

Mr. Pepper.....Materia Medica.
Mr. HarrisonPharmacy.
(Signed.) C. D. DANIEL, Chairman.

Upon motion of Messrs. Daniel and McKee the report of the Committee on Education was received and adopted.

The following resolution was adopted unanimously, upon the motion of Messrs. Jordan and Daniel.

Resolved.—That the members of the Council of the Ontario College of Pharmacy, heard with deep regret of the death of Mr. William Elliot, so long and so intimately associated with this College—one of its first members, assisting actually in its foundation, both with purse and still more valuable counsel, and always, whether as president or as simply a member of the Council, promoting to his utmost, by his well matured judgment the best interests of the College. We desire to express our sincere sympathy with his family in their loss, and request that a copy of this resolution be forwarded to them by the Registrar-Treasurer.

Mr. J. J. Hall presented a report from the Special Joint Committee, to whom was referred the matter of the Roberts' bequest. The report was as follows:

Your Committee beg to report and recommend for adoption by this Council, the following:—That the President, Vice-President and Mr. Watters, be a Committee to confer with the executors of the estate of the late John Roberts, in reference to the advisability of making a change in the details governing the bequest, and that such change fully carry out the object in view of perpetuating the name of the donor.

(Signed), J. J. HALL,
Chairman.

Messrs. Hall and McGregor moved, that the report of the Special Joint Committee just read, be adopted. Carried.

The next resolution was dealing with the same matter and read as follows:

Moved by Mr. Watters, seconded by Mr. McLaren, That the President of the Council, the Chairman of the Committee on Executive and Finance, and the Registrar-Treasurer, be authorized to invest the John Roberts' legacy of \$3000, in Loan Company debentures bearing interest at the rate of 4½ per cent. per annum. Carried.

The question of allowing students to present themselves for final examination before attaining the age of 21 years, which had previously been discussed when some of the petitions from apprentices came up on the report of the Committee on By-Laws and Legislation, came once more on the tapis through the following motion of Messrs. Polson and D'Avignon:

That if legislation be sought by this Council amending the Pharmacy Act, or if the said Act should be dealt with by the Government, that this be an instruction to the Committee on By-Laws and Legislation to take such action as will amend Section 11, enabling candidates to present themselves for examination prior to attaining the age of 21 years, retaining diplomas, however, until the successful candidate has attained that age, the candidate being at least 19 years.

Considerable discussion followed the introduction of this motion, the members of the Council agreeing on the advisability of giving every encouragement to those young men who had pushed forward in their studies and were prevented only by lack of age from taking their final exam., but the principal diversity of opinion appeared to arise over the age limit which should be placed upon the students pre-

sending themselves for finals. After the debate had proceeded at some length, an amendment was moved in the following terms by Messrs. Clark and Hall:

That the words "19 years" be struck out and the words "20 years" inserted.

This was accepted, and the resolution, as amended, was adopted.

Mr. C. D. Daniel gave notice of motion in the following terms:

I beg to give notice that, at the next meeting I propose moving that the clause of By-law 13 containing reference to the length of time for examinations be amended by striking out the words "three following days" and inserting "three or more days following."

Once more before the proceedings closed the Roberts' bequest came up, this time on a motion of Messrs. Polson and D'Avignon, who sought to change the action of the Council taken an hour previously. These gentlemen presented the following resolution:

That the Roberts' bequest matter be taken from the hands of the Joint Committee and be referred to the Educational Committee, to confer with the Faculty and Mr. Roberts' executors, and bring down a scheme at the meeting of Council in February.

The resolution received little or no discussion and was rejected upon a show of hands.

Moved by Messrs. Watters and Daniels:

That we place to the credit of the Infringement Committee the sum of \$150. Carried.

Moved by Messrs. Daniel and Jordan:

That this Council do now adjourn to meet again on the first Tuesday in February, 1894. Carried.

The Council adjourned at 1.30 p. m.

The Production of Ozone.

By W. A. Shenstone, F.C.S., F.I.C., and M. Priest, at Chemical Society.

This investigation was commenced over two years ago, and a preliminary report had been given by Mr. Shenstone and a Bristol colleague before the society some eighteen months ago. Owing to the removal of his colleague the work had lapsed until recently, when it was revived owing to a grant from the Royal Society, which enabled Mr. Shenstone to obtain the necessary assistance and defray the cost of new and specially devised apparatus.

The previous work of others upon the same subject, the production of ozone from oxygen by means of electric discharge, had tended greatly to show that silent discharges effected the greatest conversion, but the difference of potential energy had not been fully worked out.

Mr. Shenstone then proceeded to describe the different parts of the apparatus with which the results had been obtained. A delicate clock-work arrangement had been devised as a substitute for the usual platinum interrupter to the electric current, which reduced or increased the number of breaks or interruptions with the greatest ease. By means of this he had been able to reduce the interruptions to about 1,000 per minute, whereas the coil

usually gave 5,000. It was even possible to reduce them to 100, but experience had shown that when reduced too low the conversion of oxygen was very slow.

One of their most important results showed that by the use of a current with about 1,000 breaks per minute, the largest conversion of oxygen into ozone took place, but they had also confirmed previous observers in noticing that if a trace of ozone were required quickly, the larger the number of breaks the better.

The ozone generator was next described, and the oxygen apparatus which is attached to it. The oxygen is obtained from chlorate of potassium by gentle heat in a thin glass tube, the gas passing upward through another tube containing potassium hydrate, so as to thoroughly dry the gas. The ozone generator is a large cylinder surrounded by crushed ice, and the platinum nodes are inserted at the bottom. The generator had to be scrupulously clean and of the thinnest glass. The washing of this glass was minutely described, and the authors had employed "filtered steam" for this purpose, besides distilled water. The steam is filtered by passing it through a tube filled with asbestos, although it was by no means clear what the authors expected to filter out. The apparatus was connected with a U-tube of mercury and also with a Sprengel pump. The action of ozone upon the mercury was prevented by means of a minute aperture above, where the oxygen was heated by means of a small flame, although subsequently the authors found that a small roll of silver, of .990 to 1.000 purity, would prevent this action. Previously Mr. Shenstone had pointed out that, besides the rapid oxidation of the surface of the mercury, ozone has the property of attaching mercury to the glass. The side of the V-tube was graduated according to a scale, and it was easy to see by the amount of the variation of the level the extent to which the oxygen had been condensed into ozone. A thermometer of special delicacy was inserted in the outer chamber of the ozone generator, and the temperature about—2° C., maintained as nearly as possible through the experiments.

A current of oxygen was passed through the whole apparatus, and then when all traces of nitrogen were removed the generator was sealed up at its oxygen supply side and the electric discharges were made to pass through.

At first the experiments were continued for four hours, but afterwards it was found that an hour was quite sufficient, the only variation after that time being due to barometric alterations.

Another difficulty which the authors experienced, but for which they could not account, was that results differed considerably when different ozone generators were employed. It was this that led them to adopt the thinnest possible glass, as they obtained over 2 per cent. more ozone from a thin glass than with a thicker one. Their first experiments gave approximately 13 per cent. of ozone obtain-