and solids increase it. A saturated solution of salt boils at 102°C., and one of calcium chloride at 179°C.

Several other factors have been noticed to influence the boiling point, e.g., the quantity of water used and the material composing the vessel in which it is heated. Single drops of water suspended in other liquids have been heated many degrees above this point before they suddenly transformed into a volume of steam. In a perfectly clean glass vessel, water has been heated to 106°C. before ebullition commenced. Together with the first bubble, however, sufficient steam was generated to reduce the temperature to the normal boiling point. This cause of "bumping" may be overcome by placing a piece of metal in the bottom of the flask.

The value of water as an extinguisher of fire is partially dependent upon the large amount of of heat absorbed when transformed to steam and partially upon the fact that it serves to prevent the oxygen of the atmosphere from coming as readily in contact with the burning material. Combustion of such substances as wood and coal is dependent on their union with oxygen, and this does not take place to such an extent as to cause what is known as burning, unless they are heated to a considerable degree.

Although taking place more quickly when boiling, we know that water can evaporate at any temperature between the boiling and the freezing points, in fact considerably below the latter. Ice will evaporate on a cold winter day as clearly shown by clothes drying at such a time. We might therefore be almost justified in saying that we could boil ice. This term is, however, only applied to liquids, and only when the vapour is formed throughout the mass and rises as bubbles to the surface. When this is not the case we speak of liquids as evaporating and solids as volatilizing. The singing noise sometimes heard in water shortly before it reaches the boiling point is produced by the formation and subsequent collapsing of bubbles of steam.

As in melting ice, the heat rendered latent in vaporization is expended in changing the relation of the molecules to each other. These are much further apart in steam than in water. One volume of the latter would occupy nearly 1700 volumes when converted into the