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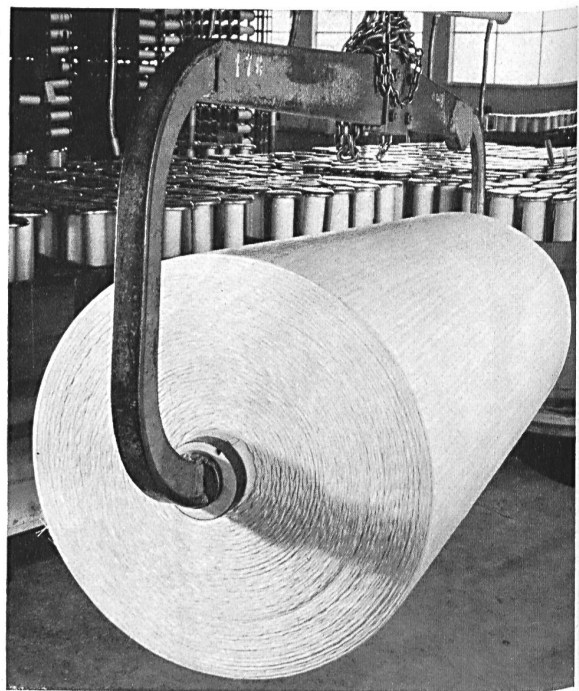
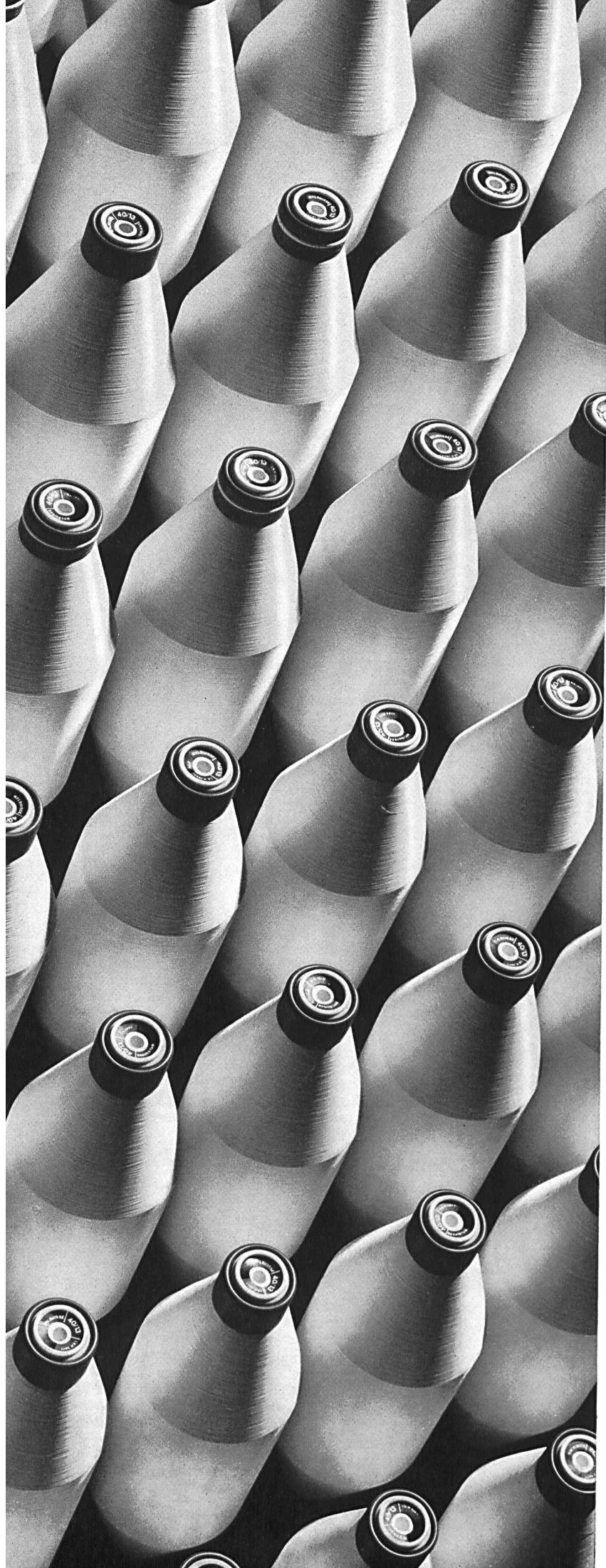
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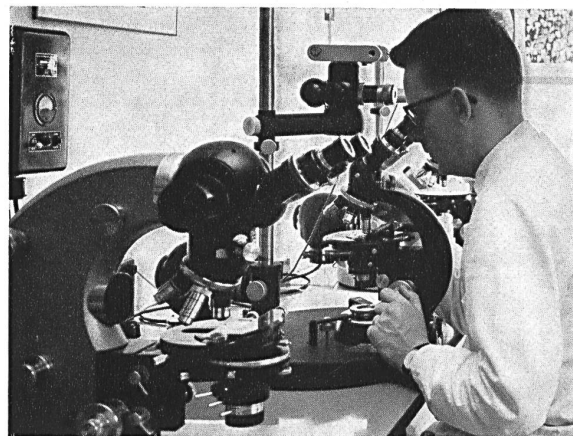
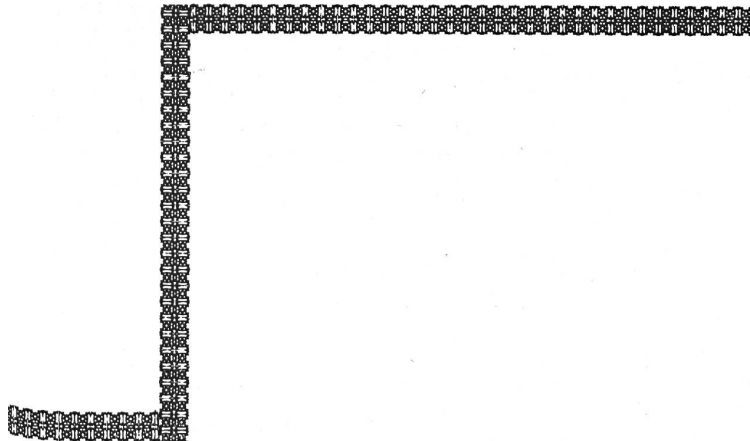
## CHEMICAL FIBRES IN AN EXPANDING ECONOMY



