Modern Attainments in Geology.

supposed to have elevated the axis of the system, pushing aside the secondary ranges. Thus it was that Leopold von Buch pictured the operation to himself.

Others, in particular the great French geologist Élie de Beaumont, considered it possible that a simple geometrical law could be formulated to account for the arrangement of mountain axes on the surface of the planet. It was supposed that these axes corresponded to the edges of a crystal inscribed in the sphere of the earth.

All these older views which for years formed a fruitful basis for research are, however, no longer in accordance with the knowledge of to-day. Their most important suppositions are now known to be very doubtful. In the first place it has been shown that the structure of the largest mountain systems is not symmetrical, but unsymmetrical and one-sided, and that approach to a symmetrical structure occurs only very exceptionally. Thus, for instance, the mightiest of the so-called "central stocks" of the western Alps, Monte Rosa, does not lie at the centre of the system, but almost on its southern edge.

The idea of Élie de Beaumont, according to which the mountain ranges correspond to the projections of the edges of a crystal on the surface of the earth, is for one reason alone no longer tenable: the great mountain chains, with few exceptions, do not run in straight lines, but take a more or less curved course.

In order to arrive at a correct understanding, it must be remembered that the form of the earth's surface is materially affected by the destructive influence of frost, weathering, and running water. What we see before us as mountains are the more or less demolished ruins of the much mightier heights which Nature first built. If one has learnt to roughly reproduce in his imagination the original form of these ruins, an entirely different and much more magnificent picture is obtained. It is very different from the picture of the landscape painter or the

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