

## **What Stockings can tell Us**

### **Industrial Innovation, Fashion and Company History**

Dr. Michaela Breil

Curator of Textiles and Fashion, tim | Staatliches Textil- und Industriemuseum Augsburg,  
Germany

#### **Abstract:**

The archive of formerly publicly recognised hosiery knitting mill ELBEO, Germany, contains around 8,000 stockings from 1890 to 1950. To process the cosmos of fashion history, technical innovation and company history of stockings before the Second World War, three pairs of stockings are sufficient. Using the example of a so-called Tartan stocking from 1895, with a pattern reminiscent of the Scottish tartans, the extreme dependency on machines as a technical novelty and on further development of their parts can be shown, as well as the fact that even though machine production was used, a lot still had to be done by hand. The smallest details found on stockings from around 1910 also indicate materialism, questions on manufacturing and branding of the company. Proof for economic success of Elbeo are the specifically shadowed silk stockings marketed as „Plastic“, which had won a gold medal at the world's fair 1937 in Paris.

#### **Contents:**

The Archive of ELBEO / Technical Innovation and Tartan Stockings / Brand Development/  
Quality and Fashion / References

### **The Archive of ELBEO**

Since the beginning of 2017, the State Textile and Industry Museum Augsburg has been in possession of the sample archive of the once world-famous hosiery company ELBEO (Hünger 1979; Breil 2018; Elbeo 1939): this archive contains approximately 8,000 stocking samples from the period of 1889 to 1950.

The stocking knitter Louis Bahner (1857-1933) (fig. 1) founded a new stocking factory in 1889 in Saxony with the aim of producing exclusively high-quality stockings instead of mass production, which was common in Saxony (Schäfer 2018; Irmischer 1929). From the beginning, he documented his production and established an archive at the home base of his family enterprise in the small village of Oberlungwitz near Chemnitz. In this archive, Bahner collected one pair of each of his own stocking patterns. In the course of establishing new production sites during the 1920s, Louis Bahner's successors had their own air-raid shelters built, which were designed to protect this extensive archive. The consequences of the Second World War, including the partition of Germany, not only ripped apart the company archive, which had contained thousands of samples by that point (Entwicklung 1960), but also resulted in the firm losing all production sites in East Germany. There were two reasons for this. Firstly, many factories in their occupation zone were stripped by the Russian occupying forces, with the machines being sent to the Soviet Union as reparation payments. The second reason was the subsequent expropriation of the newly refurbished factories by the government of the German Democratic Republic in 1953. But individual family members left their homes as early as 1945 and rebuilt their family business in the Bavarian city of Augsburg. They also attempted to regather parts of the archive, which had been scattered and lost in the confusion of the postwar period, and enriched it with new products.



Fig. 1:  
Louis Bahner (1857-1933), © ELBEO Werkfoto, tim, inv. no. F352-20.

In 1989, the Bahner family sold the company to a holding, with the last production site in Augsburg closing in 1996, and the archive, which had been reconstructed after the Second World War, faced a second demise.

Former employees of the company ELBEO, along with members of the Bahner family, saved some historical stocking samples of the original collection from being destroyed and gifted these to the museum many years ago. Part of the archive's collection found its way into a small company museum run by the new owners, while the largest part of the collection eventually ended up in the possession of the ethnologist and exhibition curator Michael Schödel, who was also active as the curator of the project "German Stocking Museum", which was never realised. Following the sudden death of Michael Schödel in 2015, his heirs donated his extensive textile collections, including the ELBEO sample archive, to the museum.

The "Stocking Archive" is now being set up for the third time, and working through the stock of the collection will take a very long time. Based on three stocking samples from the collection, the following article will outline a few industrial finishing techniques and the company history of ELBEO between 1889 and the beginning of the Second World War (1939-1945).

### **Technical Innovation and Tartan Stockings**

Towards the end of the nineteenth century, hosiery fashion was subject to frequent changes. The so-called fantasy patterns were followed by strictly graphical patterns and vice versa. Tartan stockings, next to striped stockings, became increasingly popular and therefore highly recurrent.



Fig. 2:  
Tartan Stockings, around 1895, tim – Collection Michael Schödel © tim. Photo: Maik Kern.

