and oil. In place of a bucket, half of a wineskin was used to draw the product of these wells, which was permitted to settle in tanks, in which the bitumen and salt collected and hardened, the oil being drawn off into casks. The oil was called by the Persians "Rhadinace," was black, and had an unpleasant odor.

The Persians, Burmese, and other nations still continue to employ those substances in their crude state to give light, and for medicinal purposes. As early as 1694 Eccle, Hancock, and Portlock made "*pitch, tar, and oyle out of a kind of stone,*" and obtained patents therefor. In 1761 oils were distilled from black bituminous shale, and were employed in the cure of certain diseases, as stated in Lewis's Materia Medica for that year.

More than a century ago oils were obtained by the distillation of coals, but the purification of those oils, and their application to the common requirements of life, have been slow in their progress, and are not even now brought to perfection. The papers of the Royal Society of London, the Philosophical Transactions, and other European publications, give accounts of the distillation of oils from coals and other bituminous substances. In 1781 the Earl of Dundonald obtained oils from coals by submitting them to dry distillation in coke ovens, like those employed by some manufacturers of the present day for the same purpose. Laurent, Reichenbach, and others distilled the tars obtained from bituminous schists. These tars were purified in some degree by Selligue, and the oils subsequently obtained an extensive sale in Europe for burning in lamps, and for lubricating machinery. Many other chemists have from time to time contributed improvements in the purification of hydrocarbon oils.

The discovery of coal gas brought a new class of oils to