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Therefore the volume of the whole cone, which we will call V, is to that which is exposed, which we will call v, as 9 is to 1, *i.e.*  $\frac{V}{v} = \frac{9}{1}$ .

But also, as similar solids are to each other in volume as the cubes of their corresponding dimensions,

$$\frac{\mathbf{V}}{\mathbf{v}}=\frac{9}{1}=\frac{(h+\mathbf{H})^{\mathbf{s}}}{h^{\mathbf{s}}},$$

where h equals the height of the small cone of ice above water, and H equals the depth of ice below the surface,

whence 
$$\underline{h + H} = \sqrt[4]{9} = 2.080$$
  
 $\therefore H = h \times 1.080$ 

which is equivalent to saying that in a floating cone of ice the depth below the surface of the water is but very little greater than that which is exposed above. If the ratio of  $\frac{V}{v}$  had been equal to  $\frac{8}{1}$ , then H would equal *h*, or the depth below equal that which is exposed above. That the cone would tend to float with the apex upwards rather than downwards, may be inferred from the fact that this latter position, where the base would be upwards, would raise the centre of gravity nearer to the surface of the water, and thus bring about a condition of equilibrium not so stable as if the apex had been upwards.

These considerations, it must be borne in mind, are purely theoretical, and are only used as a means of giving a clearer idea of some of the conditions under which ice may be found floating, and especially such ice as has suffered disintegration in its wanderings.

Aspect of Newfoundland.—It has been suggested that the so-called glacial effects which are universally seen in temperate, and even in tropical regions, may in many cases have been due to an ocean on which great icebergs floated. These, as they moved from point to point (like huge pepper-castors), strewed broadcast boulders and detrital matter, such as are now to be seen over an area like that of Russia and parts of North America. The effect of the force of impact of these tremendous masses has also been dwelt on, and the way in which they could grind, smooth down, or rub up the surface of a submerged area, has also often been referred to.

Should the area thus acted on be a rising one, on its emergence it may show definitely the characters that have been impressed upon it, and these perhaps may in some respects be analogous to those produced by land ice. In the explanation of the superficial aspects of a country from some such considerations as these, one man may take his stand upon a glacier, and another upon an iceberg. An iceberg theory has been advanced in the case of Newfoundland as an explanation of the physical features of the island (see Quart. Journ. Geol. Soc., 1874, vol. xxx. p. 722). From the numerous raised beaches containing Mya arenaria and other Atlantic species still living in the surrounding seas, Newfoundland appears to have risen in later geological times. The island itself, its principal bays, its mountains, its lakes and rivers, its lines of igneous protrusions, its ice-grooves and scratches, and the general strike of the rocks, whi ten abo

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