

History of Textile Industry—Spun Silk

The Transition from a Home-Industry to Mechanical Spinning

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In order to make the fibers of the silk cocoon available for practical uses, two large industries have been created:

The Reeling Industry (Filature)
The Spun Silk Industry

Raw Silk, the product of the reeling industry is the continuous filament spun by the silk worm; it is obtained by undoing the silk cocoon, that marvelous structure which the

silk worm builds around itself before its metamorphosis into chrysalis and butterfly. The origin of the silk reeling industry dates back to immemorial times in China, very likely to about 2400 B.C., when the Empress Si-Ling-Chi started to domesticate and raise silk worms, and discovered how to unwind their cocoons.

The principle of the *Spun Silk* industry consists in drawing the fibers of the cocoon, after having softened the same, into a fine thread,

* New England Spun Silk Corporation, New York, N. Y.

and then combining same by twisting. This process was first done by hand, and after the fibers were drawn from the cocoon they were twisted by the methods employed in olden times for the spinning of hemp and flax. This primitive method of obtaining Spun Silk is still applied in the countries of origin of such cocoons which cannot be reeled (Erie cocoons, certain kinds of Tussah cocoons, etc.) and is also applied by the natives of some parts of the Far East in order to make use of the waste cocoons and of the waste produced during the

weaving raw silk. This waste was first dressed (combed), then cut into fibers of two inches in length, boiled off, carded, then prepared on cotton machinery, and spun on the Mule-Jenny.

The Mechanical Spinning of certain cocoons and silk fibers produced during the reeling process, followed closely. In Italy, Switzerland* and France these materials had been for several centuries combed and spun by hand into a crude Spun Silk yarn. Combing machinery was gradually invented and perfected,



Handcombing of Silk.

reeling process. This way of obtaining a silk thread is much cruder than the very delicate reeling, and it is, therefore, likely that a Spun Silk thread was established before the reeling process was discovered.

The modern or mechanical Spun Silk industry is almost coincident with the invention of machinery for the spinning of cotton and wool. In 1779 the Mule-Jenny was invented in England. Very likely the first Spun Silk obtained mechanically was manufactured in England in 1792 from waste produced in throwing and

the Spinning machinery created for the spinning of wool and cotton was adapted to the spinning of Spun Silk, and in 1824 the first mechanical Spun Silk plant was established near Basle, Switzerland, the dressing (combing) machinery being of Italian-Swiss, the preparing machinery of French, and the spinning machinery of English origin. Almost at the same time the industry developed near Lyons (France).

The invention of the mechanical comb in

* See illustrations.



The forerunner of Mechanical Spinning.

1851 created a use for the *Noils* or short fibers eliminated in the dressing (combing) process of silk, permitting the combing and spinning of these short fibers according to principles employed in the spinning of cotton.



Reeling of Spun Silk.

The manufacturing of Spun Silk was taken up in this country around 1850. Today the American Spun Silk Industry can be estimated to represent about twenty per cent. of the Spun Silk industry of the world.