

**AMERICAN TEXTILE MACHINERY: ITS
EARLY HISTORY, CHARACTERISTICS,
CONTRIBUTIONS TO THE
INDUSTRY OF THE WORLD, RELATIONS
TO OTHER INDUSTRIES, AND CLAIMS
FOR NATIONAL RECOGNITION**

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American Textile Machinery: Its Early History, Characteristics, contributions to the industry of the World, relations to other industries, and claims for national recognition by John L. Hayes

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JOHN L. HAYES

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THE value to a nation of its possession of a perfected textile industry is but feebly expressed by the number of operatives it employs, the money value of its products, or the sum of comforts — if it were possible to calculate them — which the people of a nation derive from an abundant and cheap supply of domestic textile manufactures. The census of 1870 shows that the cotton and woollen manufacture of the United States, with their branches, the worsted, carpet, hosiery, and print industries, employed 264,122 hands, and produced a total value of \$449,514,619.

The operatives directly employed were but about $\frac{1}{8}$ of 1 per cent of our total population of 38,558,371, and the value of the product about 10 $\frac{1}{2}$ per cent of our total manufacturing industry, namely, — \$4,232,325,442, and but about 18 $\frac{1}{8}$ per cent of that produced by the single industry of agriculture, \$2,447,538,658.

When we look at the comparatively small proportion which the textile manufactures bear to our total productive industry, the question naturally arises, why it is that the textile industry is the first object of acquisition and encouragement by all

civilized nations, and that the interests of the spindle and loom have been the first consideration in the economical legislation of modern times. A moment's reflection will show us that the national value of the textile industries consists less in the direct sources of employment and production of values which they furnish, than in their relations to other industries,—to the agriculture, which supplies the raw material, and food for operatives; to the multiform industries which furnish its supplies and work up its products; to the vehicles of domestic commerce, which transport its raw material and fabrics; and to the trade of the great cities of which the textile industries are the chief aliment. But even these important relations are insignificant, compared with the influence of the textile industry, as the chief source of that tremendous development of labor-aiding mechanical power, in application to all industries, which is the miracle of the century now closing.* To illustrate the position here affirmed, and to show, by the history of the development of American textile machinery, the part which this country has taken in the grandest of all conquests,—the subjugation of the forces of nature to the control of man,—is the leading object of this essay.

RESTRICTIVE LAWS OF ENGLAND.

While to the British Stamp Act of 1765 we may attribute our emancipation from foreign political dominion, to another British statute of the same decade we may no less justly assign our industrial independence. The legislation to which we refer is so characteristic of the jealous watchfulness with which Great Britain has always guarded her industries, it has had so marked an influence upon our own industrial development, and has been so rarely referred to, that we may properly recount it with some detail.

The new career in the cotton manufacture, which was to raise Great Britain to such a height of wealth and power, com-

* This point was briefly though forcibly presented, by Mr. George C. Richardson, in his speech at the Wool Trade Dinner at Boston, April 10, 1877.—*Bulletin*, vol. vii. p. 183.

menced, about 1770, with the introduction of the water-frame or roller spinning by Arkwright, and, what was of vastly higher moment, his creation of that Briareus of modern industry, the factory system. The immediate success of his enterprise in the county of Derby, in association with Jedediah Strutt, attracted public attention. One of those happy inventors whose results were equal to his predictions, he did not fail to proclaim the vast advantages which the country would derive from his inventions. A contest as to the validity of his patent gave greater publicity to his improvements. The attention of Parliament was thus aroused to the prospective importance of the cotton manufacture, and to the desirableness of preserving its processes and machinery as the exclusive possession of England.

In the year 1774, the statute was enacted by Parliament, instituting the restrictive system as to textile machinery, which was continued for seventy-one years. The notes which follow were taken from the original statutes. The act, 14 Geo. III., cap. 71, was entitled "An Act to prevent the exportation to foreign parts of utensils made use of in the cotton, linen, wool-len, and silk manufactures of this kingdom."

The preamble recites: "Whereas, the exportation of the several tools or utensils made use of in preparing, working up, and finishing the cotton and linen manufactures of this kingdom, or any or either of them, or any other goods wherein cotton or linen or either of them are used, will enable foreigners to work up such manufactures, and greatly diminish the exportation from this kingdom; therefore, for preserving as much as possible to his Majesty's British subjects the benefits arising from these great and valuable branches of trade and commerce, it is enacted," &c.

Stringent provisions are then made against the putting on board of any ship, vessel, or boat, which shall not be bound to some port or place in Great Britain or Ireland, "of any such tools or utensils as are commonly used or proper for the preparing, working up, or finishing of the cotton or linen manufacture," under penalty of forfeiture of such tools, &c., and a fine of £200. Similar penalties are imposed for having in

possession, with intent to export the same out of the kingdom, any tools or implements used in the woollen or silk manufacture.

The provisions of this statute were either not sufficiently stringent, or the rapidly increasing importance of the manufactures demanded a more rigid restriction, for in the year 1781, another statute [21 Geo. III., cap. 37] was enacted, explaining and amending the former act, and prohibiting the exportation of "any machine, engine, tool, press, paper, utensil, or implement whatever, which now is, or may at any time be, used in or proper for the preparing, working, pressing, finishing, or completing of the linen, cotton, wool, or silk manufactures of this kingdom, or any other goods wherein wool, cotton, or silk is used, or any part of such machine, &c., or any model or plan of any such machine." To the forfeiture of the machine, &c., and fine of £200, as in the previous statute, is added imprisonment for the space of twelve months.

In the year 1825, upon a general revision of the custom laws, the above statutes were repealed, but in the new act for the regulation of the customs which was thereupon passed [6 Geo. IV.], it was provided that certain articles should be absolutely "prohibited to be exported." Among those mentioned are "any machine, engine, tool, press, paper, utensil, or instrument, used in or proper for the preparing, working, pressing, or finishing of the woollen, cotton, linen, or silk manufactures of the kingdom, or any other goods wherein wool, cotton, or silk is used, or any part of such machines, &c., or any model or plan thereof" (except wool-cards, and spinners' cards, not worth above 4s. and 1s. 6d. per pair respectively). To this list was added utensils used in cotton printing.

It will be seen that in the list of articles prohibited the precise language of the statute of 1781-2, is retained. A revision of the customs tariff was made again in 1833, and in the table of prohibitions of exportation the same list occurs [statute 3 & 4 William IV., cap. 52].

This prohibition remained in force, it would seem, for twelve years, although it may have been less rigidly enforced, or the