## DYNAMICAL GEOLOGY.

includes, besides the tidal waters of the bay and river, the river waters of the Hudson and of the New Jersey streams, with the important addition of the high-tide overflow from Long Island Sound; and the southern channel into the bay is the deepest, apparently because the New Jersey streams empty into the lower bay nearly abreast of this entrance. Large tidal grounds about a harbor are more essential even than a great river for the best conditions of harbor entrances; and any encroachment on the limits in New York Bay is carefully guarded against. The depth over the surface of the bars is mostly between 3 and 10 feet.



## Mouth of Connecticut.

## Harbor of New Haven.

Over the bars at the mouth of the Columbia River, Oregon, occurs the same small depth. A vessel ran aground on the outer bar on July 18, 1841, and, after passing a night of calm weather, but of heavy and disastrous tossings as the waves of the Pacific rolled in during the progress of the rising tide, lay quiet at daybreak when the tide was out, fixed in the sands, with a belt of dry sand around her. The next day, she was an abandoned wreck. (D., Notebook, 1841.)

The mouths of the Connecticut and Housatonic rivers, and New Haven Harbor, whose positions are shown on the map on page 211, afford excellent illustrations of this subject. The depths in the figures are in feet; the lines mark depths of 6, 12, 18, and 24 feet.

The mouth and sand-bars of the Connecticut River are represented in Fig. 198. The river is the largest of New England, and supplies abundant water and much sediment.