

MANUFACTURE OF WOOL, SILK, COTTON AND FLAX, AN-
CIENT AND MODERN.*

SINCE man was, by the Divine Justice, condemned to provide for his own wants by his own labor, the chief occupation of all the branches of the race has been to clothe and feed themselves. With the advancement of science and the development of inventive genius, the taste for both food and raiment has become more refined, and the wants of civilized people more diversified. It may be said, that the food of the bulk of the people in all countries remains now nearly what it ever has been; but the supply has become greater in proportion to the inhabitants of different countries, according to the fertility of the soil, the industry of the people, and in the improvements in the instruments of labor. Governments have, in modern times, attempted, by means of parchment laws, to extract from a barren soil, an unintelligent people, with rude and primitive instruments, food, on terms as advantageous as an industrious people, with the aid of eminent science, can extract from a fertile soil. Under pretence of effecting this object, they have compelled consumers to forego all the benefits of a more favored region which commerce would confer on them. The effect has been greatly to retard the progress of the people of all countries. In fact, it has been the avowed policy of many modern princes to preserve the *statu quo*, as that in which the people enjoy the greatest happiness. When we look upon the progress of the human race, from the rude ages to the present comparative high state of civilization, we become struck with the presumption that fixes upon any stage of advancement, as that beyond which it is not desirable to go; and to retard its progress, restrictions upon individual business, and prohibitions of intercourse, are rigidly administered.

The clothing of the human race, from all ages down to the present moment, has chiefly consisted of four materials—two of animal and two of vegetable production. Of the first, silk has ever been an article of luxury, but has

entered, to a greater or less extent, in different ages and under different circumstances, into the consumption of the people. The other animal production, wool, has formed by far the greatest basis of human clothing, in all countries and ages. Of the vegetable productions, linen was anciently the most known in Europe; but cotton has, from time immemorial, formed the clothing of the people of India. The use and manufacture of those materials slowly found their way westward, impeded and retarded by oppressions and restrictions of all descriptions. The rapacity of rulers sought to introduce the manufacture of the different articles into their several domains, and then, by the grant of monopolies and barbarous restrictions, smothered them at home, while they sought to prevent the art from leaving them for other countries. Although silk, from the earliest ages, composed the clothing of the inhabitants of Asia, and was known and used as an article of luxury long before the Christian era, yet it was not until the sixth century, under the reign of Justinian, that it was introduced into Europe as a manufacture. A few eggs, concealed in a vegetable stalk, were brought to Constantinople about the year 530, by two monks. The manufacture springing from this soon became “protected” by royal favor. Justinian and his vile consort amassed great wealth by the monopoly. At the end of that century silk was known in England, and Charlemagne wore a linen shirt, a tunic of wool, with a silk border. The manufacture of the article remained confined to Greece some six hundred years, and in the twelfth century was transferred, by force, to Palermo. In the fourteenth century it spread successively through the different countries of the south of Europe to Britain. Cotton was always the chief staple of India; and, down to this day, many of the most exquisite fabrics of India cotton have in vain sought to be rivalled by the scientific machinery of Europe. The manufacture of wool

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and linen was introduced into England gradually, by the Romans; and in most countries of Europe it has been spreading, to a greater or less extent, for two thousand years, exposed to legislative oppressions of all kinds, for the protection of some more favored branch of industry.

Although the progress of manufactures in all the countries of Europe, was at all times exposed to the abuses growing out of the mal-administration of the governments, it was not until the 17th century, that the several nations commenced to make war, each on the prosperity of the other; and recognized the mutual injuries thus inflicted, as a principle, under the name of "protection" to home industry. The great object of the labor of the human race, is to procure a sufficiency of food and raiment for all; and for each to obtain as much for as little labor as possible. Every sovereign of Europe saw the importance of having his own people possessed of these necessities to as great an extent as practicable; and it was for this purpose, that, in 1148, the King of Sicily, having overrun the cities of Greece, compelled the silk weavers to go and live in Palermo, and there exercise their art; and they continued to flourish there, because the prosperity of the people of Sicily enabled them to buy the rich goods produced, at a remunerative price. Gradually, in all countries, the first manufacturers became wealthy and influential, and obtained incorporate and special privileges. These were gradually consolidated into the protective system, by which all the manufacturers of one nation were sought to be protected in a monopoly of the home market; that is to say, the principle avowed was, as expressed by Daniel de Foe, the author of *Robinson Crusoe*, in his *Weekly Review*, 1708:

"That it is a national evil to have clothing cheap from abroad, rather than to manufacture it dear at home."

The original design of labor thus came to be perverted. Instead of working to provide the greatest quantity of clothes on the best terms, to the whole people, the whole design of government was sought to be to compel the mass of people to buy only of certain per-

sons, at such rates as they chose to demand. The makers of these cloths therefore obtained great wealth, while the consumption of the goods was materially retarded. A free competition in the supply from all quarters, would naturally afford the greatest quantity to a people, on the cheapest terms, because every country has some advantage peculiar to itself, which enables it to supply a greater quantity of a given article, for a certain amount of labor, than any other country. Where a mutual interchange of articles, thus peculiarly situated, freely takes place, not only the greatest subdivision of labor, but the best application of the advantages of all climes and localities, to the welfare of the whole human race, is brought about; and therefore, the greatest sum of happiness is obtained. Such a state of affairs eminently exists in the U. States, where perfect freedom of internal intercourse allows of the free application of the capital and skill of the whole country to the development of all its resources, wherever situated. Were such a freedom of intercourse, in the present improved means of communication, to exist between any two nations, their commercial and pecuniary interests would soon become so interwoven, that hostilities between them, from any cause, would be utterly impossible; as a consequence, princes and dynasties would soon cease to exist, because war, with all its paraphernalia, would no longer be at their command to sustain their absurd pretensions. In former ages of the world, when the means of intercourse was slow, and the transportation of goods from one country to another, was almost impossible, separate nations had nothing in common with each other, and a war was a matter of no importance, unless to those comparatively few, who were actually exposed to the ravages of a hostile host. Even the cotton manufacture of India, which is mentioned by the first Greek historian, five centuries before Christ, as having existed for an indefinite period, was known only as a curiosity to the Egyptians, at the time of the Christian era, five centuries after rumors of the "wool-bearing trees" of India had spread among the Greeks; and it was not until the 12th century, that the manufacture was introduced into Italy.

land, and they soon rivalled France in merinos and other stuffs. The quality was improved and the price reduced by their means; and, notwithstanding that the fabrication of cotton and linen goods competed seriously with low-priced woollens, and the production of wool in England has increased 25 per cent. since 1800, the increasing wants of the trade have required the above quantities of foreign wool, which, as seen, have increased near 700 fold, and it is admitted duty free. The British New-Holland colonies have supplied a large portion of it; but the wool of the United States is now being rapidly introduced into English consumption, and will become a large item of export thither.

SILK was known as a fabric as early as Edward III., and the manufacture was introduced soon after the battle of Cressy, in 1347. We have already stated that a great impulse was given to it by the settlement of Spitalfield by the French refugees; and down to the close of the 17th century the manufacture flourished, both in France and England, until the value, which had been proclaimed by Horace and Virgil equal to its weight in gold, was, in 1694, fixed officially at 7s. 4d. per lb. for Bengal raw silk, and 11s. 4d. for that of Italy. In 1718, the manufacture received a new impulse from one John Lombe, who went to Italy and surreptitiously obtained models of machinery, which he erected at Derby. On his death, which happened soon after, the government paid his heirs £14,000 to annul the patent he had obtained, and silk-mills were speedily erected in all directions. About the year 1763, some improvements in throwing and in manufacture reduced the price, which producing distress, the usual remedy of prohibiting foreign silk was resorted to. This, of course, increased the distress of the operatives, and a serious riot, in 1770, was the result. Under the protection thus afforded, the manufacture declined, as is evident from a diminution in the import of the raw material. The events of the war, during the twenty years subsequent to 1793, when war was declared, caused the import of raw silk and the smuggling of the prohibited manufactures, to undergo great vicissitudes. The suspension of the war, by deranging the whole system of exchanges that had grown up, based

