Meet Your Past President . . .

C. B. CLUFF CHOSEN TWELFTH PRESIDENT IN 1921

(EDITOR'S NOTE: *This is another in the series of sketches on past presidents which Oil & Soap inaugurated with the March, 1946, issue to acquaint new members with past leaders. Previous presidents were Felix Paquin, pro tem in 1909, elected in 1910; David Wesson, E. R. Barrow, F. N. Smalley, G. W. Agee, G. G. Fox, T. C. Law, Archibald Campbell, P. S. Tilson, Rex W. Perry, and F. B. Porter.*)

GROWTH and ferment marked the term of office for the 12th president of the American Oil Chemists' Society, C. B. Cluff of Procter and Gamble Company, Cincinnati, O. In his new capacity, having taken office in May, 1921, in Chicago at the 12th annual meeting, Mr. Cluff was concerned with the unemployment of chemists, the need to give committee activity to the new members who numbered one-quarter of the membership, and the desirability of cooperating with government chemists in fats and oils research. He also encouraged the collection and publication of seed analyses by cotton oil chemists.

C. B. CLUFF

Membership stayed high among his interests during the year for, after lamenting the lack of effort in bringing in new members, he persuaded the Governing Board to change the requirements for dues so that a chemist joining in the late months of the fiscal year would have the payment carry over until the end of the next fiscal year. Another impending change was the incorporating of the Society.

The Chemists' Section of the Cotton Oil Press, which then carried Society news and technical papers, ran a short series by vegetable oil leaders on the essentials to advancement. The first of these was contributed by F. N. Smalley, who died before completing the manuscript in which he gave attention to detail as an essential. Second was a contribution on the desirability of acquiring a business training, and third, the usefulness of a good professional library.

At this time the Society had only two officers besides the president: a vice president, who was L. M. Tolman, and a secretary-treasurer, who was Thomas B. Caldwell.

Convention plans for the spring of 1922 were complicated by a flood in the lower Mississippi valley, and the dates were changed from May 8-9 to June 5-6 in New Orleans at the Grunewald hotel.

MR. CLUFF was active in the Society for many years before his death on January 24, 1945. He served on the Refining Committee from 1917 to 1920 and from 1923 until his death: Referee Board from 1916 to 1920; Governing Board from 1921 to 1926; Uniform Methods Committee from 1918 to 1920; Membership Committee from 1920 to 1921; Color Committee for a time. He was vice president the year before he became president, carrying his interest in membership from the one office to the next. He attended nearly all the spring meetings of the Society, beginning with those of its predecessor, the Society of Cotton Products Analysts.

His professional career, after his graduation from the Massachusetts Institute of Technology in 1899 (see February, 1945, Oil & Soap for a more detailed account) was divided between the American Cotton Oil Company (1899-1913, 1915-1923), the N. K. Fairbank Company (1913-1915), and the Procter and Gamble Company (1923-1945). He was head of the patents department from 1932 until 1944. His contribution to the industry included the standardization of laboratory techniques and procedures used in the evaluation of vegetable oils. Mr. Cluff was a member of the Chemists' Committee of the National Cottonseed Products Association for 29 years.

L. M. TOLMAN, 1922

SUCCEEDING Mr. Cluff as president was L. M. Tolman of Wilson and Company, Chicago, Ill., who took office in 1922 in New Orleans. He has supplied the following sketch:

"It is exceedingly interesting to look back over the 28 years that I have been a member of the Oil Chemists Society, which at the time I joined was known as the Society of Cotton Products Analysts and which had met every year with the Interstate Cottonseed Crushers Association. The annual meeting, however, the year I was president was held at Hot Springs, Arkansas. At that meeting the secretary reported a membership of 232 active and 37 corporation members with a financial standing of $750 cash, $400 in Liberty Bonds, and potential assets of $5,000 in standard reagents, fuller's earth, and moisture dishes. At that meeting two additional vice presidents were elected to serve on the Governing Board. A number of the original charter members were present, among whom was David Wesson who, always active in the Society, served as toastmaster at the banquet.

