

"It is therefore the opinion of the writer that the mineral may be regarded as monoclinic. If we assume that the best cleavage be (100), the second cleavage (010), and the poorest cleavage (001), then the twinning-plane and composition-face is (100), and the optic axial plane lies in the orthodiagonal zone and nearly normal to the front pinacoid. In this case the optic angles measured are only approximate, being produced from a series of thin twinned plates parallel to (100), each of which, if taken apart from the others would show an angle differing slightly from that obtained on the composite plates. In the same way the value for β is not the true value.

"The writer has examined carefully the specimens from the mine for crystals of this new mineral, but without success. The stalactitic masses, which up to the present are the only form in which it has been observed, are always covered by solution surfaces, a zone between it and the covering silicate having been dissolved away. While from the optical properties the mineral appears to be monoclinic, it would be interesting to confirm this conclusion by direct geometrical measurement of crystals. In Fig. 5 the chief crystallographic observations are diagrammatically represented."¹

The first description of spencerite having been based on an examination of specimens shewing no crystals the shipment later obtained from the same locality was carefully examined for material suitable for crystallographic measurements. In a few small cavities in the brecciated country rock associated with the stalactitic material some brilliant but small crystals were discovered. They were found to be monoclinic but always twinned with the orthorhombic as twinning plane and composition face as had been suggested by the optical examination of the massive material. From the crystallographic description already published² the following paragraphs are repeated.

"Some specimens of this mineral recently obtained from the original locality contain small druses lined with sharp crystals of spencerite, the preservation of the crystals being apparently due to the cavities having been completely sealed up by calamine.

"The crystals are very small, few exceeding 2 or 3 mm. in length. They are tabular in habit, and in colour, lustre, and habit closely resemble small, bright crystals of calamine. The crystals, though small, are admirably suited for accurate measurements. The conclusions regarding the crystal form contained in the original contribution are confirmed, since the mineral is found to be monoclinic, with polysynthetic twinning on the pinacoid (100).

¹Walker, T. L., Mineralogical Magazine, Vol. xviii, 1916.

²Walker, T. L. (Wash. Acad. Sc., Vol. vii, No. 14, 1917).