OBITUARY NOTICES.

ALFRED FOSTER CHOLERTON.

1859-1936.

ALFRED F. CHOLERTON, son of the Rev. Joseph Cholerton, was born on March 6th, 1859, at Pinchbeck, Lincolnshire. He received his general education at Ashby Grammar School and at Derby School. Leaving school at 15 years of age, he was apprenticed to Messrs. John Richardson and Co., Wholesale Druggists, of Leicester, and subsequently obtained a practical knowledge of retail pharmacy as an assistant in Liverpool, where for a time he was in sole charge of a branch business. Finding only a limited scope for his ambition there, he came to the Metropolis in his twenty-first year and was engaged by Messrs. Burgoyne, Burbidges and Co. as a commercial traveller. For the next ten years he represented in turn Messrs. J. H. Haywood, Ltd., of Nottingham, Messrs. Lofthouse and Saltmar, of Hull, and Messrs. Hirst, Brooke and Hirst, Ltd., of Leeds. In 1891, Cholerton entered into partnership with Messrs. A. and W. de St. Dalmas, an old-established firm of manufacturing chemists in Leicester. All through his career it was Cholerton's aim to create and foster happy relations with his employees, and the esteem in which he was held by all those associated with him is ample evidence of the success of his efforts.

In addition to his activities in business, Cholerton was an enthusiastic social worker. He was a leader of the Adult School Union in Leicester, of which he became President, and was interested in the Rotary movement, filling with distinction the office of President of the Leicester Rotary Club.

Cholerton died on May 11th, 1936, mourned and beloved by his widow, a son, and a married daughter and many friends. He was elected a Fellow of the Chemical Society on March 4th, 1897.

ALFRED BATTYE KNAGGS.

ALFRED BATTYE KNAGGS was a member of a well-known Huddersfield medical family. After attending school for a year or two at Rossall, delicate health compelled his removal, and the rest of his early education was undertaken by the late Rev. G. E. Wilson, Vicar of St. John's, Huddersfield.

Subsequently Knaggs proceeded to the Yorkshire College, now the Leeds University, where he studied chemistry under Prof. T. E. Thorpe and physics under Prof. A. W. Rücker, taking also the course in Dyeing under Prof. J. J. Hummel.

On leaving Leeds he became Assistant to Prof. W. M. Gardner in the dyeing department of the Bradford Technical College, where he remained until his retirement in 1917.

During his time in Bradford Knaggs collaborated with the writer in a book on wool dyeing, subsequently published in Philadelphia as Vol. 8. of Posselt's Textile Library. He also did much work in connection with the *Journal* of the Society of Dyers and Colourists, acting as an abstractor for some years.

Of a generous and unassuming disposition Knaggs was much esteemed by his students and colleagues. In his later years, notwithstanding a crippled physique, he devoted himself to gardening, a hobby in which he was eminently successful, the masses of coloured blooms which he produced giving much pleasure to himself and his friends.

Though his health had been failing for some time, the end came suddenly on April 11th, 1936, at his house in Wonford Road, Exeter. He will be mourned by many as a loyal friend.

W. M. GARDNER.

THEOPHILUS HENRY LEE.

1873—1926.

THEOPHILUS HENRY LEE was born in Somerset on April 18th, 1873, and died in an English hospital at Rio de Janeiro, Brazil, on April 30th, 1926. Educated in England, he went to Brazil while very young, and for three years was analyst to the St. John d'El Rey Mining Co., Ltd. In January, 1910, he was appointed chemist to the Brazilian Geological and Mineralogical Survey.

In his governmental position Lee devoted particular attention to the chemical analyses of Brazilian ores, especially iron and manganese ores, and made important studies on the coal of South Brazil. He visited England in 1920 to learn the methods of making synthetic nitrates; he made a very complete study of the mineral waters of Caldas Novas in the State of Goyaz, and contributed papers to the American Journal of Science and to other scientific journals in Brazil on, inter alia, zirconium minerals and the analysis of rare-earth minerals.

Lee was elected an original Fellow of the Academia Brasileira de Sciencias in 1917 as a member of the physico-chemical section, and was a member, as spectrologist, of the Brazilian Commission engaged in the studies of the total eclipse on May 29th, 1919, in Sobral City, Brazil.

Lee was elected a Fellow of the Chemical Society on March 4th, 1897.

THOMAS HENRY POPE.

1875-1936.

Thomas Henry Pope, who passed away on January 12th, 1936, was born in London on February 1st, 1875. He received his early scientific education at the Finsbury Technical College and in 1893 entered the Central Technical College, South Kensington, as a student of chemistry under Professor Henry E. Armstrong. After gaining the diploma of Associate of the City and Guilds' Institute in 1896, he became research assistant to Professor W. C. Unwin and later to Mr., now Sir, Robert Mond. In 1898 he joined Julian L. Baker, who was then chief chemist to the Beetroot Sugar Association, afterwards, in 1900, himself becoming chief chemist to that Association. A paper published in the *Journal* of the Chemical Society with J. L. Baker in 1900 on "Mannogalactan and Laevulogalactan, two new Polysaccharides," records some of the results of that collaboration, and a communication to the *Journal* of the Institute of Brewing in 1901 with A. R. Ling on "Tornōe's Optical Method of Determining Alcohol and Extract in Beer" also records some of his work.

