



### SILK DRESS-GOODS.

THE DERIVATION OF THE WORD "SILK." — THE ANTIQUITY OF SILK CULTURE. — THE REFERENCES IN THE BIBLE TO SILK. — USE OF SILK AMONG THE ROMANS. — THEIR KNOWLEDGE OF ITS CULTURE. — THE INTRODUCTION OF SILK-CULTURE INTO GREECE. — INTO ITALY. — INTO FRANCE. — INTO THIS COUNTRY. — SPECIMENS OF SILK RAISED HERE DURING THE COLONIAL PERIOD. — FLUCTUATIONS IN THE BUSINESS. — THE *MORUS MULTICAULIS* SPECULATION. — CONGRESSIONAL REPORTS CONCERNING THE CULTURE OF SILK. — THE SUCCESSFUL ESTABLISHMENT OF THIS INDUSTRY. — THE MANUFACTURE OF SILK DRESS-GOODS. — THE INCREASED CONSUMPTION OF SILK. — THE INCREASED SUPPLY. — NEW MEANS OF PRODUCTION SUGGESTED. — THE PROBABLE FUTURE OF THE BUSINESS.

THE manufacture of silk as an article of apparel dates from a very early period of the world's history. Our very word "silk" is derived from the Greek *seres*, the name given to the people of the East, the Chinese, who manufactured all the silk used at this early period. From the Greek the Latins obtained their term *sericus*, "silken," and from them the term spread to the different nations of modern Europe, appearing in Anglo-Saxon as *scolc*, in Icelandic as *silki*, in Danish as *silke*, in French as *soie*, and so on.

The various references in the Bible to silk are, with the exception of that in Revelation, believed by the best authorities not to refer to silk, but to be mistranslations, since it is quite evident that the Hebrews in early times were not acquainted with this texture. In their literature the Chinese have treatises describing the processes of silk culture and its manufacture, for which they claim an antiquity of four thousand years, and which were unquestionably written many ages ago.

Among the Romans, dresses of silk came to be considered articles of disreputable luxury; and during the reign of the Emperor Tiberius, an edict was passed by the Senate forbidding men from wearing them, since the effeminacy introduced by the increased use of this material was thought to threaten the most disastrous results for the state. Aurelian also used his influence against its use, refusing to give his wife a silk robe. During the reigns of the luxurious emperors, such as

Caligula and Elagabalus, its use was, however, encouraged by the example of the rulers themselves, who adopted its wear. The prices of silk textures in these times was so large at Rome, that, in the second century after Christ, the Emperor Marcus Aurelius replenished his treasury by the sale of the shawls and scarfs which had accumulated in the royal wardrobe during the reigns of his predecessors.

Marcus Aurelius also sent an embassy to China with the view of opening a direct trade between Rome and that country for the supplies of silk consumed by the Roman Empire. Up to this time the supply of silk had been furnished to Rome through the agency of the Persian caravans, and the expense of this intermediate trade was one of the chief causes of the excessive price of silks to the Romans. This attempt was, however, not successful, and the Persians retained their monopoly of the silk-trade in Europe for nearly five centuries longer, until the culture of silk was imported into Europe.

That silk was the product of a worm was known to Aristotle and to Pliny, but many Roman writers, in speaking of it, describe it as a sort of down produced by trees. In the reign of Justinian, two Persian monks, who had spent years in China acquiring a practical knowledge of the processes of silk-culture, brought to Byzantium silkworm eggs concealed in a hollow reed of bamboo, and commenced the culture of silk in Europe. The business increased rapidly, and was soon understood in Greece, which for a long time held the leading position in Europe in this industry. In the twelfth century it was established in Sicily, on the overthrow of the Byzantine Empire, and up to the sixteenth century Italy remained the chief country in Europe for the production of dress-silks.

By the agency of Francis I., while the French occupied Milan in 1521, workmen were sent from Italy into France, and in the southern part of that country silk-culture soon obtained a permanent footing. Frequent attempts were made by James I. of England to inaugurate the culture and manufacture of silk into England, but without success. On the settlement of Virginia, James strongly recommended the introduction of silk-culture in the Colony, and sent supplies of silkworm eggs from his private stores. Nor were attempts to inaugurate the culture of silk confined only to Virginia, but every one of the Colonies became interested in the matter, and more or less silk was raised in almost every one of them, from Massachusetts to Georgia. Most of the colonial governments stimulated the industry by bounties and other encouragements, and in some of the Colonies the business appeared

to have been raised to a permanent footing. President Stiles, of Yale College, was most earnest and persistent in attempting to establish the culture in Connecticut; and in the library of the college there are preserved the records he kept for a period of forty years of his various experiments and experiences in prosecuting this industry. In 1788, President Stiles, at the Commencement of the college, wore a silk gown made from material raised and woven in the State.

Various specimens of the silk made in different parts of the country are still in existence in the possession of the descendants of those who were interested in its culture. One of these is an entire dress, which was recently in possession of Mrs. Horry of Charleston, S. C., a descendant of Mrs. Pinckney, the mother of the Revolutionary generals of that name, which was made from a piece of silk manufactured from silk raised near Charleston in 1755, and from which three dresses were made in England, one of which was presented to the Princess Dowager of Wales, another to Lord Chesterfield, and the third of which is the one above mentioned. This dress is said to be remarkable for the beauty, firmness, and strength of its material.

From various causes, but chiefly because the country was not as yet sufficiently settled to devote itself to silk-culture, to the neglect of other and more pressing industrial occupations, the culture of silk continued to decrease, until about 1830 the interest in silk-culture in the United States began to be revived, and culminated in the excitement of speculation concerning the *Morus multicaulis*, a variety of mulberry-tree, imported from the Philippine Islands, and the culture of which had been extending for a year or two previously.

