opinion the ray is cathodal, and is developed in any of the Crookes' or Geissler tubes by the passage of electricity through them, and the strength or penetrable power of the ray depends wholly upon two favorable conditions—namely, (1) a certain amount of electricity of high electromotive force; (2) the proper vacuum of the tube used. After many experiments I have come to the conclusion that the Hertz, Lenard and Rontgen ray are all one and the same, differing only in the degree of penetrable power, as above explained.

There has not been any discovery in any line of science which has caused as much world-wide interest as has Prof. William Conrad Rontgen's discovery of the properties of the penetrating light commonly called the X-ray. That name, in my opinion, is inappropriate for the following reasons—namely, in the first place the letter "X" is made use of in difficult problems to represent an unknown quantity, and that is why it has been made use of in this instance. Although the ray is somewhat obscure, still we know that it is a light and is produced by the passage of electricity of very high voltage through a glass tube which has been previously exhausted to 1-1,000,000 part of air; consequently, when we know the origin, development and properties, I am not in favor of having it represented by the letter "X", but am more in favor of calling it after the discoverer of its usefulness and who was instrumental in introducing it to be used in a practical way. This personage is Prof. Rontgen.

My object in this paper will be to give a concise description of a Rontgen ray apparatus and describe its usefulness, and, inasmuch as this subject is somewhat new and much experimentation is going on at the present time, I shall avoid, as far as possible, all unnecessary technical terms and theoretical discussions. Before advancing further on this subject I shall explain a few terms which I shall make use of:—

(a) A "volt" is a practical unit of electro-motor force; *(b)* an "amperé" is a practical unit of rate of speed; *(c)* the "cathode" is a name given to the negative pole terminal; *(d)* the "anode" is a name given to the positive pole terminal; *(e)* a "Leyden jar" is composed of glass and has a tin-foil coating inside and outside of the jar to about one-half its height; a cork stopper is used through which a brass rod runs, having a brass chain attached to its inner end, which touches the tin-foil, and a brass ball or ring attached to its outer end; the inner tin-foil is called the internal armature and the outer tin-foil is called the external armature; *(f)* high vacuum or high density is a name applied to the Crookes' tube when it requires great electromotor force to drive the electricity through the tube in order to give the best penetrable light;