L. M. TOLMAN
Courtesy, Moffett Studios, Chicago.

"As will be seen from the program of the meeting, the interests of the Society were largely the study of cottonseed oil and cottonseed products.

"At that time an effort was made to suggest that we meet with the American Chemical Society at their annual meeting, but this effort was very strongly opposed by the members present, who felt that by meeting with the American Chemical Society as a section we would lose a great deal of our separate interests and it would be much better to continue meeting individually in the smaller group where most of us were well acquainted with all of the other members. This has been the policy of the Society ever since. I know that in my presidential address I took a strong attitude against joining in with the American Chemical Society, and I believe this has been a wise thing for our Society. I feel that I get a great deal more out of these meetings than I would

if they were joined up with the American Chemical Society with its many sections in session at the same time making it impractical to visit more than one. I feel that this is one reason why the Society has been so strong and has grown to be the factor in the oil and fat industry it is today.

"Chairmen of the various committees reporting at Hot Springs meeting were as follows:

DAVID WESSON, chairman, Referee Board
H. B. BATTLE, chairman, Membership Committee.
H. S. BAILEY, editor of the Chemists' Section of the Cotton Oil Press.
F. B. PORTER, chairman, Committee on Uniform Methods.
DAVID WESSON, chairman, Committee on Cooperation in Research.
DAVID WESSON, chairman, Committee on Color of Oil and Meal.
P. W. TOMPKINS, chairman, Committee on Sampling.
FELIX PAQUIN, chairman, Committee on Extracting.
D. C. PICKARD, chairman, Committee on Seed Analysis.
H. C. MOORE, chairman, Committee on Ammonia.
A. A. ROBINSON, chairman, Committee on Soap Stock.
R. H. FASH, chairman, Committee on Refining Tests.

"Also at this meeting the Committee was appointed to decide on the future of the Society's publication and instructed to get information as to the cost of publishing a quarterly to be known as the Journal of the American Oil Chemists' Society.

"From this it can be seen that this meeting was very important in that it apparently was the starting point of the present journal and had much to do with keeping the identity of the Oil Chemists' Society independent from the American Chemical Society."

MR. TOLMAN has been with Wilson and Company, Chicago, since 1918 and is now director of the research and technical department for the parent company and its subsidiaries, including the soap plant and fatty acid distillation plant. His research activities have included various connections such as chairman, research committee, Institute of American Meat Packers; member, research committee, National Canners Association; referee on sugar, A.O.A.C.; fellow, A.A.A.S.; member, committee on revision of Official Methods, A.O.A.C.; chairman, commission on standardization of alcohol tables, A.O.A.C., Washington Academy of Sciences, and Franklin Institute; co-author, U.S.D.A., Bureau of Chemistry Bulletins Nos. 13, 68, 77, 87, and 163; author, Farmer's Bulletin No. 410, author of articles on foods and food chemistry, Journal of the American Chemical Society, volumes 23-28, 30 and in such other publications as Journal of Industrial and Engineering Chemistry, Journal of the Society of Chemical Industries, and Proceedings of the Association of Official Agricultural Chemists.

Paralleling research interests are his memberships, respectively, in the American Society for Testing Materials, American Leather Chemists' Association, American Chemical Society, American Institute of Chemical Engineers, New York Chemists' Club, and Chicago Chemists' Club. Mr. Tolman has been chairman of the Chicago Section in 1917 and of the Washington Section, A.C.S, about 1910.

California claimed him first, then Washington before he first came to Chicago for Wilson and Company in 1918. He was graduated from Pomona College in 1896 and took his work for a master's degree at the University of California from 1897 to 1899. His first job was with the Board of Health in Oakland, then he went to Washington to the Bureau of Chemistry for six years, next to the Bureau of Internal Revenue, Treasury Dept., back to the Bureau of Chemistry for seven years. From 1923 until 1928 has was in charge of operations of the Central Chemical Company and United Chemical and Organic Products Company, subsidiaries of Wilson and Company Inc. From 1928 to the present time, Mr. Tolman has been research director of Wilson and Company Inc., Chicago, Ill., its plants, branches, and subsidiaries.

