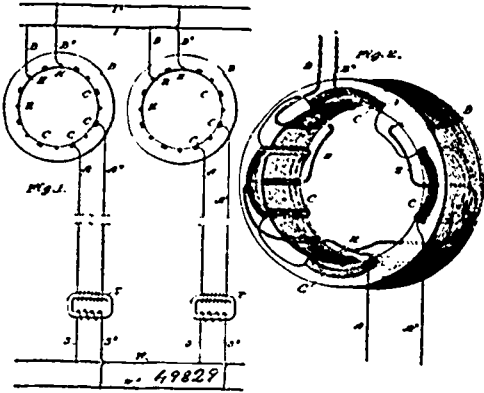
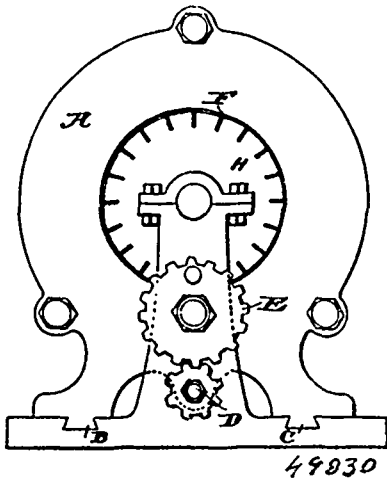


secondaries of said transformers being connected in parallel to the working circuit, substantially as described. 3rd. In a system of



electrical distribution the combination of several alternators each having an armature coil supplying the current for the working circuit, and independent armature coils connected together in parallel, with separate transformers for each alternator having their secondaries connected in parallel to the working circuit of the system, substantially as described. 4th. The method of distributing electrical energy from several alternators which consists in running the alternators so as to generate currents of like phase, transforming the separate currents into currents of a different potential, and combining such transformed currents so as to produce in the working circuit a combined current of a potential like to that of the transformed currents, substantially as described.

No. 49,830. Alternating Current Electric Motor.
(Moteur de courant alternatif.)



Charles S. Bradley, Avon, New York, U.S.A., 3rd September, 1895; 6 years.

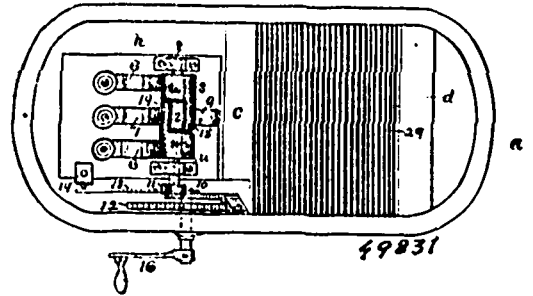
Claim.—1st. An alternating current motor having a primary element, two secondary elements, one of high and the other of low resistance, and means for shifting the elements relatively so that the primary may co-operate with either secondary. 2nd. An alternating current motor having a primary element and two closed secondary circuits on the other elements, one of high and the other of low resistance, and means for shifting the elements relatively so that the primary may co-operate with either or both secondary circuits.

No. 49,831. De-Magnetizing Apparatus.
(Appareil démagnétisant.)

Charles Houlgrave, Richmond, Virginia, U.S.A., 3rd September, 1895; 6 years.

Claim.—1st. A device of the class described, comprising an electro-magnet, means whereby the polarity of said magnet may be reversed, a switch for cutting the reversing means into or out of circuit, and means for short circuiting from the source of electricity through said electro-magnet. 2nd. A device of the class described, comprising a solenoid whose inclosure is free from all paramagnetic substance, pole pieces arranged entirely without the solenoid, means for reversing the polarities of said pole pieces, means normally disengaged from the reversing means for operating it, and a switch operated by

the engagement of the reversing means with its operating means to cut the reversing means into circuit during its operation. 3rd. A



device of the class described, comprising a solenoid, pole pieces therefor formed of paramagnetic laminals arranged at an angle to the bore of the solenoid, means for bringing the article to be treated within the enclosure of the solenoid, and means for reversing the polarities of the pole pieces. 4th. A device of the class described comprising a solenoid, pole pieces therefor formed of paramagnetic laminals arranged at an angle to the bore of the solenoid, means for bringing the article to be treated within the enclosure of the solenoid, and means for reversing the polarities of the pole pieces irrespective of the nature of the inducing current. 5th. In a device of the class described, the combination with a solenoid provided with externally arranged pole pieces of a commutator having connections with said solenoid, a source of electricity in circuit with said solenoid and means for cutting said solenoid successively into and out of circuit with the source of electricity and for short-circuiting said source through an equivalent resistance at such times as the solenoid is cut from circuit therewith. 6th. In a device of the class described the combination with a source of electricity, of an electro-magnet in circuit therewith, a commutator also in circuit with said source of electricity, an artificial resistance in circuit with certain segments of the commutator, and means for operating the commutator to reverse the polarity of the electro-magnet and to short-circuit the current from the source of electricity through the artificial resistance at times intermediate of the said reversals of polarity of the electro-magnet. 7th. A device of the class described comprising a solenoid whose inclosure is free from all paramagnetic substance, pole pieces arranged entirely without the solenoid, means whereby the polarities of said pole pieces may be reversed, a switch for cutting the reversing means into and out of circuit, and means for short-circuiting from the source of electricity through the said solenoid. 8th. The combination with a source of electricity and an electro-magnet arranged to be brought into circuit therewith, of a commutator comprising an insulating body having segments arranged thereon and provided with connections whereby it may be caused to reverse the polarity of said magnet, said commutator having also segments in electrical connection with an artificial resistance within the body of the commutator, and means independent of the source of electricity for operating the commutator to reverse the flow of current through the electro-magnet and to short-circuit said current through the artificial resistance intermediate of said reversals. 9th. An electro-magnet comprising a solenoid having externally arranged laminated pole pieces, the laminals of said poles extending longitudinally of the windings of the solenoid. 10th. An electro-magnet comprising a solenoid and externally arranged laminated pole pieces, the laminals of said pole pieces lying at an angle to the bore of the solenoid. 11th. An electro-magnet comprising a solenoid having paramagnetic portions arranged externally thereof, said paramagnetic portions being formed of laminals, slab shaped, set on edge and extending longitudinally of the solenoid windings. 12th. An electro-magnet comprising a solenoid having paramagnetic portions arranged externally thereof, said paramagnetic portions consisting of two poles arranged diametrically opposite each other and formed of laminals set on edge and arranged longitudinally of the solenoid windings. 13th. A device of the class described, comprising an electro-magnet consisting of a solenoid having externally arranged pole pieces, a slide adapted to enter said solenoid and having clips to receive and retain the article to be operated upon, and means for reversing the polarities of the pole pieces irrespective of the nature of the inducing current. 14th. A device of the class described, comprising a frame adapted to receive a solenoid winding, said frame having portions cut away to normally expose portions of the interior of the solenoid, protective coverings for the said exposed portions, paramagnetic portions arranged externally of the solenoid and adjacent to said exposed portions, and means for reversing the polarities of the resultant fields irrespective of the nature of the inducing current.

No. 49,832. Reactive Coll. (Fil réactif.)

The Canadian General Electric Company, Toronto, Ontario, Canada, assignees of Elihu Thompson, Swampscott, Massachusetts, U.S.A., 3rd September, 1895; 6 years.

Claim.—1st. The combination of a reactive coil or device comprising two or more coils adjustable angularly with relation to one another, to vary the intensity of a resultant magnetic field, with a