

burning taste and peculiar smell. **It is a powerful narcotic and irritant poison, destructive of both animal and vegetable life,** and is nowhere to be found in the realm of nature. Its only source is the fermentation of sugar, and it may be produced from all vegetable substances containing either sugar, or starch, which is readily converted into sugar, as we have seen in the manufacture of beer.

Alcohol burns readily, and is therefore used in the spirit-lamp to produce heat without smoke. It is lighter than water and boils at a much lower temperature. It possesses another property of considerable value—it never freezes, and is therefore useful in the construction of thermometers required to measure an extreme degree of cold. It is also useful in the laboratory of the chemist as the solvent of many substances employed in medicine and the arts.

Proof spirit contains about an equal amount of alcohol and water, and is so called from having been **proved** to be equal to a given standard. Where less than fifty per cent. of alcohol is present the liquor is said to be **under proof**, and where more is present **over proof**.

COMPOSITION OF ALCOHOL.

12. An elementary substance is one that cannot be decomposed. The ancients first proclaimed the elements to be earth, air, fire, and water, but modern