

bination $a = P$, $b = P$, $c = 2P$, the $2P$ faces being remarkably well developed. (See Fig. 4.)

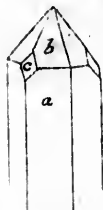


Fig. 4. Quartz Crystal—Lac aux Iles, Portneuf Co., P. Q.

Mr. John Stewart, of Ottawa, has also presented me with some interesting crystals of smoky quartz, from lot 44, range 6, Bouchette township, Ottawa Co., Quebec.

In these both prismatic and pyramidal faces are *concave*, giving the crystal the peculiar appearance shown in Plate II, which is reproduced from a drawing kindly made for me by Mr. L. M. Lambe, the artist of the Survey.

When a straight edge is laid across one of the prism faces ($\frac{1}{8}$ in. wide), the deflection of the face from its normal position, at a point half way across it, is seen to be about $\frac{1}{16}$ of an inch, the curvature being quite symmetrical.

Similar crystals have been found in Orange County, New York State.

8. SPINEL.

Beautiful, brilliant, jet-black octahedrons of spinel were lately found by Mr. John Stewart, in Aylwin township, Ottawa county, Quebec, imbedded in a crystalline limestone.

Perfect crystals in my possession measure $\frac{3}{4}$ in. in diameter, and some of them exhibit the combination of octahedron and dodecahedron $(0, \infty 0)$.

A complete alteration of the mineral to some species of mica has been observed in a few instances.

9. ANHYDRITE and GYPSUM.

Mr. H. Lundbohm of the Geological Survey of Sweden, who has recently been in Canada studying the mode of occurrence of our apatite, placed in my hands for deter-