	Moldavian.		Urpeth.	Utah.
	Malaguti.	Schrötter.	Johnson.	Newberry.
Carbon	85.75	86.20	86.80	86.15
Hydrogen	15.15	13.77	14.06	13.75
	100.90	99.97	100.86	99.90

It is supposed to be a compound of several members of the paraffine series, which are represented by the general formula $C_n H_{2n+2}$, and perhaps containing certain of the olefines $C_n H_{2n}$, a very full description of the chemical composition of a nodule of ozocerite found at Kinghornness, Scotland, was given in a paper read by W. Ivison Macadam, at the Sheffield meeting of the British Association,* last year.

Process of Manufacture. The crude mineral (ozocerite) is melted with water in order to remove any sand or other earthy impurities with which it is likely to be mixed. It is then run into cakes weighing about two pounds each. Another authority states that crude hydrocarbon is first melted and drawn off; the residue boiled with water, to the surface of which any remaining ozocerite rises; the whole allowed to stand for several hours for any suspended impurities to settle out. The melted wax which was drawn off is poured into moulds, which hold from 100 to 120 pounds. These cakes are then shipped to the various factories in England, Moldavia and Vienna, where it is purified and converted into illuminating oils and paraffine. A portion of it is directly treated on the island of Swatoi Astrow, in the Caspian Sea, near the Peninsula of Apscheron. There it is distilled in flat bottomed iron retorts provided with leaden worms, each of these retorts holding from 1,500 to 2,000 pounds.

Sixty-eight per cent. of distillate is obtained, sixty parts of which are paraffine and eighty parts oil. According to Grabowsky, the products of such a working may be tabulated as:

Benzine	2 to 8 per cent.
Naptha	15 to 20 " "
Paraffine	36 to 50 " "
Heavy lubricating oils	15 to 20 " "
Coke	10 to 20 " "

The oil thus obtained is yellow, opalescent, possesses an ethereal odor, and has a density varying between 0.75 and 0.81. Each distillate yields a quantity of a light oil boiling below 100°, which is used for purifying the paraffine, as will be shown further on. The crude paraffine thus obtained from the first distillation is yellow in color and tolerably pure. It is treated by the hydraulic press and the expressed oil redistilled in order to obtain any remaining paraffine. The pressed paraffine is melted and treated at from 170° to 180° with five per cent. of sulphuric acid, washed, neutralized with lime, and then rapidly distilled, then cast in plaques and again pressed. The cakes thus obtained are treated with twenty-five per cent. of the light oil and again melted and pressed; finally, they are treated with steam for the purpose of eliminating the last traces of essential oil. The material resulting from this treatment is a perfectly pure and colorless substance, free from all odor, transparent, and so hard as to exhibit in large blocks an almost metallic sound.

An improved method of bleaching ceresine, paraffine, petroleum, stearine and other fatty matters has been patented in Germany within a few months. The process consists in heating ozocerite to 170°–200° C. About twenty per cent. of the hydroxides of aluminium, iron, manganese and magnesium or the silicates of aluminium and magnesium are added to the molten mass. The treatment is repeated several times with the clear liquid, which separates upon standing. The residues are then treated with steam to remove ceresine and to restore the hydroxides.

* See *Chemical News*, vol. XI., p. 148.

TEXTILE FABRICS OF THE ANCIENT INHABITANTS OF THE MISSISSIPPI VALLEY.*

By Judge J. G. Henderson.

He showed that the modern Indians and these ancient people are bound together by a similarity in the instruments and processes of spinning and weaving. The materials used were the bark of various trees, the nettle, and the hair of the bear, buffalo, deer and dog. In working up the vegetable substances, the bark was first macerated. After being dried, it was spun in a multitude of ways. The rudest process was rolling on the thigh. The next step was a rude spindle which passed through various processes of evolution to the modern spinning-wheel. The speaker then proceeded to show the gradation of elaboration through which the loom has passed into the process of weaving. Judge Henderson's paper was illustrated by a series of drawings, collection of raw materials, and models of spindles and looms.

OCCURRENCE OF TIN AT WINSLOW, ME.*

By Professor C. H. Hitchcock.

After exhibiting specimens of the ore, etc., which is ordinary tin-stone, and is associated with margarite, fluveite, beryl and arsenical pyrites, Professor Hitchcock observed that there are twelve veins of this ore, in twenty feet of rock, their geological relations being identical with those of the tin veins of Cornwall. A bar of tin weighing fourteen ounces was also shown; it is the largest bar ever made in this country. Professor Hitchcock considers this locality the most promising tin-bearing locality yet discovered in the United States.

MICROSCOPY.

At a meeting of the State Microscopical Society of Illinois, held at Chicago, on the 8th ultimo, a new Microscope stand was exhibited by Mr. W. H. Bullock, specially designed for lithological work.

"The stage was made to rotate concentrically on the same plan adopted in his large instruments, and was graduated to read with a vernier to minutes. Both the minor and sub-stage were mounted on graduated circles, and arranged so as to swing over the stage, either separately or in unison. The sub-stage was made in two cylindrical fittings. The lower one carrying the polarizing prism, could be readily swung to one side, while the upper carried the achromatic condenser. The polarizing prism was mounted with a circle graduated to degrees, and was fitted with a stop for marking the position of the prism. The analyzer was mounted above the objective, somewhat after the manner of a Wenham prism, and could be slid in and out of position with the same facility, and also carried, if desired, a quartz film. It was, he said, a matter of great convenience for the lithologist to be able to pass from the use of ordinary to that of polarized light, without loss of time, and with the instrument on exhibition, this change could be effected in less time than a change of objectives with a double nose piece. The stand was also provided with a goniometer eye-piece, which was fitted with a calc film and and analyzing prism, both separable at pleasure."

The instrument, as above described, appears to be well adapted for the end in view, but we would remind Mr. Bullock that Swift, of London, has arranged the polarizing prism and the analyzer in equally convenient positions for instant use; the former he attached to his patent condenser, under the stage, while the analyzer was fitted exactly as Mr. Bullock described. Such instruments have been made for upwards of ten years, and have been used in this country.

Mr. Beck, of London, who was present, must have been quite familiar with the instrument we have described. We have always found the arrangement to work admirably, and are surprised that makers do not generally adopt the system in all Microscopes.

* Read before the A. A. A. S., Boston, 1880.