In 1901 Pope was appointed lecturer in chemistry in the British School of Malting and Brewing in Birmingham University in succession to J. H. Millar under the late Professor Adrian Brown. He stayed at the Birmingham School of Brewing for about sixteen years, lecturing, not only on brewing, but on general inorganic and organic chemistry to the degree students. He also had charge of the Analytical Department, in which in those days much analytical work was done, principally for brewing purposes. Pope was a good teacher, having the somewhat rare ability—rare at any rate among "teachers"—of presenting his subject in a way which not only revealed the fundamental principles, but captured the interest and developed the mind of his students. His quiet humour and charm of manner made him extremely popular in this rôle.

In October 1917, he forsook teaching and entered the industrial field as Works Chemist to Messrs. Calders, Ltd., where he was occupied with routine and general scientific problems arising in the manufacture of alcohol and of yeast at the distilleries of Bo'ness and Gartloch. Four years later this firm amalgamated with the Distillers Company and Pope was transferred for similar duties to the Vauxhall Distillery in Liverpool, going later to Bankhall Distillery in the same city.

In consequence of re-organisation of the work of the scientific staff and the establishment of a central research department of the Distillers Company, Limited, Pope was transferred

as one of the senior chemists to the new laboratories at Great Burgh, Epsom, Surrey, where he remained, in charge of the industrial alcohol section of that department, until the time of his death. His wide reading, varied experience and critical judgment were of very great value in the study of large-scale operations with which he was occupied in his later years.

Pope devoted much of his spare time to the study of languages and to scientific literary work; he was abstractor for the Journal of the Chemical Society and for the Society of Chemical Industry for more than 35 years. He also did much valuable work for the Society of Public Analysts, first as an abstractor and later, in 1933, as assistant editor of The Analyst. He had an extensive knowledge of foreign languages, including Spanish, Italian and Russian, and although he published little original work he is well known as having translated Euler's "Chemie der Enzyme," Molinari's "Trattato di Chimica Generale ed Applicata all'Industria" and Villavecchia's "Trattato di Chimica Analitica Applicata." He also edited the latest English translation of Mendeléeff's "Principles of Chemistry" from the Russian. In addition, Pope revised that section of Allen's "Commercial Organic Analysis" which deals with "Starch and Isomerides" and he prepared anonymously a bibliography of the more important references to the presence of the principal heavy metals in food and biological materials. These are some examples of his patience, knowledge, and skill.

Pope's charming personality, combining as it did a natural modesty, almost a courtly dignity and a quiet humour, endeared him to all those with whom he came in contact. He was a most agreeable colleague and charming friend who will be long mourned by those who knew him.

I. VARGAS EYRE.

CHARLES EDWARD POTTER.

1862-1935.

Many associations of long duration were broken when Charles Edward Potter passed away on May 29th, 1935, in his 74th year. He was a member of the Chemical Society for 52 years and his connection with the sugar-refining industry had covered almost the same long period in one refinery in the City of Liverpool, where he was born on April 4th, 1862, and near which he resided till his death. Educated at the Liverpool Institute, he showed, as a boy, an unusual enthusiasm and aptitude for scientific pursuits with a decided leaning towards those of a chemical and mechanical nature, and when he left school in 1878 to enter the employ of Messrs. Henry Tate and Sons, Sugar Refiners, as laboratory chemist in the Love Lane (Liverpool) Refinery, inclinations and duties ran so harmoniously together that a congenial and successful career could well be expected. His ability, application, and resourcefulness found recognition in successive promotions to works chemist, manager, (1903) and managing director (1919), the position he continued to occupy after the amalgamation of Messrs. Tate and Lyle, Ltd., till his retirement at the end of 1934, a few months before his death.

The record of his work will not be found in scientific or technical literature. A loyal servant, served loyally by more than one generation of assistants and workpeople, he unobtrusively played his part in the expansion of a world-renowned firm whose success has been achieved in no small measure through quick recognition of the value and skilful application of the results of chemical, physical, mechanical, and electrical research.

His life, apart from business, was pre-eminently marked by a great love for the society of his fellow men. He enjoyed the theatre and travelled often to foreign parts. He read little except newspapers and technical journals, but a retentive memory and keenness of observation kept him in close touch with the world and the march of events. Although connected with Liverpool all his life, he took little part in public affairs, but realising acutely that relief of suffering must depend largely on medical advance through hospital practice he was a generous giver to these institutions and warmly welcomed an invitation to serve on the committee of the Liverpool Northern (David Lewis) Hospital, to which he was able to render valuable service for the last 16 years of his life. He was a Freemason for more than

30 years. He took little interest in sport and had few hobbies, but photography gripped him from the days of wet plates to those of colour cinematography.

