

At the conclusion of the evening a hearty vote of thanks was unanimously accorded to the Ottawa Electric Company for supplying *gratis* electric current, wires, etc., during the evening. To Mr. Wm. Scott and Mr. A. Dion especially, are the thanks of the members of the two societies due for their great kindness and interest in the matter.

NOVEMBER 27TH, 1896, Ottawa Teachers' Association.—  
*Electrical Discharges in High Vacua*, by Prof. John Cox, M.A., F.R.S.C., of the Physics Laboratories, McGill University, Montreal.

Professor Cox began by showing the insulating power of dry air and the disruptive discharge which occurs when the terminals are approached to a minimum distance. He then caused the same discharge to take place in sealed tubes from which the air had been exhausted in varying degrees, and demonstrated Quet's observations upon the stratification of the medium. He referred to the fact that De la Rue has proved by the uniformity of potential that even in highly attenuated air the discharge is a disruptive one, and that at no degree of exhaustion is air a conductor. The striæ were shown in a large number of Geissler tubes containing various gases highly rarified. All the strata appear to start from the positive pole, and as they successively detach themselves from it they occupy very constant positions relatively. The potential necessary to cause a current to pass (disruptively) diminishes until a certain attenuation is reached, when it increases and the strata thicken and diminish in number until no discharge passes, however high be the potential. The colours are reversed in order by reversing the direction of the current. All these experiments were made in tubes which, are highly rarified, still were far from perfectly vacuous. Dr. Crookes was the first to carry the exhaustion of tubes to a degree approaching perfect vacuum. In this case the stratification ceases, and a bluish light fills the entire tube. When the vacuum approaches perfection the light proceeds from