The Tartan stockings from ELBEO is a women's stocking made of wool and silk from the first years of the family business hosiery production (fig. 2). To fashion, these stockings were not a new phenomenon. In the early nineteenth century, two types of tartan-sockings existed: two coloured hand knitted ones and ones sewn from fabric. However, since 1884 they were produced in an industrial way. (Farell 1992, 66) Elbeo kept these winter stockings in their assortment until about 1905.

For the industrial production of stockings, one needed a “set” of flat knitting machines, the so-called Paget machines (fig. 3), invented by Arthur Paget from Loughborough in England in 1857. A "set" of machines was necessary: three machines for the leg of the Stockings (legger), the needle bed of which matched the width of the stocking length, i.e. the spread-out leg section, then one heel and one point or foot machine. (Schödel n.d.) The transferral of the stocking sections from the legger to the other machines was done by hand.

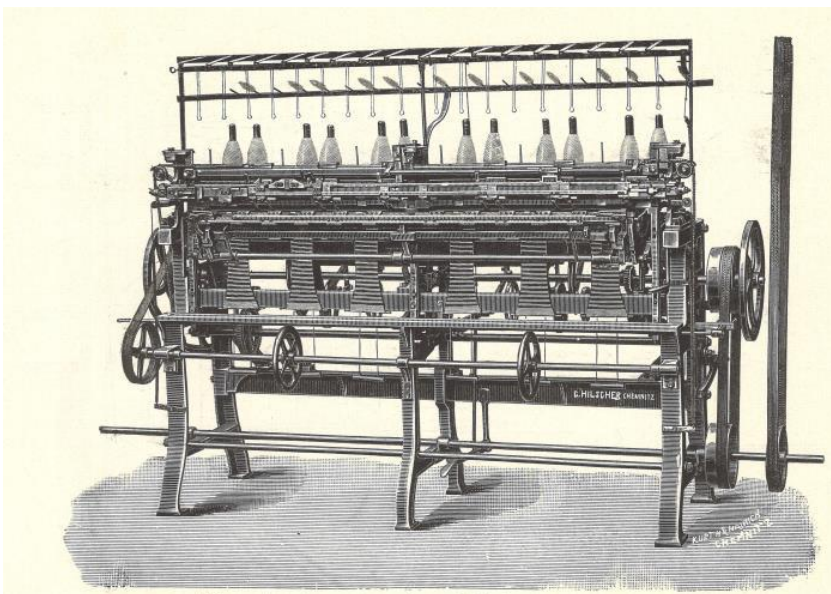


Fig. 3:  
Paget Machine for striped stockings, (Worm 1927, 64).



Fig. 4:  
Female employees transferring lengths of stockings onto the heel- and foot machine,  
tim – Collection Michael Schödel © tim.

Women threaded the machine-produced stocking leg onto a so-called needle bar stitch after stitch, and afterwards transferred the stitch on the narrow needle bed of the heel and foot machine (fig. 4). All these machines were constantly being developed further by both English and French as well as by Saxon manufacturers, and it was not until the invention of special thread handling attachments and needles that complicated patterns were possible. For the production of the tartan pattern, it was necessary to enmesh two threads of different colours with one another, i.e. plating. The pattern emerged through the interlocking ring patterns, in this case made of wool, which were decorated down the front with wide lengthwise stripes of fine silk, thus creating the various tartan patterns.

Handwork was necessary not only in the transferral of the stocking sections from one machine to another, but also in closing the seam – a job that was done by women working at home. It was also common to add hand-stitched details to the machine-produced patterns.



Fig. 5:  
Pattern cloth by Emma Bahner (1859-1922) used as a model for embroiderers, tim – Collection Michael Schödel  
© tim, Fotograf: Maik Kern.

Pattern cloths made by Emma Bahner (1859-1922) as dowries before marrying the founder of the company served as models for the hand-stitched details (fig. 5). The Bahner family expected their employees to be highly skilled in needlework as well as working with extreme precision. The combination of delicate embroidery and other patterns resulted in a diverse range of women's and men's stockings.

