

11,000,000 barrels and with an increase in price at the end of the year, it is evident that an unusual condition in the oil market existed. The three commodities of general market value to be considered in connection with crude oils are gasoline, kerosene and residuals, the last suitable for fuels in the west and for lubricants and wax in the east. In the trade "naphtha" is the name generally applied to oils lighter than kerosene as distilled from crude oil, but by the public the term "gasoline" is applied to the light fraction of the oil suitable for internal-combustion engines. In fact, when crude naphtha is redistilled it is for the most part separated so as to yield gasoline and lighter or heavier kerosene. The demand for gasoline has become so imperative that little or none is now allowed to lower the safety of lamp oils; the latter have therefore greatly improved in character. In the production for 1911 California led with 81,134,391 barrels; Oklahoma took second place, with 56,069,637 barrels; Illinois was third, with 31,317,038 barrels; and Louisiana was fourth, with 10,720,420 barrels. The prices of the different oils varied greatly, ranging from 47 cents to \$1.32 a barrel. Thus while the production in Pennsylvania was only 8,248,158 barrels, its value was \$10,894,074, whereas Louisiana, which produced 10,720,420 barrels, received for it only \$5,668,814. The greatest increases in production in 1911 were in California, 8,123,831 barrels; in Oklahoma, 4,040,919 barrels and in Louisiana, 3,879,025 barrels. The principal decreases were in Illinois, 1,826,324 barrels, and in Ohio 1,099,258 barrels. The following table of total production shows the general increase in production for the United States since 1901.

1901	69,389,194
1903	100,461,337
1905	134,717,580
1907	166,095,335
1909	183,170,874
1911	220,449,391

ACCORDING to *Terrestrial Magnetism*, preparations are being made, under the superintendence of Professor Tanakadate, to send out four parties for making a new magnetic sur-

vey of Japan, to be completed within two years. The same general scheme of work will be followed according to which the first survey of about eighteen years ago was successfully accomplished under Professor Tanakadate's direction. The issuing of the British Admiralty chart of lines of equal magnetic declination has been recently transferred from the Hydrographic Department of the Admiralty to the Magnetic and Meteorological Department of the Royal Observatory, Greenwich.

UNIVERSITY AND EDUCATIONAL NEWS

It is reported that Mr. P. A. B. Widener, of Philadelphia, has increased to one million dollars his gift to Harvard University for a library building in memory of his grandson, Harry Elkins Widener.

THE late Dr. John Dixon Mann, who occupied the chair of forensic medicine in the University of Manchester from 1892 until his death last April, bequeathed to the university the sum of £1,000. By resolution of the council, the money has been added to the special fund for the encouragement of medical research.

At the University of California work has begun on a laboratory for the Citrus Experiment Station at Riverside, funds for this building and for the site on which it stands having been appropriated by the last legislature. The new laboratory will be thoroughly equipped, and will become headquarters for some of the work for advancing the interests of the orange and lemon industries heretofore carried on by the university at Whittier. The United States Department of Agriculture will cooperate with the university at Riverside, stationing there agricultural experts to study the problems of the citrus industry. Professor J. Eliot Coit has been appointed director of the laboratory.

Nature states that the establishment of the new university in western Australia is progressing satisfactorily, and the senate is open to receive applications for the filling of eight professorial chairs. Parliament has

voted an annual minimum endowment of £13,500 towards the administration and needs of the university, and the chair of agriculture has been fully endowed by the newly appointed Chancellor, Sir W. Hackett. Mr. H. Gunn, who carried out similar work in South Africa with success, has been appointed organizer of the university, and is now actively engaged in making preparations for the inauguration of the institution early next year.

DR. B. E. RAY, at present of the Experiment Station and College of Agriculture, North Carolina, has accepted a position as professor of chemistry in the College of Agriculture and Mechanic Arts, Mayaguez, P. R. Special attention will be given to the development of courses in sugar chemistry.

PROFESSOR I. F. LEWIS, Ph.D. (Hopkins), of Randolph-Macon College, Ashland, Va., has accepted a call to the assistant professorship of botany at the University of Wisconsin.

MR. J. W. MERRITT, assistant in mineralogy at Northwestern University, has been appointed instructor in geology at Dartmouth College.

At University College, Reading, Dr. S. M. T. Auld, lecturer in the chemical department of the Southeastern Agricultural College at Wye, has been appointed professor of agricultural chemistry, and Mr. John Goding, of the Midland Agricultural College, has been appointed research chemist in dairying.

H. MAXWELL LEFOY has been appointed professor of entomology at the Imperial College of Science and Technology, South Kensington, London.

PROFESSOR JOHANNES FITTING, director of the State Botanical Institute at Hamburg, has been called to Bonn, as the successor of Professor Strasburger.

DISCUSSION AND CORRESPONDENCE

THE CORROSION OF IRON AND STEEL

TO THE EDITOR OF SCIENCE: In the issue of SCIENCE for April 26, 1912, appears a review of a recent book, "The Corrosion of Iron and Steel," by J. Newton Friend, Ph.D. The review is signed "William H. Walker." The

writer did not see this review at the time it was issued in SCIENCE, but his attention has just been called to it in a curious way. It appears that the review has been reprinted in pamphlet form for distribution as a commercial argument. The commercial argument is based upon the following paragraph from Professor Walker's review:

It is a matter of regret that the author has been misled, as have also the reviewer and others, by giving credence to statements and data supplied by the American Rolling Mill Co., of Middletown, Ohio, which he publishes on pages 114, 250, 276 and 351, regarding the purity of this firm's products. For example, the material said to have the analysis published on page 114, as containing 99.954 per cent. iron, and which on page 276 is proposed as a standard for pure iron on which to base a corrosion factor, *was later found by the author himself, much to his surprise, to contain .172 per cent. copper.*

In the commercial reprint referred to, the portion of the quotation from Professor Walker's review which the writer has italicized, appeared in large block letters. There is only one inference that the reader of this pamphlet could form, which is that The American Rolling Mill Co., of Middletown, Ohio, is purposely putting copper into their material for some ulterior purpose.

The writer must express himself as being surprised, to say the least, that Professor Walker should have included in a review of a scientific book such a paragraph as this, based upon an analysis of a single open market sample which was manufactured in the early days of a new industry. Professor Walker must be well aware of the situation with respect to the elimination of copper from iron in the open hearth furnace, for under date of March 16, 1911, the writer wrote to Professor Walker as follows:

In regard to the point you raise about copper in ingot iron, I can only tell you that at the time when the American Rolling Mill Co. first adopted the slogan in a trade way, of "99.94 per cent. pure," they had not established their chemical research laboratory and had paid no attention to the possible appearance of small amounts of copper in the iron, which came from the ore and selected