Bibliography of Reports

(EDITOR'S NOTE: *Of interest to the oil and fat industry are these excerpts from the Bibliography of Scientific and Industrial Reports, distributed by the Office of the Publication Board, U. S. Department of Commerce, Washington, D. C. The full reports may be purchased from the Washington OPB.*)

PB 20468. THORNLEY, T., and others. Technical developments in German margarine industry. (BIOS Final Rept. 274, Items 22, 31.) Jan., 1946. 62 p. Price: Microfilm, $1.00; photostat, $5.00.

This report of a short tour of investigation of the margarine industry in the British Occupied Zone in Germany in November, 1945, concludes that the general process in all factories inspected was identical with the main process used in Great Britain. The one exception to the generally followed process was a combination of batch churning (using two churns alternately and churning only to a thin emulsion) and continuous cooling and working in a Danish Gerstenberger & Agger unit in operation at Rostock Gebrüder A. G., Elmshorn. War-time manufacture was rigidly controlled and was characterized by abolition of brands, planned distribution, closure of smaller factories, allocation of materials and production. The closed economy obviously called for home produced fats, and these were supplied in the form of rape oil (hardened and unhardened), with a small proportion (not exceeding 10 per cent) of Premier Jus, and for some unascertained period earlier in the war, a small proportion of synthetic ester of ethyl alcohol and fatty acids known as "Ester-Oel" or "Ester-Fette." Synthetic triglycerides had been considered, but no evidence of their manufacture of their use for margarine was discovered. The rape oil was entirely derived from home-grown seed—solvent, extracted or pressed. Two factories appeared to be supplying the whole of the margarine industry with crude oil (Thörl and Brinkman & Mergell), while one (Fett Raffinerie Jurgens, at Brake) performed the whole of the hardening requirements, being engaged exclusively on hardening rape oil. The Premier Jus was of poor quality as supplied, and when used as supplied made its own contribution to the poor flavored production of some factories. Home produced animal fat supplies were supplemented by the installation and use of many "Cadaver-Verwertung" plants (animal carcass utilization plants made by the Harburger Eisen und Bronzwerke A. G.) in which fats were separated and then presumably used for technical purposes, while the non-fatty constituents were concentrated to a valuable feeding meal for livestock. The whole of the hydrogenation requirements, at least for the British Zone, were supplied by one factory (Brake), using the Lane steam-iron process (not electrolytic) for hydrogen generation. Fats with high soapstock fatty acid were steam heated and agitated at high pressure with zinc oxide and water in steel autoclaves lined with alloy steel. The question of the production of an artificial fat from a by-product of the Fischer-Tropsch synthetic fuel process had been examined and discarded on physiological grounds because the Fischer-Tropsch mixture contains fatty acids with both odd and even numbers of carbon atoms in the chain and the human organism can safely handle only natural fats containing the even chains. The Cooperative Dairy at Elmshorn produced butter directly from fresh milk by a process that might be of especial interest to anyone with large volumes of surplus milk. The butter resulting from the process, which is described in this report, was unsalted and, of course, had not undergone any fermentation process, but had extraordinarily good keeping properties. Samples to nearly two years old examined showed no evidence of any deterioration to the taste. While interesting methods of meeting the conditions of a closed war-time economy were observed, no technical developments in margarine manufacture likely to be applicable to peace-time conditions were disclosed. A novel horizontal vacuum bleaching vessel is described in some detail. Advantages claimed for bleacher were: exceptionally good contact between oil and bleaching earth and hence economy in bleaching agent and oil retention; low power requirement for agitation. Brief descrip-

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tions of the factories visited and their products are given. Appendix A contains the sequence of operation for each factory; Appendix B contains a description of the splitting autoclave for handling 2.5 to 3.0 tons crude oil; and Appendix C contains photographs illustrating types of plant and machines seen in operation.