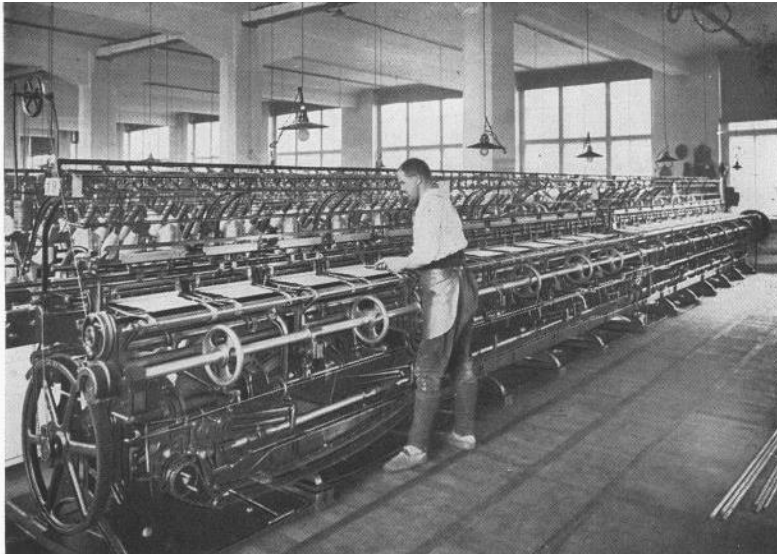


Fig. 6:  
Cotton-Machine.

For the industrial production, however, another machine type proved to be more effective: the so-called Cotton machine (fig. 6), invented by William Cotton from England 1868. In contrast to the Paget machines, the Cotton machine was able to produce at first 8, then later 12 and finally 36 stocking lengths simultaneously. The technical details for the production of various patterns were transferred by technicians from the Paget machines to the Cotton machine.

## Brand Development

The second example from the sample collection is a cotton stocking from the 1910s (fig.7). A Jacquard-Petinet machine – a technical advancement on the Cotton machine – allowed the production of its breakthrough pattern.



Fig. 7:  
Petinet-pattern and embroidery detail on a stocking, ca. 1920s, tim – Collection Michael Schödel  
© tim. Photo: Maik Kern.

Petinet-patterns are defined as open-work hosiery, which create a special decoration on stockings. In the second half of the nineteenth century the Petinet-fashion was created in Paris and soon became widely spread across the globe. The pattern resembles the then fashionable calf-high boot-shapes, which were slowly replaced by low shoes. Petinet-stockings enjoyed great popularity between 1885 and 1914. Here, too, one can find intricate, home-produced hand-stitched details in silk (points and triangles). The seam of the stocking is closed by machine.



Fig. 8:  
Company logo inside the welt of a stocking, ca. 1920s, tim - Collection Michael Schödel © tim. Photo: Maik Kern.

Noteworthy, however, are the initials L.B.O. worked into the inside of the double edge (fig. 8). They refer to the founder of the company and the original location, **Louis Bahner Oberlungwitz**, as well as to his company philosophy that only quality and corresponding price, i.e. class rather than mass, can lead to success. This philosophy was presented in direct contact with their customers. Louis Bahner, and later his sons, personally visited their customers, introducing the quality of their stockings and thus being able to insist on a correspondingly high price. Even before 1900, Louis Bahner presented his customers with printed price lists in order to prevent “a haggling of the wares” (Bahner 1939, 94). Standardised payment and delivery conditions were also implemented. The market resisted, but Louis Bahner and his three sons stuck to their price policy and were able to implement their prices on all levels of the delivery chain until 1914. They developed a clear understanding of the way a brand works.

The Bahnners continued the brand development with the labelling of their products. In order to distinguish between the brotherly companies in Oberlungwitz – Wilhelm Friedrich Bahner, Louis Bahner and Gerhard A. Bahner – the traders had started the habit of using their respective initials as markings. The initials „LBO“ for „Louis Bahner Oberlungwitz“ became the distinguishing feature of his stockings on the market. In 1906, Louis Bahner attached an advertising card to his children's socks with the following text: “Children's socks / ELBEO / Guarantee: the very best quality, the most authentic colours, solid fit”. (Bahner 1939, 95) In 1910, he registered the cards as a trademark with the Reich Patent Office. These cards are also the first evidence of the use of the phonetic spelling “EL BE O”, derived from the letters “LBO”. The objection of two competing companies led the entrepreneur to register the old trademark “LBO” for men's socks and women's stockings as well. The largest customers resisted the trademark, as they wanted to place the stockings on the market with their own design and packaging as an in-house brand. It was not until after the First World War that desperation on the part of the consumers allowed this resistance from the traders to be overcome. (Bahner 1939, 96; Hüniger 1979, 128)

