	Per cent.
Water	33.46
Rubber	3.99
Resin	62.95

Working up this *cheese* with solvents, removing foreign matter by filtering through gauze, evaporating, with low heat, the excess of solvent, adding an excess of precipitant, removing the precipitating agent, washing and drying the precipitate, gave a good grade rubber.

The rubber obtained in this manner was black, firm, not tacky, odorless and strong. In quantity, it is much better than the product obtained from its neighbor, milkweed.

Milkweed latex, however, is richer in rubber than that of Indian hemp. The amount of latex in the two plants are about the same. In both cases the amount of rubber present is too small to be of any economic importance.

Of the total rubber present in the latex, 96 per cent. of it is won in the cheese formed in the natural coagulation of the latex. Ninety-six per cent. of the total rubber found ranks as good grade rubber.

The *resin* is mahogany-red, transparent, medium hard, tasteless, with slight characteristic odor.

The soil conditions under which the plant was grown exerted an influence upon the amount of rubber in the latex. Plants grown on dry, sandy soil of West Akron, gave a latex containing 2.27 per cent. rubber and 20.69 per cent. resin. Latex from plants grown in the wet swamps of South Akron, contained only 1.12 per cent. rubber and 15.04 per cent. resin. Rubber from dry land plants appears to be of better quality than that obtained from wet grown plants.

Natural latex from dry grown plants, collected in August, during very dry weather, contained:

	Per cent.
Water	72.29
Solids	26.21
Ash	1.59

Rubber in fresh latex was 2.36 per cent.

AKRON, OHIO.

NATURAL GAS.

The Bureau of Mines has just issued Technical Paper No. 10, "Liquefied Products from Natural Gas; Their Properties and Uses," by Irving C. Allen, and George A. Burrell, in an effort to show how natural gas, which is being allowed to escape almost without restraint in almost all of the petroleum fields of the country, may be conserved.

By fractionating natural gas, either during or after liquefaction, four products can be commercially obtained: (1) The gaseous product, the common natural gas of commerce; (2) the semi-liquid product, known as the new "wild" product, which should be used only as a liquefied gas and should be held in high-pressure steel containers only; (3) the light liquid product, or light gasoline used for blending with heavy naphthas; and (4) the heavy liquid product, or ordinary high-grade gasoline.

The liquefaction of gases by pressure is not a new industry, but only recently has its application to natural gas been recognized as practicable.

Up to the last two years the general practice in the manufacture of liquid natural gas was to make the product by compression of the gas in single-stage compressors operated at a pressure of 150 to 300 pounds per square inch. The one product obtained, so-called "natural gasoline," was run into a tank and "weathered." The weathering consisted in allowing the lighter portions to volatilize spontaneously and escape into the open air until such time as the boiling away of the liquid had practically ceased. Thus the process involved a loss of 25 to 50 per cent., or even more. This loss was an absolute waste, not only of power and of cost of operating the engines and compressors but of the product itself.

The next step in the industry was to pass the waste gases (of which only the small quantity used for power had been utilized) from the single-stage compressor through a higher-stage compressor, thereby getting a second and more volatile product—a "wilder" liquid—which was run back into the first and mixed with the first or heavier condensate. This mixture was then again weathered to a safe degree, whereby it lost the greater part of the more volatile product that had been condensed in the second stage.

Recently the process had been improved another step, in that the first stage compressor product is run into one tank and handled as ordinary gasoline; the second compressor product is run into a second tank and handled as a lighter gasoline, with which the heavy refinery naphthas can be enriched or enlivened.

The natural gas of this country frequently contains light products that do not condense in the second-stage compressor, and for which it is practicable and necessary to instal three, four, and even higher stage compressors. These light products—true gases at ordinary temperatures and pressures—can be compressed and liquefied, but the liquid gases so obtained must be handled as gases and not as oils.

NATURAL CEMENT VERSUS PORTLAND CEMENT.

The rise and fall of the natural cement industry in the United States is shown by Ernest F. Burchard, of the United States Geological Survey, in "The Cement Industry in 1910," recently issued by the Survey as an advance chapter of "Mineral Resources for 1910." A dozen years ago the production of natural cement was nearly 10,000,000 barrels; last year it was but 1,139,239 barrels.

PRODUCTION OF PORTLAND AND NATURAL CEMENT IN THE UNITED STATES, 1899–1910 (IN BARRELS).

Year.	Portland cement.	Natural cement.
1899	5,652,266	9,868,179
1901	12,711,225	7,084,823
1903	22,342,973	7,030,271
1905	35,246,812	4,473,149
1907	48,785,390	2,887,700
1909	64,991,431	1,537,638
1910	76,549,951	1,139,239

ELECTRIC PRODUCTION OF FERRO-TUNGSTEN.

The Ampère Co., of Berlin, now smelts scheelite direct with sulphide of iron, with an addition of carbon in the electric furnace, according to the *Mining Journal*. The sulphide of iron serves as a flux. The product is a ferro-tungsten, containing but little carbonate, in the form of uniformly smelted regulus. The reaction in this process is $CaWO_4 + FeS + 4C = FeW + CaS + 4CO$. The silica contained in the scheelite is fluxed by the addition of lime forming a fluid and easily removable slag in which is contained the calcium sulphide formed according to the reaction hereinbefore given.

BUREAU OF STANDARDS ANALYZED SAMPLES.

The Bureau of Standards, Washington, D. C., is now ready to distribute certain special steels, as follows: No. 30, Chrome-Vanadium; No. 32, Chrome-Nickel; No. 33, Nickel. The fee for these steels will be $2.50 each. A renewal of No. 19, Acid Open Hearth Steel, 0.2 carbon, will probably be ready before this notice appears in print. Until printed certificates can be had, the above steels will be issued with provisional certificates without details of analyses or descriptions of methods.