upon the immense operations of the government treasury, produced ruinous disasters. In the year 1820, industry began to recover from the disastrous effects of peace. At the time of the silk riots, in 1773, order was restored by the establishment of a list of prices, which was legalized by George III., for the district of Spitalfields. After the war was over, and skill and industry began to regulate prices, and not protective laws, the manufacturers of Macclesfield, not subject to the "protection" of Spitalfields, were enabled to surpass them in the London market. The distress thus produced, resulted, in 1822, in the repeal of the protection of Spitalfields, the reduction of the duty on raw silk from 5s. 6d. to 3d. per lb., and the repeal of the law prohibiting foreign silks, thus throwing the trade open to competition. The effect of this freedom of trade, which it was asserted would ruin all the silk weavers of England, has been to raise the consumption of the raw material, from 2,641,866 lbs., to 6,207,678 lbs.; an increase of 3,560,000 lbs. in 20 years, or near 50 per cent. more than the result of the previous 500 years of protection.

The manufacture of LINEN has long been prosecuted in England; but about the end of the 17th century was indirectly encouraged in Ireland, to please the wool manufacturers of England. In the reign of William III., the woollen manufacturers becoming alarmed at the progress of the manufacture in Ireland, modestly asked to have it suppressed. The king, in answer, made the following promise:

"I shall do all that in me lies to discourage woollen manufactures in Ireland, and encourage the linen manufacture; and to promote the trade of England."

The measure adopted was to prohibit the export of woollen goods from Ireland, except to England; and a prohibitory duty existed in England. As a kind of offset, a bounty on the export of linen from Ireland, was granted, which continued to 1830. The great improvements in the spinning of linen in England, have enabled her to create a large trade in the export of linen yarn to France and Ireland. The former has, of late, endeavored to exclude the yarn, to encourage spinning in

Moslem, that other nations would not *give away* their goods, and to receive them argued, that something must be paid for them; and as the export of produce was prohibited, specie speedily vanished from circulation. Hence the law of prohibition gradually fell into disuse. The wisdom of the christian governments erred as far on the other side. They permitted all produce to pass freely out, forgetting, that if their subjects sold, they must receive something in return, and to prohibit returns was to impoverish the country. These mutual restrictions have tended in an eminent degree to check the consumption of manufactured goods, because they artificially enhanced their price; that is to say, they added a new ingredient to the cost of certain articles, beyond the natural ones of the expenditure of capital in its production, and the profits of manufacturers and sellers. In spite of all these restrictions, however, the production and consumption during the present century, have been immensely greater than at any previous period of the world's history. The increase in the production has been owing almost entirely to wonderful discoveries, and the advancement of science, in each branch of manufacture.

Great Britain; in consequence of her commanding geographical position—si-

tuated as she is, centrally, surrounded by good harbors, in respect to all the large commercial cities of Europe—her vast mineral resources of coal and iron interstratified and conveniently disposed for cheap use and transit, and possessing an energetic, industrious, and enterprising people, naturally took the lead in manufacturing, and, isolated from the continent by seas, commanded by her own ships, she has hitherto escaped those devastating invasions that have successively ravaged all the nations of Europe. Her industry has, therefore, been undisturbed, and her productive power has progressed the more rapidly, that the paralyzed industry of the continent has left the field entirely open to her enterprize. Under these circumstances she has been enabled, aided by great discoveries, and inventions in the arts, to maintain the supremacy which has been threatened, but not seriously affected, during the last quarter of a century of profound peace. In tracing the leading events in her manufactures, we shall indicate the general progress. As an indication of the rapidity with which her manufactories have progressed, we annex an official decennial table of the quantities of the raw materials imported into the United Kingdom, and taken for consumption by her manufacturers—

QUANTITY OF RAW MATERIALS FOR MANUFACTURES, TAKEN INTO CONSUMPTION IN GREAT BRITAIN IN EACH YEAR OF EIGHT SUCCESSIVE PERIODS.