## Quality and Fashion

Since 1924, a new material revolutionised the stocking-fashion: artificial silk, also called rayon. The typical body image of the 1920s which was now showing half of women's legs, helped provide an unprecedented boom for hosiery. Although the delicate and expensive stockings made of pure silk embodied a more noble hosiery fashion, the newly fashionable short skirts of the 1920s contributed to the spreading of the inexpensive rayon-stockings. The stockings, unobtrusive in their colour-design, supported the effect of the outerwear. Silkiness and fineness were important criteria for the quality of a good stocking. The colours were meant to make the skin seem powdered. Despite producing rayon-stockings, Elbeo continued the production of pure silk hosiery.



Fig. 9:  
Shaded Silk Stockings, 1937, tim - Collection Michael Schödel © tim. Photo: Andreas Brücklmair.

The natural silk stocking highlights the core of the brand and the entrepreneurial passion of the company ELBEO. The stated aim of this item was to produce a stocking that was both incredibly thin and qualitatively outstanding. Every change to the fineness of the thread, and hence of the stocking, required a new knitting machine, since the needle beds could not simply be switched. With the help of new dyeing techniques, ELBEO introduced shaded natural silk stockings to the market in 1933. The back side of the stocking displayed a darker colour than the front side. In this way, the leg was intended to look slimmer. The shaded stockings soon developed into a commercial success (fig. 9).

At the World Expo in Barcelona in 1929 and in Paris in 1937, ELBEO received the highest distinctions for its products, honouring the particularly high quality produced by the Saxon company. The invitation to participate in the Paris exhibition of 1937 was at such short notice that ELBEO was not able to develop a new stocking for it. Nevertheless, they were still able to send stockings from their current production, namely the finest silk stocking of the time, "Ultra", as well as the shaded silk stocking "Plastic", and succeeded in becoming the only stocking company to win the Grand Prix (fig. 10).



Fig. 10:  
Grand prix at the World Fair for the company ELBEO in Paris 1937. In: ELBEO-Chronik 1939, vol. 1, tim.

By this time, a small family business with 18 employees had become a large company with 2,230 employees at three production sites in Saxony and with customers throughout the world.



## References

Hünger, Heinz. 1979, 15 March. „Elbeo – der ruhende Pol“. In *Textilwirtschaft* 11, 128-129.

Breil, Michaela. In preparation. „Von Fachhandel zum Onlineshop – der Vertrieb von Strümpfen im 20. Jahrhundert“, In *Strümpfe aus Deutschland. Produktion und Konsumtion*. Tagungsband der gleichnamigen Tagung im Kloster Irsee im Jahr 2015, edited by Michaela Breil, Karl Borrmäus Murr and Peter Fassl.

Elbeo-Chronik. 1939. Vol. 1 and 2. Oberlungwitz (copied manuscript).

Schäfer, Michael. In preparation. „Strümpfe aus Sachsen: Zur industriellen Transformation eines Exportgewerbes im 19. Jahrhundert“. In *Strümpfe aus Deutschland: Produktion und Konsumtion*. Tagungsband der gleichnamigen Tagung im Kloster Irsee im Jahr 2015, edited by Michaela Breil, Karl Borromäus Murr and Peter Fassl.

Irmscher, Felix. 1929. *Die Strumpfindustrie in Chemnitz und im Chemnitzer Kreis*. Berlin: Textil-Praxis.

*Die modische Entwicklung des Strumpfes. Ein Strumpfmuseum berichtet aus Vergangenheit und Gegenwart*. 1960. Offprint from *Wirkerei und Strickerei-Technik* 9.

Farell, Jeremy. 1992. *Socks & Stockings*. London. The Costume Accessoires Series, edited by Aileen Ribeiro. London: B.T. Batsford Ltd.

Schödel, Michael. n.d. *Produktkategorien nach technischem Entwicklungsstand*. Typescript: tim, Sammlung Schödel.

Bahner, Ernst. 1939. „Innere Voraussetzungen“. In *Elbeo-Chronik* 1. Oberlungwitz.

Worm, Josef. 1927. *Die Wirkerei und Strickerei*. Fourth edition. Leipzig: Max Jänecke.