, of the rotary motor placed in a bridge between two branches, each containing a resistance and means for admitting the current to one or the other terminal of the motor or to both simultaneously, as and for the purpose described. 8th. The combination of the adjustable commutator, the rotary motor geared thereto, the bibranched circuit, each branch containing an arificial resistance, the motor terminals connected to the two branches and a circuit closer for admitting the circuit to one or the other of the branches as described. 9th. The combination, with the electric motor of the rocking lever carrying two insulated contacts, one connected to one and the other to the other terminal of the motor, and a rocking circuit closer working upon said lever, in the manner described, so as to close one or the other circuit or both simultaneously. 10th. The combination of the circuit closing lever r, the double contact lever q q^2, whose contacts are insulated from one another and arranged one above the other, and the electric motor and artificial resistances, connected as described. 11th. The combination with the commutator brush support F, of the rack a, the electric motor and the gear b d c. 12th. The combination with the rotary motor and the adjustable commutator, of reversing devices for said motor, and an armature for actuating said circuit reversing devices supported on the field magnet frame. 13th. The combination with the *adjustable commutator*, of the rotary motor supported from the field of force magnet. 14th. The combination with the adjustable commutator, of the rotary actuating electromotor, the pole pieces g g, for said motor connected to the pole pieces of the machine, and the non-magnetic connecting pieces g g^2, in which the motor shaft is pivoted. 15th. The combination of armature N, circuit closer r, double insulated contacts t t^2, each connected with the continuation of the circuit through a separate branch containing an artificial resistance and an electric motor in a bridge between said branches, at a point between the resistance and the circuit closer. 16th. The combination of circuit closer r, armature N, compound contact lever q q^2, contact t t^2, resistances R R2 and electric motor connected as described. 17th. The combination, with the adjustable commutator on a dynamo machine, of an actuating electric motor whose pole pieces are magnetized from the field magnets of said machine. 18th. The combination with the revolving armature or armature shaft, on a dynamo electric machine, of an adjustable commutator and intermediate reversing mechanism for reversing the movement of the commutator brushes, or equivalent part of the commutator, according to the increase or decrease in the strength of the current on the circuit supplied by the machine. 19th. The combination with a dynamo *electric machine, of regulating* devices, whereby the electro motive force of the current supplied by the machine may be changed, means for imparting movement to said devices from the armature shaft, a reversing mechanism and devices for operating said mechanism, according to the increase or decrease of the strength of the current on the circuit supplied by the machine. 20th. The combination with the armature shaft, of adjustable commutator brushes connected therewith, intermediate reversing mechanism, two electro magnets acting in opposite directions on said reversing mechanism, so that when one prevails the commutator brushes may be moved in one direction and vice versa, when the other prevails, and means for energizing one or the other of said magnets simultaneously with the rise or fall of the normal current strength. 21st. The combination with the armature shaft, of adjustable commutator brushes connected therewith, intermediate reversing mechanism, electro magnets for operating the same and a circuit closer for controlling the circuits of said electro magnets, operated by an armature within the attraction influence of a magnet that is in the current of the machine or is suitably connected with said circuit, so as to be affected by the fluctuations of current strength therein. 22nd. The combination with the regulating appliances for a dynamo electric machine, of a suitable actuator and intermediate reversing mechanism, two electro magnets H H2 acting on said reversing appliances in opposite direction, and circuit closing devices for admitting current to one or the other of said electro magnets singly according to changes in the current strenght above or below normal. 23rd. The combination with a reciprocating frame or lever G, for controlling the reverse movements of the regulating appliances on a dynamo electric machine, of two magnet poles arranged to move said lever in opposite directions and means for restoring and holding said lever in a central or intermediate position, when the attraction of neither magnet pole prevails. 24th. The combination with the adjustable regulating devices for regulating the electro motive force of a dynamo electric machine, of a reversing mechanism, two electro magnets acting thereon in opposite directions and circuit closing devices for closing a circuit through one or both electro magnets according as the current strength is above or below normal or at normal. 25th. The combination with the armature shaft, of two discs or wheels h h^2, a wheel f through which movement may be communicated to the regulating devices for changing the electro motive force of the machine, and means for bringing said wheel into contact with one or the other of said discs or wheels h h^2, according as the current strength rises or falls above normal. 26th. The combination of the armature shaft having the two discs wheels or surfaces h h^2, the adjustable commutator brushes or other device for regulating the electro motive force of the machine, the intermediate actuating mechanism wheel f forming a portion of the same and mounted on a swinging lever, and two electro magnets acting on said lever in opposite directions, as and for the purposes described. 27th. The combination with the armature shaft, of the adjustable commutator or other device by the adjustment of which the electro motive force of the machine may be regulated, the intermediate actuating mechanism, the frame or support G carrying wheel f or other device whereby the mechanism may be run in either direction from the shaft and two electro magnets H H2 arranged to actuate the frame G in opposite directions, substantially as and for the purpose described. 28th. The combination of the armature shaft having driving surfaces h h^1, the adjustable commutator or its equivalent, the intermediate actuating mechanism provided with the movable driving wheel f, the two electro magnets controlling the position of said wheel, and suitable means whereby a current may be admitted to both or one of said magnets according as the current strength is at normal or above or below normal. 29th. The combination of the armature shaft having driving surfaces h h,