the valency of an element was to attach to it as many lines as it possessed capacities of saturation. The capacities of saturation or valencies thus appeared very early as points of saturation, and the saturation itself as a linkage. These geometrical artifices or expressions were, for a long time, used merely as symbols, and to the present day many eminent chemists refuse to attach to them any real meaning: formulæ of this kind were called formulæ of structure, not of constitution. One of the most remarkable instances of the exact use of linkages to explain the difference of a series of organic compounds, all closely connected with each other, is the theory of the so-called aromatic compounds, derived from benzene, which we owe to Kekulé. It has stood the criticism of more than a quarter of a century, and has led to the most wonderful practical knowledge of a large number of old and new compounds.

47. Atomic linkage.

It is not astonishing if, in the face of these remarkable strides which geometrical symbols have led to, an attempt has been made to form an actual conception of the geometrical figure and grouping of the atoms of which chemical molecules and compounds are made up.

Space relations are the only ones in which the difference of symmetry and asymmetry can be at all conceived by us; and when chemical compounds were discovered which show no other difference than that one of them turns the plane of polarisation of a ray of light passing through it to the right, the other to the left side, the time seemed ripe to seek an explanation of this in a purely stereometrical difference of form or grouping.