	Wool. lbs.	Silk. lbs.	Flax. cwt.	Hemp. cwt.	Cotton lbs.
1790.....	3,245,352.....	1,253,445.....	257,222.....	592,306.....	30,574,374
1800.....	3,615,284.....	3,167,335.....	416,120.....	556,419.....	53,314,207
1810.....	10,936,224.....	1,796,106.....	511,970.....	955,890.....	126,018,487
1820.....	10,043,746.....	2,641,866.....	381,821.....	418,509.....	141,912,267
1830.....	32,313,059.....	4,318,181.....	944,096.....	506,771.....	255,426,476
1836.....	60,366,415.....	5,533,445.....	1,511,438.....	567,892.....	363,634,232
1840.....	52,862,020.....	4,756,171.....	1,338,217.....	612,515.....	437,099,631
1844.....	69,493,355.....	6,207,678.....	1,595,839.....	911,747.....	558,015,248

We have, in these figures, the most extraordinary increase since the close of the war; and this has been owing to the almost total abolition of the protective system as applied to manufactures. Wool has always been the object of care to the British government. Up to 1660, British-grown wool was allowed to be freely exported; in that year the export was prohibited, and remained so up to 1825—a period of 165 years. This measure grew out of the idea that

the peculiar long staple of English wool was superior for manufacturing purposes, and, therefore, by preventing other nations from obtaining it, they should keep the manufacture to themselves. By this selfish policy, inventive genius was paralyzed, and the art of manufacture remained stationary. As soon as the French could obtain the English wool, their genius produced a quality of cloth altogether superior to that of the English. This stimulated invention in Eng-

We have stated that the silk culture was introduced into Constantinople in the year 530; but it was not until 1622, during the reign of Elizabeth, that some foreigners first made silk in London. It took 1100 years to carry the trade from the Levant to the North Sea.

The manufacture in England did not prosper to any great extent, however, until in 1685, from 30,000 to 50,000 Protestant silk weavers were driven thither, to seek refuge against the persecutions of the Catholics, when Louis IV. revoked the edict of Nantz. Some 15,000 of these immigrants settling in and near London, located, what is known as Spitalfields, and became the chief seat of the silk manufacture in England. This large accession of silk weavers did not injure those previously established, but producing a great decline in the money value of the articles made, enhanced the consumption to a degree that improved the business of all. It subsequently led, however, to jealousies between Great Britain and France. Although England had received great benefit from those French who had arrived in London, to make silks for the English, yet she sought to prohibit those who remained in France from adding anything to that supply. These mutual jealousies between nations were engendered, or grew up of themselves spontaneously, when no great degree of mutual intercourse had previously existed; when, as yet, no large class of persons, in any one country, had become accustomed to depend upon another large class in another country for articles of necessity. The manufacturers were the first to feel the effects of foreign competition, and to complain of its injurious effects, before the people at large had learned to appreciate its benefits. As therefore, by royal favor, and governmental protection, the manufacturers were already an influential class, and the ruling powers naturally leaned upon them for support in times of emergency, it became easy for that class to obtain, what they called protection, at the expense of the people; more especially as that it is always, in all countries, the active class, or those who have some special object in view, that obtain that which they seek at the expense of the many who have no organ-

ized opposition to that systematic attack. England, under Charles and Cromwell, began those demonstrations of commercial hostility against other nations, which took the form of navigation laws, prohibitions and restrictions on imports of all sorts, with bounties on exports. In 1687, these material injuries were established as a principle, by France. These examples were followed by all other nations of Europe—Austria towards the close of the seventeenth century. In Germany, from the earliest times, the revenues of petty princes, and lordly tyrants, were drawn from onerous taxes on commerce, rather, however, as a mode of oppression, than with a view to “protect” manufactures. In all the despotic countries, the general principle of raising a revenue, has been to levy the highest duties on those articles most absolutely necessary to common use, and to the support of every individual; and some of them, as France, Spain, Naples, and Austria, have monopolized certain trades, as tobacco and salt, with a view to the profit. England has not done that, but has taxed every thing of necessary in use, excepting water.