In family life he was a happy, generous, and much appreciated husband and father. He is survived by his widow, one son, who occupies a prominent position in the refinery where his father laboured so long, and four daughters.

T. B. B.

FRANK SCUDDER.

1862-1936.

A Fellow of the Chemical Society since March 1st, 1883, Frank Scudder died at his residence, St. Annes on Sea, on February 6th, 1936, aged 74 years.

Born in Rusholme, Manchester, he was educated at Manchester Grammar School and entered the laboratory of Dr. Angus Smith, then founding the Inspection of Alkali works. He remained till Dr. Angus Smith died in 1884 and Dr. Smith's desk became his treasured possession. In the laboratory he came in contact with the rising chemists who were regular visitors, such as Lionel Playfair, Dr. James Young (Paraffin Young), and Bunsen (then a chemist in Lancashire) and he was proud to relate how he had to meet Dr. Joule each week and convoy him to Dr. Smith's laboratory in Cavendish St., All Saints. After the death of Dr. Angus Smith, Scudder was for a short time in charge of benzoleproducing works at Normanton in Yorkshire. Later he became Technical Assistant to Sir Henry E. Roscoe and with him went through most of the famous chemical fights, such as the cordite case, the McArther Forrest cyanide gold extraction case, and the water-gas development for iron works. After visiting all the water-gas plants in America, Germany, and Russia, Scudder became chemist to the Syndicate. Through the trouble of iron stains formed on the Fahnejelm combs (the forerunner of the Welsbach mantle) he was led to the discovery of iron carbonyl, a gas which deposits mirrors of iron similar to the Mond nickel carbonyl. In 1893 Sir Henry assisted in the formation of the Mersey and Irwell Rivers Board—the first of such boards—formed to protect the new Ship Canal. Henry at the request of manufacturers became the first chemical adviser. Scudder was sent to Manchester to attend to this development. On Sir Henry's retirement in October, 1905, Scudder was appointed chemical adviser and he remained so till his death. During this period he was intimately associated with the Commissions and all concerned with the growth of purification of water, sewage, and trade wastes. In 1898, with Roscoe, he became associated with Liebig's Extract of Meat Co. as chemical adviser and he retained this post till his death.

Scudder was with those who in Manchester founded the Society of Chemical Industry

and as an original member was present at the Jubilee of this Society.

Scudder was not a public man; his profession was his hobby and after the day's work was over he went to his home and garden. He died on the day of his wedding jubilee.

ROBERT PETTIGREW.

WILLIAM STEVENSON.

1858---1936.

WILLIAM STEVENSON died at Eaglehurst, Ditton Hill, Surrey, on February 18th, in his 79th year. He was born in Manchester, where his family have been well known for many generations. He was educated in Paris and on completing his education joined Messrs. Burgoyne, Burbidges and Co., Ltd., Manufacturing Chemists. It was here that he met the late Mr. Reginald Howell, who, in 1882, joined him in partnership to form the business of Stevenson and Howell, Manufacturing, Analytical and Consulting Chemists, specialising in the production of essences, essential oils, etc. In 1898 the business was formed into the Limited Company whose head office and works occupy the extensive site in Southwark Street. Stevenson was Joint Managing Director with Mr. Howell till the latter's death

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in 1912 and then with Mr. J. W. Tilley till the latter retired in 1917. From this date till Stevenson himself retired in 1929 he was sole Managing Director and Chairman of the Company. He was succeeded by his son, Mr. R. W. Stevenson, M.C., M.A., and Mr. V. J. Tilley, F.I.C., as Joint Managing Directors.

Stevenson was a member of the Executive Committee of the British Essence Manufacturers' Association from its inception, and with his broad outlook and knowledge of the trade he rendered valuable service during the difficult period of the Great War and in many other important problems which had to be dealt with by the Association. He was elected a Fellow of the Chemical Society on February 6th, 1879.

P. C. ISHERWOOD.

PHILIP LEWINGTON WHITEHOUSE.

1874-1936.

PHILIP L. WHITEHOUSE was born on January 15th, 1874, at Glasgow. He was a student at the Glasgow and West of Scotland Technical College under Professor E. J. Mills, F.R.S., and after leaving College was engaged for $5\frac{1}{2}$ years with Messrs. J. Storer and Co., Ltd., Paint Manufacturers, of Glasgow, where he became Technical Manager. In this capacity he was engaged in many chemical investigations, one of which he undertook with Professor E. J. Mills on the utilisation of slag as a pigment. He left Glasgow for West Bromwich in 1903 and became an analytical chemist. In 1915, he formed Waste Products, Ltd., and Lewingtons, Ltd., and was associated with a number of local activities in West Bromwich, taking also a prominent part in the Rotary movement. His death took place on April 8th, 1936, at West Bromwich after three months' illness.

Whitehouse was elected a Fellow of the Society in December, 1901.