

located in Maryland, Virginia, West Virginia, Kentucky, Tennessee, Georgia, Alabama, Oklahoma, and Texas, produced 5,717,959 barrels at 94 cents.

The Barbar Asphalt Company has engaged Dr. Albert Sommer to take charge of a new department which will embrace recently developed Trinidad liquid asphalt products. Dr. Sommer until lately was in charge of the scientific development work of the Texas Company.

The next meeting of the International Association of Chemical Societies will be held on April 13th, 1912, in Berlin under the presidency of Prof. Wilhelm Ostwald.

Dr. H. E. Sawyer, formerly of the Bureau of Chemistry of the U. S. Department of Agriculture, died on July 5th at the age of 43 years.

## CONSULAR AND TRADE NOTES.

### THE COBALT SILVER MINES.

Since the inception of the camp in 1904, the silver mines of the cobalt district have shipped ore containing 93,275,077 ounces of silver, valued at \$48,265,236, after freight and smelting charges were deducted. During 1910 there were 33,519 tons of ore shipped by the mines, having a silver content of 29,856,069 ounces, worth \$15,375,000.

By calendar years, the production of the cobalt district was:

Year.	Ore shipments, in tons.	Silver content, in ounces.	Value.
1904.....	158	206,875	\$ 111,887
1905.....	2,144	2,451,356	1,360,503
1906.....	5,335	5,401,766	3,667,551
1907.....	14,788	10,023,311	6,155,341
1908.....	25,624	19,437,875	9,133,378
1909.....	30,677	25,897,825	12,461,576
1910.....	33,519	29,856,069	15,375,000

This camp has in seven years produced ore of a gross value of a little over \$50,000,000. Of this sum \$30,000,000 was net profit, and there is now in sight an ore reserve conservatively estimated at \$30,000,000. The average value of the total tonnage shipped was approximately \$500 per ton, and each ton netted a profit of \$266.

### KAURI-GUM INDUSTRY OF NEW ZEALAND.

In 1910, for the first time in the history of the kauri-gum industry of New Zealand, except in 1893 (a year of panic and depression in the United States), exports to the United States have been exceeded by shipments to Europe, the United States taking only 3,839 tons, as against 4,150 tons purchased by Europe. During the preceding year 5,127 tons were exported to the United States, as against 3,123 tons to Europe. As a general average, the United States in recent years has taken about two-thirds of the annual output of kauri-gum in New Zealand. Over one-half of New Zealand's total exports to the United States still consists of this gum, the exports invoiced during 1910 through the American consulate-general and agencies being valued at \$1,271,891 out of total exports from New Zealand to the United States valued at \$3,409,468. During the preceding year the value of kauri-gum exported to the United States was \$1,891,497, so that there was a decrease for 1910 of \$619,606.

### SWEDISH WOOD-PULP TRADE.

The proposal of the Swedish and Norwegian wood-pulp associations to limit the production was fully approved by the members to go into effect on June 1, 1911, continuing until January 1, 1913. It is stated that the agreement calls for a reduction of at least 150,000 tons in the production of mechanical pulp for the period stated. The limitation does not apply to chemical pulp at all. Prices for both chemical and

mechanical pulp are said to be on the rise. Shipments of mechanical pulp to the United States are increasing.

Declared exports of all kinds of pulp from Gothenburg to the United States for the first quarter of 1911 aggregated \$322,282 in value, as compared to \$263,855 for the corresponding period in 1910 and \$259,066 in 1909. The following figures show the values declared for export from Gothenburg to the United States annually for the past six years:

1905.....	287,677
1906.....	269,931
1907.....	734,655
1908.....	809,736
1909.....	964,822
1910.....	1,232,474

This was chiefly dry chemical pulp, with occasional shipments of wet chemical and wet and dry mechanical pulp.

### MUSSEL MUD AS FERTILIZER.

In most of the bays indenting the shores of Prince Edward Island are found extensive deposits of mussel mud, so-called locally, being organic remains of countless generations of oysters, mussels, clams, and other bivalves of the ocean and of crustaceous animals generally. The shells, usually more or less intact, are found embedded in dense deposits of mudlike substance and this combination is a fertilizer of high value and potency. It supplies lime and organic matter, besides small quantities of phosphates and alkalis. An ordinary dressing of it secures fertility in a striking manner to the poorest of most exhausted soils. The shells decay slowly, year by year throwing off a film of fertilizing stuffs. The deposits around Prince Edward Island vary from 5 to 25 feet in depth. They are taken up by dredging machines worked from rafts in summer or from the ice in winter.

