that valley when the glacier attained its greatest size viz., at least 5,200 feet above the present bottom of the valley at Viesch, and more than 3,700 feet at Morcles, not far above the southern end of the delta of the Rhone, which once formed part of the lake. If we may suppose that this latter thickness continued approximately as far as the deepest part of the lake between Evian and Cully, the glacier may have been nearly 4,700 feet thick, if we add to the above thickness at Morcles the depth of the water.[1] By similar observations on the *Jura*, it is clear that where the ice abutted on that range, it still maintained a thickness of something like 2,200 feet where thickest, swelled as it was by the vast tributary masses of glacier-ice that progressed down the valley of the lakes of Thun and Brienz, and also by that of the Arve and of Chamouni, and by others of smaller size that flowed down the valleys south of the lake.

Consider the effect of this gigantic glacier flowing over the Miocene rocks, which in this part of Switzerland are comparatively soft, and yet of unequal hardness! That mass, working slowly and steadily for a period of untold duration, must have exerted a prodigious grinding effect on the rocks below. Where the glacier-ice was thickest, there the grinding power was greatest, especially on the softer Miocene strata, and the underlying rock was consequently to a corresponding extent worn away. No one can doubt that the ice-flow that pressed down the upper valley of the Rhone exercised a great amount of eroding power, representing as it did the snow-drainage of all the

[1] For details on this question, see 'Notice sur la conservation des Blocs Erratiques et sur les Anciens Glaciers du Revers Septentrionale des Alpes,' par M. Alphonse Favre, Archives des Sciences de la Bibliothèque Universelle, November 1876.