different latitudes, just as the line of perpetual snow varies upon the flanks of the mountains. Under the Equator it is 1⅞ths of a mile: thence the limit gradually rises, approaching nearer and nearer to the surface as we ascend towards the Poles, until it reaches the surface in lat. 56° 25′ S. on the one hand, and in lat. 48° 20′ to 67° 30′ N., and descending again as the latitude increases to ⅘ths of a mile in lat. 70°.

From the Equator to the isotherm of 39° the water *above* this line is warmer, and between 39° and the Pole is colder, than it is *below* the line; the temperature varying from the line to the surface.

The line of *maximum* surface-temperature, however, does not coincide with the Equator, owing to the influence exercised by disturbing currents; but occurs in lat. 10° N. in the Atlantic, lat. 12° N. in the Indian Ocean, and lat. 8° S. in the Pacific.]

We have already explained why the temperature of the ocean is much more uniform than that of the atmosphere.

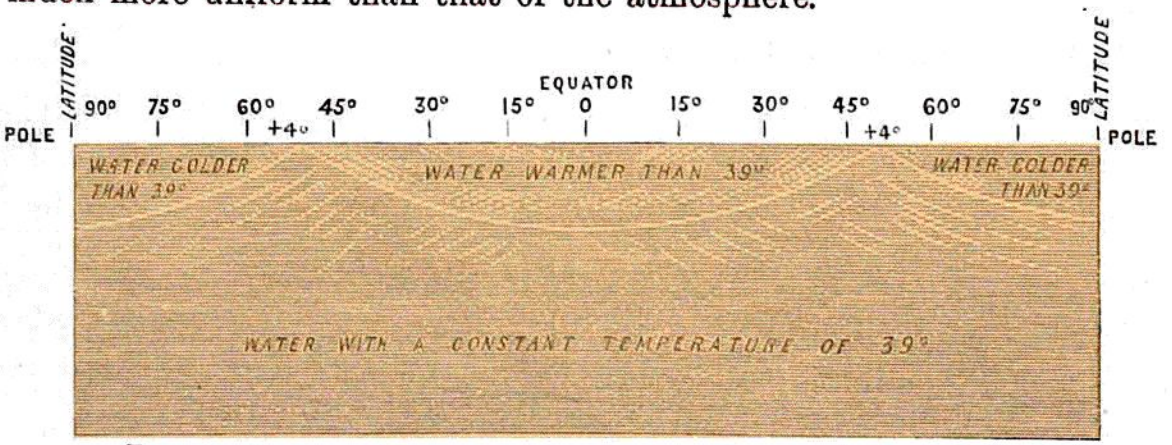

FIG. 212.—DIAGRAM, SHOWING AT WHAT DEPTH AN INVARIABLE TEMPERATURE OF 39° F. IS FOUND IN THE OCEAN.

A peculiarity worthy of being remembered is, that water is colder over shallows and reefs, and near the coast, than in the open sea; a fact of which advantage may be taken to render navigation more secure. Alexander von Humboldt explains this phenomenon by supposing that the deep waters re-ascend the slopes of the reefs and sand-banks, and mingle with the upper or superficial strata. Above these shallows thick mists are almost continually hovering, because the cold water which covers them determines a local precipitation of the atmospheric vapours. The outlines of the fogs are clearly marked; seen from a distance, they reproduce the exact form of the shallows and the accidents of the submarine soil. Nay, more; the clouds are often arrested at these points, and tower against the distant horizon like mountain-peaks.