The general principle which has been acknowledged by all the powers in relation to protection, has been to prohibit those articles which they suppose most to compete with certain interests at home, which it is intended to favor, but to allow of the free export of the products of national industry; that is to say, to allow the citizens to sell, but not to receive any valuable thing in return. The policy of Turkey has been the reverse of this, but equally plausible. The idea which originally presented itself to the Sublime Porte was, that all the wealth of a nation must arise from the industry of its inhabitants. Hence, if all the proceeds of their industry was, by law, confined in the country, it must necessarily grow rich; exports of Turkish produce were, therefore, strictly prohibited; on the same principle all the produce of other nations brought into the country would in so far add to the wealth of the country. Imports have, therefore, from the time of Solyman the Magnificent, to the present day, been admitted at a duty of three per cent. *ad valorem*. It, however, escaped the sagacity of the

France; and the result will be the continued superiority of English and Irish cloths. The export of yarn from England was 30,000,000 lbs. last year; and is a new business since 1820. The consumption of the raw material has, it will be observed, more than quadrupled since 1820.

COTTON may be said to be the creature of the present century. Its history is altogether the most remarkable of the annals of human industry. By inspecting the above table, it will be observed, that less than 31 millions lbs., nearly all of Indian growth, was consumed in Great Britain, in 1790; and in the 54 years which has since elapsed, it has risen to 559 millions of lbs., mostly of U. States growth. We have mentioned, that from the earliest times, cotton has been made use of in India for clothing; but it never became an article of importance until the United States undertook to furnish it to the world. The American cotton is of two kinds, Sea Island, and upland. The former grows on the sea-coast, has a smooth black seed, and is easily separated from the wool. The latter grows on the upland, and is of short staple, growing from and adhering firmly to a green seed. The difficulty of cleaning the cotton was such as to render the culture, to any extent, worthless. It could not be worth the labor of picking the seeds out by hand. In 1793, however, Mr. Eli Whitney, a native of Massachusetts, and a gentleman of rare mechanical genius, invented a machine for clearing it from the seed, and this invention enabled England to defeat Napoleon, and will yet revolutionize the world. The machine came into operation in 1796, and gave effect to the steam-engine first applied to the cotton manufacture, in 1785, by James Watt, to the spinning-jenny of Sir Richard Arkwright, thrown open to the public in 1790, and to the powerloom of D. Cartwright, brought into use in 1801. These four wonderful inventions, nearly contemporaneous, gave that impulse to the consumption of cotton evidenced in the above table. From the year 1810 to 1820, the war, and other difficulties, prevented any very rapid increase; after 1820 it progressed astonishingly until it has now become, in value, one-half of the whole exports of Great Britain.

The extension of the manufactures, in the United States, has been great, but far less so than in Great Britain, because the consumption of cotton goods has been checked by the operations of excessively protective laws. The machinery of Arkwright had been long in operation in England, but every effort to import it into the United States failed, until the year 1790, when Mr. Samuel Slater, overseer for a partner of Arkwright, came to this country, and soon after, in connection with Messrs. Almy & Brown, commenced a factory at Pawtucket. From that time the manufacture continued to struggle on against protective laws, in the hands of a few men, and compared with England, has progressed as follows:—

LES. COTTON CONSUMED.

