Saugar University. I am grateful to Prof. W. D. West for critically going through the paper.

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The identity of namaqualite with cyanotrichite.

IN 1870 (Jour. Chem. Soc., vol. 23, p. 1) Professor A. H. Church described as a new mineral, namaqualite, some material obtained by J. R. Gregory, who brought it from Namaqualand in South Africa. Church's description is as follows:

> . . . Namaqualite occurs in thin layers of silky fibres which are true crystals, though their minute size and general absence of distinct terminations renders it impossible to ascertain the system to which they belong. The layers alternate with irregular bands of a kind of chrysocolla, and are sparingly mixed with small crystals of magnesia mica. The aspect of namaqualite resembles that of chrysolite [i.e. *chrysotile*], but its colour is pale blue with a silky lustre. Its hardness is 2·5, and its density 2·49. Isolated crystals appear transparent under the microscope. In the closed tube it gives off much water when heated, becoming black.
>
> For analysis, the mineral was coarsely crushed, and the homogeneous fragments carefully picked out under the microscope. . . . The mean percentages are: H_2O 32·38, CuO 44·74, Al_2O_3 15·29, CaO 2·01, MgO 3·42, SiO_2 2·25, Sum 100·09.

Church therefore considered it a hydrated copper aluminium oxide, and suggested a possible relationship to hydrotalcite and pyroaurite. Apparently no further investigation has been reported in the literature since Church's original paper.

In the mineral collection of the American Museum of Natural History there is a single specimen (no. 6176) labelled 'Namaqualite, Namaqualand, South Africa', which agrees with the description given by Church. It was purchased from J. R. Gregory, and is probably part of the same material he supplied to Church. In immersion liquids under the microscope the blue mineral appears as aggregates of fibrous crystals, strongly pleochroic from almost colourless to bright blue, and with α 1·59, γ 1·65; these properties are identical with those of cyanotrichite, and the identity was confirmed by the comparison of an X-ray powder photograph with that of a specimen of cyanotrichite from Moldawa, Rumania. The analysis given by Church evidently reports as H_2O the loss in ignition, which would include the SO_3 also present in cyanotrichite. The formula of cyanotrichite requires 12·4 % SO_3 and 22·4 % H_2O, their sum being in reasonable agreement with the figure of 32·4 % 'H_2O' reported by Church. His figures for CuO and Al_2O_3 agree well with those for cyanotrichite.

In the 7th edition of Dana's System of Mineralogy, Professor Frondel reports cyanotrichite from the Springbok Mine, Namaqualand. Professor Frondel informs me that this specimen was presented to Harvard University by the late Dr. P. Wagner in 1927, and the identification on the original label was 'namaqualite?' It is quite possible that this is the locality from which the original specimens of namaqualite were obtained.

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Aluminium laps for polished sections.

AN outstanding difficulty in the use of diamond powders is the plucking of fractured grains of chalcopyrite, &c. Cloths are useful, but cause too much relief for general purposes. Solid nylon is slow, while solid metal laps such as copper still cause injury to fractured sulphide ores though useful with rocks.

Lead laps have been used successfully, but are expensive and liable to alteration. In the hope of combining the soft action of cloth with the diamond-holding property of the metal the writer has tried copper gauze without success. Recently a soft aluminium foil has been available in household stores. This is very thin and flexible and was found to accept the diamond powders in the same way as lead. Accordingly it was attached to glass discs to form a smooth metal surface which provided a level polishing lap, but the surface was still very rigid, like that of the solid metal laps. By chance it was found convenient to attach the foil by an intermediate sheet of thin paper, and this caused a great improvement in the action of the lap, which gave sharp cross-cutting with very little relief, yet the cushioning effect of the paper support greatly reduced the damaging effects of contact with the metal. The surface so produced is not level in the optical sense, but local differences between neighbouring grains are very small; a little relief is introduced by the usual finishing polish with alumina, &c., on selvyt cloth.

A very convenient aluminium foil lap can be made from a special thin foil, which is already attached to a paper back. This is sold by dealers in packaging materials. The paper side is smoothly mounted on a glass disc with Seccotine. A small drop of 5Cs silicone (Hallimond, Manual