

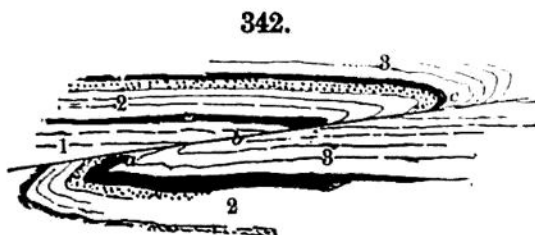
flexure, and the thinning, even to removal, of those of the flanks in close-pressed overthrust flexures, are two important points well illustrated in Figs. 118 and 119 on page 110, and in Fig. 120, representing the resulting

341.



Section of the Jura Mountains, along a line extending northwestward from Geneva through St. Claude to Chaux du Dombiel. 1, Trias; 2, Lower Jurassic; 3, Upper Jurassic; 4, Cretaceous; 5, Tertiary. Scale, 1:250,000. P. Choffat, in Heim's *Mech. Geb.*

flexure-fault. Fig. 342 has a still greater displacement along the plane between the anticline and syncline, with a complete separation of the originally continuous beds, as the numbers on them show. This thinning

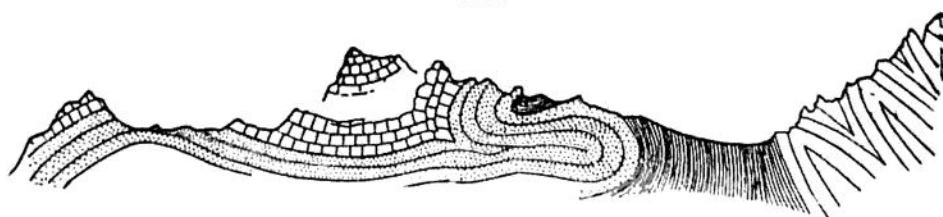


A flexure-fault from the Alps. Heim.

and faulting are due to the friction between the overlying and underlying flexures during the overthrust movement. The facts teach that a regular unfaulted overturn flexure, like that represented in the part to the right of Fig. 91 (6), on page 103, is only an ideal form.

The Alps had been the scene of earlier mountain-making after both the Archæan and Carbonic eras. The chain of the Alps includes, therefore, (1) Archæan, (2), post-Carbonic, (3) post-Miocene ranges; and the Juras belong with the last in time. The proof that an upturning took place after the Carboniferous or Permian is shown in Fig. 340; the Jurassic beds (which include, at bottom, the Lias) rest *unconformably* on the Carboniferous, evincing that a time of upturning had intervened. In the Oriental Alps, the great upturning was post-Cretaceous instead of post-Miocene.

343.



Post-Nummulitic upturning in the Himalayas. La Fouché.

2. *Post-Nummulitic upturning in the Himalayan Range.*—In the Upper Indus Valley, Middle Tibet, in the district of Zaskar, south of the Indus, Nummulitic limestone (Eocene Tertiary) constitutes the summit of a peak of the Singala, having a height of 19,000 feet. In the section (Fig. 343) the blocked area is the Nummulitic limestone, a blackish fetid rock; the