## Impressions of the European Soap Industry<sup>\*</sup>

Describing Many Varieties of Plant and Manufacturing Methods Encountered on a Tour Through Western Europe

By Archibald Campbell

F WE might classify American soap plants as medieval and modern, then on the same basis of nomenclature we should classify European Soap plants as ancient, medieval, and modern. In the ruins of Pompeii, I was shown the remains of a soap factory that flourished some 600 years B. C. This surely was ancient. However in those early days, they understood how to boil soap as is evidenced by the lead and copper vessels equipped with lead piping for heating and circulating purposes. Some of the soap is still encrusted on these vessels and although hard and fossilized compares rather favorably to the casual observer to some of the highlybuilded American soaps after they have reposed on the retailer's shelf for several months. When I was more actively engaged in the manufacture of soap, I sometimes wondered how our competitors were able to hold so much builder in their soaps; but after visiting this plant at Pompeii, I am inclined to the belief that some of those wily competitors must have succeeded in getting a sample of this soap and gained the secret of building soaps à la Pompeii.

Although Pompeii was the only truly ancient plant I visited in Europe, nevertheless, I must confess I visited others that could easily be classed, if not ancient, at least pre-medieval. They were one step worse than the worst I ever saw in the United States and I considered those in the medieval class. Plants that had been in the same family for several generations, and catered to a certain local patronage, being perfectly content to continue along certain established lines of production. In some of these plants, the equipment was meager and antiquated. They were unsanitary and unsafe. Many workmen going about their duties barefooted, even around the soap kettles. The processes were laborious, inefficient and uncontrolled. As an illustration I saw soap that had stood on drying racks for over three months to effect the proper drying. Needless to say this soap had a real antique appearance.

These plants were the exception however, rather than the rule. By far the greater number of plants visited by me in France, Italy, Germany, and Great Britain compared favorably with the general run of soap plants in the United States; especially was this true when the concern enjoyed a national or international business. In most of such plants, the equipment consisted of an assortment of old antiquated machines and others of more modern design together with still others of a strictly up-to-date model. This was particularly noticeable in the plants in Great Britain where they seem to be very slow to discard obsolete equipment and replace it with the latest and most efficient new models. They cannot see the expediency of discarding a machine until it is worn out, regardless of its inefficiency. While this is due in part to the low cost of labor, nevertheless these same firms are extremely anxious in purchasing new equipment to secure the latest and most efficient models. It seems a very part of their nature to hang on to the old machines as long as they will operate. The plants I visited in Germany seemed much more up-to-date in this respect; and as labor was just as cheap if not cheaper than in Great Britain, I can only explain it as some inherent national trait; as the concerns in both instances seemed equally alert, progressive, and successful.

A S THE per-capita consumption of soap in France and Italy is exceedingly small the outputs of most of the plants in these countries are comparatively limited and unless the firm does an international business, there is not the incentive to grow and develop. The other influence that is making itself felt in this respect is foreign ownership and control of

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local concerns. This control tends to introduce modern methods and ideas as well as up-to-date equipment. In general, the plants under French control and management use French built equipment. In some instances, this compares favorably with that of American or German make, but in automatic labor saving equipment the American and German machines excel. The plants in Germany are mostly equipped with German built machines. These compare very favorably with the same type of American equipment, in speed, cost, and character of workmanship. In Great Britain and in plants on the Continent, controlled by British or American capital most of the equipment is American designed and built machine.

The plant of Henkel & Co., Duesseldorf, Germany, impressed me more favorably than any soap plant I visited in Europe, and even in the United States as well. This is a moderate sized plant, devoted to the manufacture of cleansers and washing powders. The plant was strictly up-to-date and modern The throughout. A pulp mill was operated in connection with the soap plant to produce the pulp and paper used in containers for packaging their finished products. An oilmill for crushing, pressing, and extracting oils, from seed, was also operated in connection with the plant. They produced their own caustic soda together with silicate of soda. For decomposing and splitting fats for the recovery of glycerine, they used three of the most up-to-date methods and for the distillation of fatty acids and glycerine, they operated under an extremely high vacuum. The soap powders were produced by the spray process and packaged on automatic machines that were the last work in completeness and efficiency. The entire plant was clean, sanitary, well-lighted, and ventilated. The packing rooms were tilefloored and tile-wainscoted, and equipped with dust collecting systems. The offices were beautifully finished in marble and bronze, and in a garden at the entrance was an artistic bronze memorial to those of their staff who had made the supreme sacrifice in the late war. The entire plant was under strict chemical and mechanical control with a complete cost system covering each step of the process. It came as near the ideal as I have ever seen in a soap plant.

THE Port Sunlight plant of The Lever Brothers Co. is the most outstanding soap plant in Great Britain. It is so immense that it is very difficult to form a clear impression of it on the first visit through it. The plant is well lighted and working conditions

are very good throughout. The thousands of visitors are conducted through the plant on runways erected above the working floors, where they are safe from harm and command an unobstructed view of the manufacturing operations below. The layout, equipment, and processing compare very favorably with the largest modern plants in the United States. The welfare work in the plant, also in the model village of Port Sunlight, seems very well organized and carried on in a very complete and thorough manner, including art galleries, theatres, schools, churches, swimming pools, athletic fields, libraries, savingbanks, playgrounds and everything that makes for a higher plane of living. It is probably, up to the present time, the nearest approach to the realization of a dream of the head of a great industrial institution for the welfare and social betterment of his employees.

"OILET soaps in France and Italy are I made largely from olive oil as a base; many are made wholly of this material. This does not apply to soaps manufactured by concerns controlled by British or American capital. These firms maintain their regular formulae for their standard, advertised brands. Toilet soaps in Great Britain resemble in composition and appearance those of the United States. The soaps containing high percentages of olive oil are soft and require special drying treatment to render them merchantable. On account of cheapness of perfumes and labor, European soap manufacturers are able to turn out more highly scented and more expensively wrapped and packaged soaps than could be turned out and sold at an equal price in the United States.

AUNDRY soaps in Europe are mostly pure L soaps, containing little or no alkaline build-Soap powders, washing powders, and ers. cleansers, likewise have a higher percentage of soap than the corresponding American product. These pure soaps lend themselves to the artificial system of cooling and slabbing which is quite extensively used abroad. The fats used in these soaps are largely tallow, grease, palm oils, rosin, hydrogenated marine oils, with comparatively small amounts of nut oils. The highly builded soaps containing a high percentage of nut oils, so common in American markets, are practically unknown in Europe. Soft-soaps so commonly used in past years in Europe seem to be on the wane and are being replaced by bar soap and powders. The tendency in Europe as in America seems to be away from soft soaps and bar soaps to chips, flakes, and powders, sold in bulk or packages.