2 daylight, blue, lamps—33 cents each	.66
1 bottle No. 145, Walsco touch-up paint, black	.39
1 110 V. A.C. male plug	.10
5 ft. No. 14 copper wire, enameled	.10
TOTAL COST	$6.11

The described illuminator enables a rapid change from transmitted to reflected light which is convenient for the examination of the opaque accessories in thin sections. The use of this illuminator eliminates the necessity of handling a rather warm lamp when a source of reflected light is required.

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LANTHANON AND SCANDIUM DISTRIBUTION IN WESTERN AUSTRALIAN FERGUSONITE

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Hand-picked fergusonite of detrital origin from the Marble Bar district of northern Western Australia has been found to contain a high proportion of ytterbium and erbium and a small proportion of scandium. The identity of the metamict material was established by optical, *x*-ray and differential thermal (1) examination, the results being confirmed by chemical analysis (2, 13):

Ta_2O_5	Nb_2O_5	TiO_2	Fe_2O_3	Y_2O_3	Ln_2O_3*	U_3O_8	ThO_2
49.4	2.70	2.50	<0.1	21.2	12.0	0.30	0.13%

* Total lanthanons.

Though the customary name for this material has been used it may be noted that the term 'formanite' is proposed in Dana's "*System of Mineralogy*" for material containing preponderating amounts of tantalum (3). The low thorium and uranium content of the Marble Bar product is notable and serves to differentiate it from material of otherwise similar composition from the neighbouring district of Cooglegong (4).

The lanthanon-yttrium fraction was examined spectrophotometrically and by chemical means as described elsewhere (5, 6, 7).

La_2O_3	Ce_2O_3	Pr_2O_5	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3*
0.05	2.0	1.4	5.7	8.5	5.7	8.6%

Tb_2O_3*	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3*
1.7	11	3.1	15	4.3	27	5.7%

* Approximate values.

The distribution thus shows a maximum abundance in the region erbium-ytterbium, that is, towards higher atomic numbers than reported by Goldschmidt and Thomassen (8) for complex oxide minerals containing tantalum and niobium. A somewhat similar distribution was reported by Sahama and Vähätalo (9) for wiikite, and by Dixon and the writer for the heavy lanthanon fraction of davidite (10).

The widespread occurrence of scandium and its sporadic enrichment in lanthanon minerals has been qualitatively demonstrated by Eberhard (11). According to Rankama and Sahama (12) scandium if present in such minerals is markedly concentrated only in those varieties containing a high proportion of ytterbium and lutetium, that is, of lanthanons with small atomic radius. A search for scandium was therefore made, in which the mineral was decomposed in hydrofluoric acid and scandium separated by the cellulose column technique of Kember (13) or the thiocyanate extraction procedure of Fischer and Bock (14). Provided preliminary separations involving filtration of tantalum and niobium oxides were avoided, scandium could be detected in the solvent extracts by means of ammonium tartrate (14, 15) and sodium alizarin 3-sulphonate (14, 16). These results were confirmed spectrographically. Adsorption of all or part of the scandium occurred on "acid earth" precipitates. Tests with alizarin 3-sulphonate and pure scandium, yttrium and thorium salts enabled the amount of scandia in the extracts to be assessed at approximately 0.02%, more accurate estimation by chemical means being hindered by the lack of published information on the chemistry of scandium.

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WEBERITE FROM PIKES PEAK, COLORADO

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The mineral collection of the Cryolite Company: "Kryolitselskabet Øresund" A/S, Copenhagen, Denmark, contains two specimens labelled "Cryolite, Colorado ?, *A* and *B*." They are about 3 cm. across and consist of a grayish-white, fine-grained mass, the single grains being less than 0.3 mm. in diameter. A specimen much larger than these, about 12 cm. across, but without any label, was found together with other mineral samples, and as it is essentially of the same type as the first-mentioned specimens, it must be assumed that *A* and *B* represent fragments of the larger piece. This assumption may be considered quite safe, judging from the singular character of the specimens.

The collection of the Mineralogical Museum of the University of Copenhagen contains a specimen similar to those mentioned above. It is labelled: "Cryolite, St. Peter's Dome, Colorado, 1903, no. 1364; donated by C. F. Jarl" (former President of the Cryolite Company). Under no. 1364, the catalogue of that collection, in addition to the text on the label, bears the statement: "magnesium-containing cryolite." Even though the four specimens differ a little, their general character warrants the assumption that they all came from the same locality.

A comparison with material from the Urals did not show any such similarities. In Ivigtut no material has ever been found which showed relations or textures such as are to be seen on the Colorado material.

A. H. Nielsen, chemist at the Cryolite Company, called my attention to the unusual composition of the two specimens *A* and *B*, which he had analyzed some time ago. The results are shown in table 1.

The high content of Mg is scarcely compatable with a mineral like cryolite, and A. H. Nielsen suggested that weberite or one of the "cubic" minerals known from Ivigtut might be present. The microscopic examination clearly showed that at least three quarters of the material was weberite. The mineral has an index of refraction between 1.345 and 1.350, it is biaxial with a large axial angle and corresponds closely to the material described by R. Bøgvad (1938) from the Greenlandic occurrence at Ivigtut.

The literature was searched but nothing was found indicating earlier observations of Mg in cryolite from Pikes Peak. In order to establish the