## LIMESTONE AND ITS PRODUCTS

liquid will do so. Of course mixtures that contain water will give the water test.

Now that water has been analysed and found to have as constituents oxygen and hydrogen, these gases should be mixed to see if water results from the mixture, as air resulted when its constituents were mixed. The teacher might inform the pupit that in water the two gases are united in the proportion of two volumes of hydrogen to one volume of oxygen. Let each one make such a mixture and try the effect of lowering sodium or potassium into it; no ignition takes place. Let a lump of burned copper sulphate be lowered into it; it does not turn blue, so the mixture is quite unlike water.

Show, finally, that the two gases can be united in the presence of heat to form water. To do this let the flame from an ignited hydrogen jet play obliquely on the bot com of a round-bottomed flask filled with cold water, or, bester a mixture of water and ice. Have a watch glass below the flask to catch the condensed drops and test chese with sodium and burnt copper sulphate.

## LIMESTONE AND ITS PRODUCTS

Have the pupils place moist litmus paper in contact with limestone and note the absence of any action. Let them also test the solubility of limestone in water. Then have them grind up a very small quantity (a lump not larger than a grain of wheat); weigh the powder, and heat in a crucible before a gasolene blast lamp for fifteen minutes. Now weigh again, test with litmus, and also as to solubility. Compare the results with those of the experiment where magnesium was weighed and heated in air. They will see that something has been driven off in the heating process. The material remaining is quicklime.