

of high frequency, high potential currents now familiarized by the labors of Tesla, Elihu Thomson and D'Arsonval.

As a result of continued medical work for 13 years with static machines, the writer had had constructed, by the Galvano Faradic Company of New York City, a machine which embodied, in his opinion, every modern advance. It was fundamentally of the Wimshurst-Holtz type; it had 8 revolving plates, each one 30 inches in diameter; it was provided with a simple device, by aid of which the physician could employ at will the spark, spray, static-induced and the transformer current. In its present shape the new machine answered every purpose in medicine to which influence machines could be put. It was known as the Morton-Wimshurst-Holtz machine.

EVENING SESSION.

Dr. William J. Morton exhibited a new transformer for use with influence machines. The transformer consists of two flat spirals placed in an ebonite box containing oil. The static induced current is led into one coil, and from the secondary coil the current passes to the patient.

This current produces a peculiarly vigorous but painless muscular contraction.

Dr. Morton also exhibited a helmet such as was employed by Charcot in the treatment of disease by means of rapid percussion. The vibrations are produced by a small electric motor. The application of this helmet uniformly and almost immediately relieves the sensation of fatigue, and in some cases it will relieve, at least temporarily, most excruciating neuralgic headaches.

Dr. E. H. Woolsey, of California, called attention to the fact that the relief was probably obtained through the agency of the spine, and was similar to the relief experienced by some when riding on horseback or on a railroad.

"Faradization as it was and as it is with the Controllable and Recordable Current, as provided by a new Apparatus."

Dr. George J. Engleman, of St. Louis, read a paper with this title. The author described his method of separating the interrupter from the faradic coil, so that the current of the latter may be independent of the slow or rapid action of the vibrator. The apparatus is provided with a comparatively slowly revolving wheel, by which one can easily compute the number of interruptions. In view of the fact that the full current from the fine wire coil is scarcely bearable when the interruptions are 2000 to 3000, and yet when they are 15,000 the current is scarcely perceptible, the importance of determining the rate of vibration is evident. Personally he thought the useful limit was 50,000 interruptions. Again, where external irritation is desirable, a short coil of fine wire is required, whereas an entirely different construction is needed for producing

a sedative effect. In addition to noting the number of vibrations of the interrupter, it has been found that the essential points to be recorded are the resistance, the number of windings, and the fineness of the wire.

DISCUSSION.

Dr. Massey remarked that a very objectionable feature of the ordinary faradic apparatus is the rapid oxydation of the contact surfaces of the vibrator.

Dr. Herdman said that this objection had been done away with in the new apparatus, because the rubbing of the contacts on the brake wheel sufficed to keep these surfaces bright. He did not think the physiological limit of such an apparatus had yet been determined.

Dr. Engleman replied that he thought the physiological limit had been reached, for experiment had shown that the best physiological effects were obtained when the number of windings did not exceed thirteen thousand.

The following papers in the absence of the writers were read by title:

"Notes upon some uses of Galvanism in Surgery." By D. B. D. Beaver, M.D., of Reading, Pa.

"An Unconsidered and Important Factor in the Explanation of the Action of Electricity in Uterine Disease." By Henry McClune, M.D., of Cromer, England.

"The Present Position of Electricity in the Treatment of Eclopic Gestation." By A. Brothers, M.D., of New York City.

"Uterine Displacements and their treatment by Electricity." By G. Betton Massey, of Philadelphia.

"Synovitis treated by Calaphoresis." By F. H. Wallace, M.D., of Boston, Mass.

"The Primary Action of the Galvanic Current on the Blood. It increases the Amount of Ozone it Contains, as shown by Chemical Tests of the Blood in the Arteries." By J. Mount Bleyer, M.D., and M. M. Weil, M.D., of New York.

"The Use of Static Electricity in Incipient Insanity." By W. E. Robinson, M.D., of Albany, N.Y.

"The Conservation of Energy as a Successful Factor in Electro-Philately." By Horatio R. Bigelow, M.D., of Philadelphia, Pa.

Dr. W. J. Herdman, of Ann Arbor, was elected President, and Dr. Margaret Cleaves of New York, Secretary; Dr. Franklin H. Martin, of Chicago, and Dr. A. Laphorn Smith, of Montreal, Vice-Presidents; Dr. R. J. Nunn, of Savannah, Ga., Treasurer, for the ensuing year. It was decided to hold the next meeting in New York City, on the last Tuesday in September, 1894.