covery, which was more a deduction from the mathematical form of the particular body he observed than a broad generalization from a series of observations of different bodies. It must be borne in mind that the ancients knew and had described crystals of certain minerals as having a *constant number* of faces (or planes) arranged in a *particular way*. But Steno went further than this and shewed that another constant existed. He cut a number of sections of variously shaped prisms of quartz (1.) at right angles to the edges of the prism, and (2.) at right angles to the edge formed by a face of a pyramid with a face of the prism and found in the first case (see Fig. 1) that the angles of any one section were equal to each

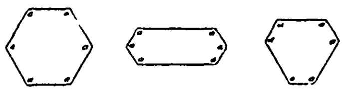

Fig. 1.

other and also to every angle of the other similar sections, and in the second case (see Fig. 2) he found that the sections had two angles equal

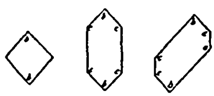

Fig 2.

to *b* and four angles equal to *c*, except when the prism was absent in the crystal, when the section was a four-sided figure with two opposite angles equal to *b*, as shewn on the left in Fig. 2.

His inference was that in all specimens of Rock-crystal corresponding pairs of faces have the same inclination.

Thus was taken the first step towards the discovery of one of the three great fundamental laws governing the formation of crystals, which has been enunciated thus :—

THE LAW OF CONSTANCY OF ANGLES. Crystals of the same substance, whether natural or formed in the laboratory, are essentially constant in the angle of inclination between like planes.

For a whole century the law discovered by Steno was not elaborated until,