

gree of Fahrenheit; and a gradual reduction of its temperature to take place from that moment by the effect of a constantly diminishing temperature of the air; under such circumstances the following phenomena would occur. The particles of the water at the surface becoming more condensed, that is heavier, as they became cooler, would sink towards the bottom, and be replaced by the hitherto subjacent particles; which in their turn, undergoing a similar decrease in their temperature and condensation, would consequently subside towards the bottom; till at length the whole mass of water had arrived at the temperature of about 40° . From this point any progressive decrease of temperature would have an expansive effect upon the particles of water near the surface; which, being thus rendered relatively lighter than the particles of the subjacent mass, would not subside; but, remaining on the surface, would continue to be expanded and made still lighter till they had reached the temperature of 32° ; at which degree, under ordinary circumstances, they would freeze. But the coat of ice thus formed would be, in some measure, a barrier to the effect of the colder atmosphere upon the bulk of the water beneath; which consequently would remain for a comparatively longer time in a liquid state; and would be easily procured for general purposes, by making partial openings