All the terraces and plains in the lower Hudson south of Croton point, those at Port Washington, College Point, Maurer, Tarrytown and Van Cortlandt park, accord with this mode of retreat, and the slight but recognizable evidence which they bear of the presence of the ice along this eastern bank of the Hudson makes it reasonable to grant that the levels which they exhibit are those of local bodies of water held in position by the ice and hence subject to capricious changes.

Croton point stage. The strongest development of glacial deposits, such as are peculiar to the front of a retreating glacier, in the Hudson valley north of the great terminal moraine in Brooklyn and south of the Highlands, occurs at a point in the valley where there is again an important change in the geologic structure of the region. At Haverstraw, the thick sill of intrusive basalt which forms the palisades of the western bank of the river curves inland and westward, presenting its steep front to the north. At the same time the Hudson valley eroded in the Triassic basal beds widens out to the westward, and the gorge occupied by the existing river from Ossining (Sing Sing) northward bends around in deference to the geologic structure of its western bank. On the east bank there debouches just south of Croton point the Croton river, a curvilinear stream whose northward curvature may be compared with that of the trap ridge which touches the opposite shore at Haverstraw. We shall first consider the glacial conditions as they are found at Haverstraw, and then proceed to the interpretation of the deposits at Croton point and in its vicinity.

Haverstraw glacial deposits. The glacial deposits at Haverstraw from the base of High Tor northward along the shore and to Stony Point, for a mile or more inland, are rather complex, consisting of the more striking brick clays, glacial sands, gravels, and also till in the form of a frontal moraine. The extensive opening of the clay beds affords numerous opportunities for examining their structure and relations.

Frontal moraine. Once the ice front in its retreat lay north of the curved ridge of trap above referred to, any tendency to move southward would be met by the obstruction which this westward curving ridge offers, and as the ice, on the whole retreating,