PB 17261. I. G. FARBENINDUSTRIE. Besprechung betreffend emulgatoren. (Discussion on emulsifying agents.) (Enlargement print of part of microfilm 180-3.) 1934. 4 p. Price: Microfilm, 50c; photostat, $1.00.

Short memo on a meeting in which properties of more than 20 currently used emulsifying agents were discussed. In German.

PB 19674. THORNLEY, T., and others. Margarine manufacture. (BIOS Evaluation Rept. 424.) Feb., 1946. 2 p. Price: Microfilm, 50c; photostat, $1.00.

Margarinewerke H. Meyer-Lippinghausen A. G., Lippinhausen bei Herford was producing about 90 tons of table margarine a week. A normal batch churned without addition of ice, or ice water, 1500 kg. per batch in 23 minutes. Cooling was over brine-cooled single drum, delivering about 4 tons per hour, on wide rubber conveyor belt through one pair of granite rolls to bore type aluminum containers. After a resting period of ½ hour, mixing was completed on a small vacuum blender (wooden), no additions being necessary at the blender. The refinery and margarine plant of Fritz Homann A. G., Dissen, Nr. Osnabruck, was also of established type, but of all metal construction, with glass pipes for milk lines to 4 tinned steel churns. Included in the factory premises was a dairy for butter and soft cheese production.

PB 19167. U. S. WAR DEPARTMENT, QUARTERMASTER CORPS. Baking manual for the Army cook. (Tech Manual 10-411.) Oct., 1943. 109 p. Price: Microfilm, $1.50; photostat, $8.00.

The instructions and illustrations in this manual give, step by step, the proper methods for making a large number of baked products; namely, bread, hot rolls, coffee cakes, pies, cakes, and cookies. In addition, illustrations of many products cooked by deep-fat frying and pan frying are included.

BALDESCHWIELER, E. L. Production of synthetic fatty acids and edible fats—Deutsche Fettsaurewerke, Witten. Off. Pub. Bd., Report, PB 225. 1945. 10 p. Price: Mimeo., 10c.

Contains flow sheets for the oxidation plant for manufacture of fatty acids and for manufacture of edible fats, with additional explanations of the processes for making these synthetic products. Diagram is provided of kettle used for oxidation.

CROMARTIE, WILLIAM J., and HENZE, CARLO. Research in the field of fat and protein supply in Germany. Off. Pub. Bd., Report, PB 274. 1945. 6 p. Price: Mimeo., 10c.

A brief survey is given of the work done in Germany for the purpose of compensating the acute fat and protein shortage. A description is given of the sources of raw material (tomato seed oil, grape seed oil, fish protein, oilseed proteins, and of a synthesis (total synthesis of fats and biochemical synthesis of fat and protein by fungi from sugar and nitrogen compounds). Finally the possibilities of economizing on fat by taking advantage of the metabolic transformation of carbohydrate into fat within the human organism are considered.

PB 25671. MARKLEY, K. S. Report on Denmark—fats, oils and oilseeds, Dansk Sojakagefabrik Akts., Copenhagen, Denmark. Aug. 1945. 8 p. Price: Microfilm, $1.00; photostat, $1.00.

The Dansk Sojakagefabrik, oil mill is one of the largest in Denmark. The other large oil mill is owned by the Aarhus Oliefabrik Akts at Aarhus. There are three smaller oil mills, a Lever Brothers Soap Works, and several margarine plants. The oil mills have a capacity far in excess of the country's consuming power for fats, and hence Denmark exports both butter and vegetable fats and oils. Production and consumption figures of butter and margarine.. The Danish Soyacake Factory, solvent extraction plants, refineries, and dock and storage facilities are described. Hydrogenation, hydrogen and chlorine production and other processes are described. Prior to the war they processed soy beans, copra, peanuts, sesame, linseed and cottonseed; and refined palm kernel oil and fish and whale oil. They produced protein cake, and meal; crude and refined oils corresponding to the above, hardened oils, lecithin, distilled fatty acids, glycerine, caustic soda, hydrogen oxygen, soap and margarine.