	1790.	1844.
England . . .	30,874,374 lbs.	558,015,248
U. States . .	500,000 "	160,000,000

The English duties upon cotton goods were 10 per cent., and about 12 per cent. on the raw cotton, and which has now been abolished. In the United States the cotton is grown, and the duties upon foreign cottons range from 80 to 200 per cent. This, of course, will explain why a few cotton manufacturers are enormously wealthy, and that the consumption of the goods has been much slower than in England. In 1832, a congressional committee reported the number of mills and spindles, which, as compared with the return of the census of 1840, are as follows:

NUMBER OF COTTON MILLS IN THE UNITED STATES.

	1832.	1840.
No. of Mills	795	1,240
" Spindles,	1,246,503	2,284,631
" Looms,	33,506	—
Persons employed,	57,466	72,119
Lbs. consumed,	135,000,000	160,000,000

This was a period of the descending scale of the compromise act. It may be remarked, that the whole period, from 1790 to 1844, has been one of experiment. A constant succession of inventions, discoveries and improvements, both in spinning and weaving, as well as in printing, have, in England, operated to reduce the prices of the fabrics, and to promote their consump-

tion in all their forms all over the world. Thus, it was not until 1814 that the power-loom was known in the United States, and was far from generally used in England in 1813. The constant occupation of the most fertile lands in the southern states, with the increase in the slave population in a ratio more rapid than that of the whites in Europe, have served to throw out a most prolific supply of the raw material, yearly, making England more dependant upon them for a supply.

The manufacture of cotton in Europe has progressed under all its difficulties nearly to as great an extent as

in the United States. France imported, in 1812, 14,000,000 lbs. raw cotton, and in 1844, she received 120,000,000 lbs. from the United States; Germany and Holland, 20,000,000 lbs., and Austria 13,000,000 lbs., which describes nearly the extent of the manufacture in those countries. From what has been here said, it will be observed that the English manufacture has progressed since the peace in a greater degree than that of any other country, and for the reason that she has gradually abandoned entirely the principle of protection. The quantities of her leading exports have been as follows :

QUANTITIES OF LEADING MANUFACTURES EXPORTED FROM GREAT BRITAIN.

	1814.	1827.	1831.	1836.	1844.
Cottons, yds.	190,474,707	365,492,804	421,385,303	637,667,627	885,969,819
Cotton Yarn, lbs. ...	12,282,354	44,878,774	63,821,440	88,191,046	132,832,952
Linen, yds.	45,130,000	55,132,189	69,233,892	32,088,769	69,232,682
Linen Yarn, lbs.				4,574,504	29,490,987
Silks.	£219,398	236,113	578,874	917,822	590,189
Wollens, pieces.	1,482,643	1,851,946	1,997,348	2,224,566	2,196,944
“ yds.	12,193,815	6,460,094	5,797,546	9,099,824	10,725,859
“ Yarn, lbs.			1,592,455	2,546,177	5,962,401

For these immense quantities of goods, the value of which form four-fifths of her total exports, is she depen-

dant on foreign markets, and the general direction of the markets is as follows :

EXPORTS OF GREAT BRITAIN.

	1814.	1820.	1830.	1836.	1842.
To Colonies,	15,025,456	11,717,252	10,004,399	15,469,312	14,770,097
N. of Europe,	14,693,580	11,680,906	7,320,654	11,570,542	16,830,416
S. of do.	9,292,630	5,288,074	5,066,749	6,317,029	5,373,955
All other,	6,482,553	7,738,420	14,772,570	19,937,287	10,404,555
Grand Total,	£45,494,219	36,424,652	37,164,372	53,293,979	47,381,023

It is observable, that in spite of all the tariffs that have been enacted, and all the protection accorded to the manufacturers of the North of Europe, the market in that direction has increased more than to her own colonies, to which, by the way, the exports were large in 1814, during the war with the United States, for indirect entry into this country. Of the total of 47 millions sterling exported in 1842, 36 millions was of the above four articles, of

which we have treated. It is apparent that that vast commerce is dependant entirely upon a state of peace, more particularly with that country on which England most depends for a supply of the raw materials. In the last quarter of a century, the progress of steam communication in vessels and on railroads, has been such as to “annex,” commercially, the nations of Europe and America too closely to allow of future wars.