CERUSSITE FROM SALMO, B.C.

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At the H. B. Mine, Salmo, B.C., where the principal ores are oxidised zinc minerals (silicate, carbonate and phosphate) cerussite is found in considerable quantity. The cerussite is not well crystallized as a rule but occasionally exceedingly beautiful crystallized specimens are encountered. The crystals are water clear with very brilliant faces and well suited for exact goniometric measurements. This probably is the finest crystallized cerussite found in Canada.

The crystals are almost invariably twinned forming six rayed structures such as have been frequently observed for this mineral. In these complex growths the twining ordinarily observed occurs on the face of the prism (110) but in the case of the Salmo mineral the structures are often more complex in that several of the individuals are twinned on (110) while one of these is twinned on another individual with (130) as the twinning plane. In many minerals complex twins involving more than one twinning law are common but in the past the stellate interpenetrating twins of cerussite had been regarded as resulting from twinning according to one law only until Hubrecht observed the participation of both twinning laws in the same complex group.* On groups of cerussite from Salmo the same complexity has been observed.

On crystals measured the following forms have been obseved:

(*a*) Pinacoids—
Basal Pinacoid (001) usually rough and when present large.
Brachypinacoid (010) always the largest face so that the crystals are tabular.
Macropinacoid (100) narrow and well defined;

(*b*) Prisms—(110) and (130);

(c) Brachydomes — (012), (011), (021), (052), (031), (041), (092), (051), (061), (071), (081), (091), (0.10.1), and (0.12.1).
The domes (012) and (021) are the most prominent. The others are present in certain crystals and give with the goniometer a long series of reflections;

(*d*) Macrodome—(102);

(e) Pyramids—(111) and rarely (112).

*Zeitschrift f. Kryst. XL p. 169.

The ordinary form of single crystals is represented in fig. 1; it will be noticed that the faces are generally not very numerous. The more complex type of crystal is represented in fig. 2, where the development of numerous brachydomes is especially characteristic.

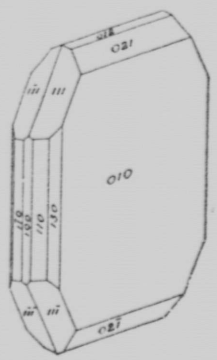

Fig. 1.

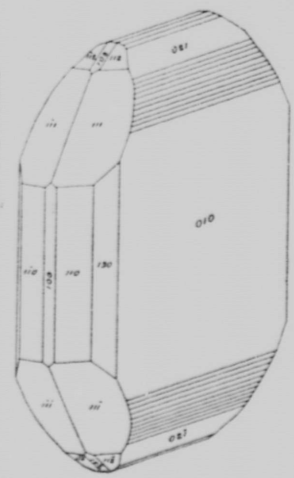

Fig. 2—The brachydomes lying between the faces (001) and (010) are as follows:—(012), (011), (021), (052), (031), (041), (092), (051), (061), (071), (081), (091), (010.1).

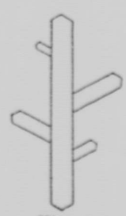

Fig. 3.

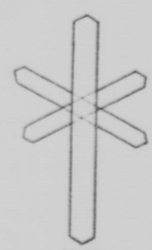

Fig. 4.

Repeated twinning on the unit prism (110) is very common, producing forms such as are represented by fig. 3 or 4. When this twinning law is the only one involved the angle between the *a* axes of successive individuals is 62° 46′. In the crystal represented schematically on fig. 5, the four individuals 1, 2, 3 and 4 are twinned according to this law, but a fifth individual (x) is twinned on No. 2 with (130) as twinning plane. The angle between the *a* axes of those two individuals is 57° 18′. The interpenetration of several individuals