In more than one respect, the development of textiles since the end of the war has taken more the form of a revolution than an evolution, and everything would seem to indicate that this state of upheaval is likely to last another few years. The changes mainly affect fibres and yarns but also include fabrics and finishes. Without the considerable development that has occurred in these fields, the extraordinary increase in the consumption of textiles would not have taken place. What, but yesterday, was a luxury is now considered a necessity.

The development of artificial and synthetic fibres is of special importance, because the chemical fibres branch is the only Swiss industry supplying raw textile materials. In 1963, the firms affiliated to the Association of Swiss Artificial Silk Manufacturers produced about 35 000 tons of artificial and synthetic yarns and fibres.

In its structure, the chemical fibres industry is affected by the conditions governing two different branches. The high cost of scientific research, the importance of capital, and continual modifications in production technique are the influences of the chemical industry in the formation of cost prices, while from the point of view of distribution and the market, it is the conditions — not always favourable — of the textile industry that prevail. The chemical fibres industry can only meet the demand for inexpensive high quality textiles by achieving a high output in a limited range of products and thus keeping unit prices low. The smallness of the home market runs counter to these requirements so that this branch has always had to sell a considerable part of its output on foreign markets. Rayon — which was at one time called artificial silk — is still used today in almost all fields of the textile indus-



try. It is particularly popular for the manufacture of fabrics for linings, Jacquard fabrics for women's fashions and furnishing fabrics.

After the war, new and more varied needs led to the expansion of the manufacturing programmes of Swiss rayon factories. In 1948 they began to produce high tenacity rayon for tire casings, which met with great success in the tire industry, gradually taking the place of cotton.

In addition to the traditional qualities of rayon, manufacturers also make continuous and non-continuous yarns in spun-dyed rayon as well as twists of all kinds, artificial horsehair and straw, used for many purposes in the textile industry and fashions, and yarns with hollow fibrils used mainly for the manufacture of velvet ribbons and imitation furs. The transparent viscose cellulose sheets are mainly used in the packaging industry.

In several fields of industrial conversion, there have been big changes in structure to the advantage of synthetic fibres and yarns. The latter first of all conquered the field of women's stockings and later socks. The eminent properties of these new materials have ensured them great popularity among the public, for the manufacture of lingerie, and fabrics for raincoats and overalls. Synthetic fibres and yarns are also being used more and more widely in the field of outer garments too. In quite a different sector, the manufacture of fishing nets, it would no longer be possible to do without synthetic yarns, so successful have they proved.

Unlike the regular development of textiles in natural fibres, synthetic yarns have evolved remarkably rapidly

and contributed greatly to the conquest of new outlets. From the technical point of view, it is not so much a question of discovering new synthetic materials as of finding new uses in new fields of application for those that exist already.

In the textile sector, undreamt of prospects are opened up by their mixture with other fibres, especially natural fibres, by the production of compound yarns, textured yarns and the development of high elasticity yarns. There is also great scope for the use of synthetic yarns in the manufacture of carpets and furnishing fabrics.

The importance of synthetic fibres is due precisely to the fact that they so successfully complete many of the main qualities of wool and cotton by contributing invaluable new properties; they can so to speak be tailored for practically any purpose. Another by no means negligible advantage is that they are not dependent on nature and are thus not subject to short-term fluctuations in price. In order to ensure the future development of sales, which the favourable prospects of the market allow us to expect, chemical fibre producers are continually increasing their manufacturing potential, which has risen some thirty per cent a year during the last few years.

The ability to adapt to all changes in market conditions is a question of life and death for the Swiss chemical fibre industry. The latter's long-term commercial policy is therefore governed by a systematic raising of the quality of artificial fibres (viscose), a development in keeping with the present demand, and a corresponding increase in the existing possibilities of production of synthetic fibres (nylon), as well as the spread of the use of the latter to new fields.