traced, the evidence on the east of the valley in the form of lateral moraine terraces shows that a long tongue of ice lay

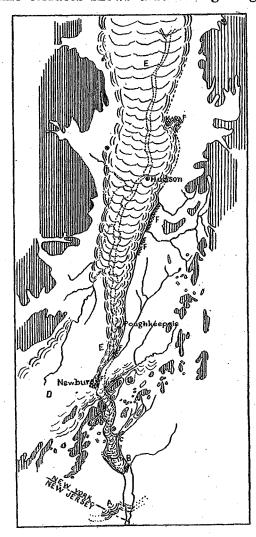


Fig. 17 Sketch map designed to show manner in which the glacier retreated in the Hudson valley. A, ice front at Tappan N. Y.; B, protrusion of glacier through the Highlands to Croton point; C, a later stage in the same; D, same stage as C when the ice still filled much of the lowland north and west of the Highlands; B, the Newburg stage. The western limits of the ice at the Newburg stage are conjectural. Definite margins of the ice on the eastern side are shown by ice contacts at F, F, F. Vortical ruling in areas over 1000 ft in elevation

over the gorge and for some miles east of the present river holding up the drainage of the side streams for a time, giving a more or less definite belt of deposits traceable northward as