regular octahedron on the other, will result.* These forms, moreover, as well as their intermediate oscillations, frequently occur in the same substance : red oxide of copper may be cited as an example. But between the cube, a square prism, and a rhombic prism, no relations of this ki. 1 exist. Neither are these forms related physically : for their optical, thermal, and other physical relations are equally distinct. By considerations of this sort, therefore, we are able to establish six (or really seven) distinct Crystal Systems. These (named chiefly in accordance with the relations of their axes) are enumerated in the annexed tabular view.†

Crystal-axes of one length. Refraction. single ............... } *The Monometric System* (including the cube, rhombic dodecahedron, octahedron, &c., with their various combinations.

Crystal-axes of two lengths. Refraction, double, with one neutral line or optical axis ........... } *The Dimetric System* (including square-based prisms and pyramids with their various combinations.)

*The Hexagonal System* (including regular hexagonal prisms and pyramids, rhombohedrons, &c., with their combinations.)

Crystal-axes of three lengths. Refraction, double, with two neutral lines or optical axes.

Axes at right-angles. } *The Trimetric System* (including right rectangular prisms and pyramids, rhombic prisms and pyramids, and combinations of these.

One axis oblique. } *The Monoclinic System* (including oblique rectangular and rhombic combinations.)

All the axes oblique. } *The Triclinic System* (including doubly-oblique combinations.)

* The Law of Symmetry, in its exact acceptation, may be thus expressed :
(1.) If an edge or angle of a crystal be modified, *all* the *similar* edges or angles must be equally modified.
Or (2.) *One-half* or *one-mth* of the corresponding angles or edges, in alternate positions, must be equally modified. *Example.*—Cube and Tetrahedron (Boracite; Arseniate of Iron.)
Or (3.) *All* the similar edges or angles must be modified by *one-half* or *one-mth* the normal or regular number of planes. *Example.*—Cube and Pentagonal Dodecahedron (Iron Pyrites.)
Conditions 2 and 3 produce *hemihedrons* or *part-forms.*
† See also Vol. V. of this Journal (New Series), pages 7-9.