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PETROLEUM.

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What is known under the general name of petroleum or "rock oil" is in reality a very complex mixture of hydrocarbons varying from fluids much lighter than water to viscid and tar-like substances. By hydrocarbons we mean chemical compounds of hydrogen and carbon. These are very numerous, some existing of gases, most of them as liquids, and quite a few as solids. All are inflammable, their hydrogen giving the blue part of the flame, and their carbon the yellow part. Their hydrogen unites with the oxygen of the air to form steam, and their carbon with oxygen to form carbonic acid gas. Experimental researches on light have proved that the yellow rays are the most penetrating. This explains why hydrocarbon gases and oils are such good illuminants, particularly acetylene, which contains a larger percentage of carbon than any of the others.

Properties of the Hydrocarbons.

The hydrocarbons are usually divided into three great groups, viz: Paraffin, ethylene and ben-

zine. The paraffin series includes methane ("marsh gas"), ethane and propane, which are gases; also liquids like butane, pentane, hexane, heptane, octane, nonane, dodecane, heptecane, whose boiling points range all the way from 34 degrees Fahrenheit, up to 532 degrees. The ethylene series includes ethylene, propylene, butylene, amylen, hexylene, heptylene, &c.; and the benzine series, benzine, toluene, xylene, mesitylene, churene, hexamethyl benzine and many others of no interest whatever to the average citizen were it not for the fact that each and every one of the hydrocarbons contains hydrogen and carbon in certain fixed proportions and is highly inflammable—the hydrogen furnishing most of the heat and the carbon the light of the flame.

Where it is Found.

Petroleum has been discovered in many countries, and occurs in Italy, France, Roumania, Persia, Eumrah, along the shores of the Caspian sea, China, Japan, Siberia, and last, but not least, in many