Early in this year the Chamber of Commerce at Lyons, France, published a report concerning American silk, in which it was stated that a sample, reeled in Philadelphia by Mr. D'Homergue, was assayed by a sworn and licensed assayer, and was declared to be of an extraordinary quality, and admirably adapted to the uses of fabrication; that it was fine, nervous, good, regular, clean, of a fine color, and, in short, united all the qualities that could be desired. Its value was estimated at twenty-six francs (a little over five dollars) a pound. The Committee upon Agriculture also reported to Congress concerning the culture of silk, and accompanied their report with a bill to promote the growth and manufacture of silk in the United States. The bill was brought up in the next session, but failed to pass.

In 1837, Mr. Adams reported from the Congressional Committee

on Manufactures, to whom a resolution from the House, passed during the previous session, had been referred, inquiring concerning the expediency of promoting the culture and manufacture of silk. In this report the whole subject was discussed, and it was stated that it had been found perfectly practicable to raise mulberry-trees and silkworms throughout the whole of the United States. One acre of the *Morus multicaulis* would sustain sufficient silkworms to raise one hundred and twenty pounds of silk, worth six hundred and forty dollars. The process of reeling had been found easy. The manufacture was as simple as that of cotton or wool, and the necessary machinery was much less expensive. The manufacture of silk fabrics on power-looms had been successfully established, and it was certain that this country could compete successfully with others in this industry. The New England States were all of them engaged in the culture and manufacture, and four of them were encouraging the business by bounties. Silk-companies existed in all the Eastern and Middle States, and in the Southern States much interest was felt in the subject. The Western States were peculiarly adapted to the business, and a number of companies with large capitals were incorporated in Ohio, under skilful managers. The business had been commenced in Kentucky, in Indiana, Illinois, Missouri, and Tennessee.

In 1838 the speculation in mulberry-trees culminated, and single trees were sold as high as ten dollars each. The revulsion followed, and most of the nurseries were abandoned or destroyed. In this year, however, a convention of silk-growers was held at Baltimore, at which two hundred delegates attended. A National Silk Society was formed, and a journal devoted to the silk interest established. In 1839 *Morus multicaulis* trees were offered at three cents each, "healthy and well branched," and it was predicted that the next year they would be sold at three dollars a cart-load. From the disastrous results of this spirit of speculation, the culture of silk suffered severely for some years. Gradually, however, both the culture and the manufacture of silk have attracted more attention, and it is perhaps not among the impossible results in store for us in the future, that this country may eventually come to be among the chief silk-producing countries of the world.

It is within even the short period of our national existence, that indigo, which had become a leading crop of the South, has given place to cotton, the supremacy of which, with the increasing diversity of industry and specialization of labor introduced by the abolition of slavery, seems seriously threatened in its turn, and which will

certainly not remain the only, though it may remain the chief, industry of that section of the country.

The notice elsewhere in this volume of the present successful condition of the manufacture of silk machine-twist shows the results attained by American industry in this branch of silk-manufacture. In the production of silk dress-goods a similar advance has been made, and the quality and texture of the silk fabrics made by Cheney Brothers at Manchester, Connecticut, have justly obtained a reputation which is gratifying.

The democratic industrial movement of the present era of civilization tends towards increasing the circle of the consumers of luxuries, and, depending upon the people, instead of only upon the small class of the rulers, for the purchasers of its products, seeks to make universal the moral influences of the gratification of our desires, instead of depending upon their suppression or denial for this end.

In the attainment of this needed reform, the silk-manufacture has played an important part, and the almost universal distribution of its products shows how much more general the industrial activity of the present has made the ability for the enjoyment of luxuries than even less than a century ago was possible. To our grandmothers the possession of a silk dress marked an era in their lives; while now to persons whose lives of daily toil formerly forbade the expectation of ever enjoying such a luxury, a silk dress is by no means such an impossible possession.

To keep pace with this increased demand, the cultivation of silk has greatly increased; and though it suffered a few years from a malady which attacked the worms in many countries of Europe, yet the scientific use of the microscope has robbed this disease of its terrors, by showing its causes, and suggesting the sure means for avoiding it. There is no more striking evidence in modern times of the intimate connection and interdependence of the scientific and commercial interests of mankind, than the good service which a purely scientific investigation of the causes of the disease, guided by a scientific method, derived only from the philosophic theories of the students of biology, has done to the cultivators of silk, by giving them a simple and practical means of effectually combating the ravages of this singular parasitic disease, which seemed at first destined to utterly destroy their industry.

Not only has the increased demand for silk led to the extended introduction of this industry, but it has also called attention to other sources of the supply than the silkworm. Various other insects

have been found which also yield a textile material; and varieties of silkworms which feed upon varieties of the oak and other trees have been suggested as valuable for supplementing the supply. Even spiders have been cultivated for their ability to spin silk; and a few years ago a writer in the *Galaxy* devoted several papers to an enthusiastic description of his labors with individuals of a peculiarly hideous species of spider which flourished on the low lands of the Southern Sea Islands. The description of the ingenious kind of harness which he invented for the purpose of reeling out the web from the living spider, together with his accounts of their habits, and calculations of the probably profitable character of this new industry, were quite interesting. Up to the present time, though, these new sources for the silk supply of the world have not come to be commercially of value; yet there is but little doubt that the culture of silk has a great future before it, and that in this country the practical knowledge gained by experience will offer an opportunity for taking advantage of the admirable combination of favorable conditions which this country offers both for the culture and the manufacture of silk.

