

some smallage seed thereto, and afterwards some oil."

Nowadays, however, hair care need not start in the herb garden: there are quicker routes to good grooming. The first essential is a good cut. There is no head of hair, however difficult or obstinate, that cannot be controlled by clever cutting and shaping. Few women, even if they have the courage, have the skill or knowledge necessary to do-it-themselves - and most of them have the sense not to try. The maintenance side, however-washing, conditioning, setting-is well within their scope. The shops offer such an array of bottles, jars, tubes, bubbles, sachets and, latest recruit to the cosmetic counter, 'shampoo leaves'-described by one authority as the most useful leaves since the Garden of Eden-that the only difficulty is selection. A recent cosmetics survey by the research department of a national women's weekly indicates a definite trend of preference for liguid and lotion shampoos (some brands of which use 'Teepol' as a base). Sales of these kinds of shampoo accounted for twothirds of the consumption of 1957 as compared with half in 1955.

But, whatever her choice, the customer rarely gives any thought to the elaborate processes and production lines that make it possible for her to have so varied a selection. A visit to the Middlesex factory of one of the biggest manufacturers of hair preparations soon puts an end to the casual assumption that 'there's nothing to it.'

A LTHOUGH at this factory some of the production is still manual, a great proportion is highly mechanized, and the process from empty jar to carton ready for dispatch is a fascinating operation, as full of color and rhythm as a Disney film.

The empty jar or bottle is put on a machine that clears it of any speck of dust. From there it passes along the belt to the second stage, where the contents are injected from an overhead complex of pipelines running from the mixing room to the benches. Once filled, the containers, now amber, green or white, pass along to where a rotating hod ejects a lid on each. An adjacent machine imprints the threads on the lid and screws it on in one operation. Labelling comes next, and from there the bottle passes along the belt, to be inserted into its cardboard container. and finally comes off the belt in the cartons, which are transported in bulk by conveyors into the adjacent store.

From empty jar to carton, the process takes some 40 feet of bench and is tended by about 16 operatives. Except for the handling of heavy weights, it is carried out entirely by women, and where the mechanization is alternated with manual operations, it is fascinating to watch the dexterous wrist and hand movements of the white-coated girls, the precision and speed with which they dispatch the little jars on their journey or whisk them off the belt into the containers.

Perhaps the most astonishing feature to an outsider is the scale of production. Of one preparation manufactured in this factory, 120 jars are completed every minute, while 110 tons of products are dispatched daily from the storeroom. Some idea of the quantities involved can be obtained by a visit to the mixing-room, where slabs of raw materials, like giant paving-stones, and 45-gallon drums of perfume wait to be used.

The other side of the picture, the minute and scrupulous attention to quality, can be seen in the laboratories. There one meet. an impressive array of precision instruments—balances, rotating-cup viscometers, and photometers to check the dispersion of the drops in emulsions. On the walls hang charts on which are plotted the results of the intricate series of tests—19 in all on one product—carried out at various stages of the manufacture.

There are three kinds of lah-

oratory on the premises: the Риге Research Laboratory. where basic work is done on essential oils and other ingredients used: the Formulation Laboratory, which handles the composition and improvement of formulae and the examination and analysis of foreign and other products; and the Control Laboratory. Ouality where the elaborate system of testing is carried out at all stages from raw materials to finished products.

Through the laboratory windows, on the flat roof opposite, can be seen glass-fronted 'suntraps' which, with the incubators in the laboratory, are used for testing the products under shop-window, display and storage conditions such as they may expect to meet. On new preparations, of course, the laboratories work in close collaboration, and it may take anything from 18 months to 5 years to bring the new product from the idea stage to the shop counter.

I N ADDITION to laboratory-controlled experiments, each product is under constant test in normal conditions of usage. For this purpose, the firm has a large source of human guinea-pigs' on the factory floor—and a most attractive glossy-head selection it is, too. Volunteers from the girls who work in the factory are used to test

existing and new products, and tucked away in the more restful corners of the building are experimental salons where they have their hair cut, then washed, set and treated with the products. If this seems, to readers who have to fit in their hair. appointments on a crowded Saturday, to be the height of ease and luxury, it may be a consolation to know that, once a volunteer is accepted, she has to give up her freedom of choice as regards styling, cut and preparations, and she must on no account go 'outside' to arrange for a private hairdressing appointment.

From other sections of the factory, which handle the filling and processing of the newer containers — the sachet and

'leaf' forms — there may emerge at any time a white-clad girl with her arms full of gaily-colored 'sachets' of polyvinyl chloride. This petroleum product is widely used in the packaging of shampoos: at this factory 16 miles are used each week in producing one kind of sachet alone.

For all the carnival effect—the gay colors, the scent, the music-while-you-work, the predominance of pretty, well-groomed girls—this is a highly-geared modern industry, streamlined, efficient and competitive, which turns out, in fantastic quantity and at a reasonable price, the products that bring hair glamour within the reach and the beauty budget of every woman.

Christmas Lines

Mother: "No, Dad, don't be too hard on Junior for failing in college. When they gave him his books last fall he thought they were a gift and didn't open them until Christmas."

Sue: "I believe my husband is the most generous man in the world."

Lou: "How come?"

Sue: "I gave him a dozen neckties for Christmas and he took them right down and gave them to the Salvation Army."

