

Correspondence.

Society of Opticians.

Toronto, June 13th, 1898.

Editor CANADIAN DRUGGIST:

DEAR SIR,—In the interest of optics in general, and Canadian optics in particular, may I request a small corner in your valuable columns in which to air a grievance.

I notice in the various trade papers published across the border regular reports of the progress of the various state optical societies; in many of them regular meetings being held, and interesting papers on optical topics being read, and a universal look-out being kept that the rights of opticians are not curtailed, and also a constant endeavor being made to enlarge their sphere and elevate the standard of the graduate optician. That their achievements have not been of little worth is shown in the recent vain attempt to rush through the New York legislature a bill practically barring any but medical men from fitting glasses.

While in Canada the growth of the optical trade, together with the spread of optical knowledge, has been quite in proportion to that of our neighbors, we have a complete lack of organization. It is true we may not be immediately threatened by hostile legislation, but it is fair to assume that as our opticians improve in knowledge and ability that the increased trade thereby acquired at the expense of the oculist will arouse antagonism, and attempts are sure to be made to restrict and, if possible, throttle the optician.

The oculists are organized, and discussions along this line have already been held. Any action therefore taken by them will be an organized effort. How is the optical profession prepared to cope with the question when it comes? There is no organization, and an association in name only.

The Optical Association founded a year or two ago is apparently lifeless, and any attempt to resurrect and re-organize it will, I am sure, receive the support of its present officers, through no fault of whom does it owe its want of success.

The many ways in which opticians associated together can benefit each other, in addition to the question of legislation, are so numerous and well defined as to make it not a question of "shall we organize"—but rather on what plan?

I should like to hear from our opticians throughout the country either through THE CANADIAN DRUGGIST, or personally, whether they consider a society of opticians advisable, and if so along what lines.

Thanking you,

I remain yours sincerely,

LIONEL G. AMSDEN,

Principal Canadian Ophthalmic College.

Krypton.

The discovery of a new gaseous element was announced at a recent meeting of the Royal Society, London, by Professor Ramsay, F.R.S. This element he has named Krypton. It will be remembered that at the meeting of the British Association held in Toronto last year, a report of which appeared in these columns, the learned professor in his address to the Chemical Section propounded



Prof. Wm. Ramsay, Ph.D., F.R.S.

a theory that it was possible that there existed an intermediate element between the gaseous argon and the terrestrial helium. The following report of the communication made by Professor Ramsay and Mr. Morris H. Travers is taken from *The British and Colonial Druggist*. The discoverers conclude that the atmosphere contains a hitherto unknown gas heavier than argon, transparent and like that element inactive, with a characteristic spectrum, and less volatile than oxygen, nitrogen or argon. The spectrum presents, besides the weakly-defined spectrum of argon, two exceedingly brilliant lines, one being almost identical with the D 3 yellow line of helium, and the other green, which may be compared in inten-

sity with the green line of helium. Its wave length was 5566.3. Another slightly weaker gave 5557.3. The density of the gas was approximately 22.5, that of oxygen being 16. According to the velocity of sound, the ratio of specific calories is 1.666, the same as that of argon and helium. It therefore follows that the new gas is monatomic, and constitutes an element. The position in the periodical table is not yet possible to determine in an absolute manner. They, however, hazard the conjecture that the pure gas has a density of 40 and an atomic weight of 80, and that it may be classed with helium.

Liquefaction of Hydrogen and Helium.*

It will be remembered that these two gases have until now defied all attempts which have been made to liquefy them. It is true that in 1895 Professor Olszewski momentarily obtained indications of the liquefaction of hydrogen, but was baffled in his attempts to obtain even a small quantity of it in the form of a coherent liquid. His method consisted in subjecting hydrogen to great pressure, and the cold produced by boiling liquid oxygen *in vacuo*. By this means a temperature of -211°C . was reached, and by suddenly relieving the pressure and allowing the hydrogen to expand, Olszewski observed the indications of liquefaction referred to. He was able, however, to determine approximately the critical temperature (-233°C .) and the boiling point (-243°C .) of hydrogen, and came to the conclusion that the critical point of helium is below -233°C ., and its boiling point below -264° . These determinations have, however, generally been considered to have been theoretically determined, and until last week it seems highly probable that hydrogen and helium remained unliquefied. In the course of his remarks Professor Dewar recalled the fact that in 1895 he described an apparatus to produce a jet of hydrogen containing liquid, showing how such a jet might be employed as a means of cooling substances below temperatures which can be reached by the aid of liquid air. All his attempts to liquefy the hydrogen were unsuccessful, but up to the present no other investigator has been able to press the investigation further with any degree of success. As the apparatus mentioned worked well, the professor had caused to be constructed a

*Read at a meeting of the Royal Society by Prof. Dewar.