### SODA IN BRITISH EAST AFRICA.

The Magadi Soda Co. (Ltd.) has been formed with a capital of \$6,387,281, to acquire a 99 years' lease of and to develop the important deposit of natural soda covering an area of some 30 square miles, known as Lake Magadi, in the British East Africa Protectorate, to connect the same with the Uganda Railway by the construction of a branch line, about 100 miles long, and to build a pier and approaches thereto at or near Kilindini. The Uganda Railway administration has undertaken, on a year's notice and at its own expense, to provide all necessary rolling stock sufficient to carry 160,000 tons of soda or soda products per annum.

### THE RUSSIAN PLATINUM INDUSTRY.

The Ministry of Commerce at St. Petersburg has placed before the Council of Ministers a project for regularizing the platinum industry. It is proposed to prohibit the export of platin-

iferous ores from a date when Russian laboratories can take over the whole Siberian output for refining, and steps are being taken to subsidize out of treasury funds such private laboratories as require more modern equipment. Special regulations are also being drawn up by which State control of the extraction and price of the metal will be established.

#### COTTONSEED-OIL REFINERY IN CANADA.

The first refinery of cottonseed-oil products in Canada is that of Gunn's (Ltd.), in Toronto. The plant is equipped to manufacture a complete line of salad oils, cooking oils, and shortening composed of compounds of vegetable and animal fats and oils. The capacity is 20,000,000 pounds per annum. The com-

pany has a line of tank cars engaged in carrying cottonseed-oil in its crude state from the mills of the Southern States.

#### IODINE FROM CHILE.

The Domeyko iodine works in the north of Chile are said to be the largest in the world, with an annual capacity of 400,000 pounds. The total production of iodine in Chile for 1910 amounted to 1,279,150 pounds.

#### TIN MINING IN BOLIVIA.

The Pulacayo tin mines in Bolivia have reached the depth of 2,304 feet, and the richness of the ore increases as the mine descends. This mine has been worked for more than 300 years.

## BOOK REVIEWS.

**Applied Electrochemistry.** By M. DE KAY THOMPSON, PH.D. 329 pp. The Macmillan Company. Price, \$2.10 net.

This is a work which is the result of the studies of applied electrochemistry by one who is well equipped with the knowledge of the theoretical side of the subject. It is intended as an introduction to applied electrochemistry for students who are already fairly well equipped with a knowledge of theoretical chemistry and electrochemistry.

Electrochemical measuring instruments are first described and sufficient detail given to permit one to make and operate the different types with a knowledge of the probable accuracy to be obtained. Frequent references to the literature are made in the case of most of the subjects taken up and these enormously increase the value of the book. Under electrochemical methods of analysis a number of interesting processes are given for determining concentration of various salts or ions through direct reading electrical measuring instruments. These are interesting as suggesting such applications to untried fields, but are admittedly not intended as representing electrochemistry now usefully applied in analysis. Such applications are still quite rare, but their comprehension by the student insures an understanding of some of the important quantitative principles of electrochemistry.

The ordinary processes of electroplating are briefly considered. Apparently in each case the best known formulae for the baths have been selected from the literature.

In the 25 pages devoted to electrolytic winning and refining of metals, a general review of the well-known processes is given, together with brief descriptions of some commercially unsuccessful processes. This scheme of discussing processes which have been only "near processes" seems a good one, as it must show the student how help may be gained from carefully considered failures.

The book makes no claim of presenting new material, but rather of forming a collection from the literature of what one would naturally call applied electrochemistry, and to this is added the most recent conceptions of theoretical electrochemistry in connection

with the subject. It certainly covers a broad field in a clear and concise manner, and the choice of processes and methods is apparently wisely made. Separate chapters are devoted, in addition, to those subjects mentioned below:

Electrolysis of Alkali Chlorides, 56 pp.

Primary Cells.

Storage Batteries.

Electric Furnaces.

Metallurgy of Iron and Steel.

The Fixation of Atmospheric Nitrogen.

Ozone.

The general impression made by the book is a good one and is what might be expected from a well trained student and teacher of the principles of electrochemistry. The illustrations are well selected and up to date.

While the application of the science is advancing so rapidly that the strictly applied portions ought to be frequently rewritten, yet the principles and the historical accounts, which are the more useful portions for the student and teacher, will remain prominent and permanent.

W. R. WHITNEY.

**Drying Machinery and Practice.** By THOMAS G. MARLOW. 326 pp.; 174 illustrations; 22 tables. New York: D. Van Nostrand Co. Price, \$5.00 net.

The press work and general make-up are good. It is written in a clear, concise, and logical style that can be readily understood by the ordinary reader. It is an English book and consequently deals with English practice and machinery but the fundamental principles are, of course, universal in application.

At the outset the author clearly states the reasons for drying materials, as well as the different degrees of dryness as found in practice. A brief outline of each division of the subject is taken up in a general way, followed by a detailed description of the machinery and manner of using the same, giving the results of practice, such as the power required, the amount of, and the condition of, the resultant product, so that the reader can form a correct opinion of what may be expected in practical work.

In discussing the subject of drying by evaporation,