

shall here quote a passage in which the waste of capital during the last sixteen years is described :

And in entering upon this investigation the first fact in order to be noted is that, for the time at least, the power of purchase to nations, communities, and individuals, so far as such power resides in accumulated labor, has been abridged ; or, in other words, the so-called civilized nations of the world are not as rich as they might and ought to have been, inasmuch as for the last sixteen years especially they have been diligently wasting their capital, or placing it under conditions which will not permit of its ready use for productive purposes. It is not proposed to here enter into any extended details on this subject. But, in order to indicate somewhat of the nature of these details, it may be mentioned that since 1860 the national debts of the world, incurred mainly for war purposes, have been increased by a sum larger than ten thousand millions of dollars ; that at least an equal amount, taken from current annual product, was expended during the same period for similar unproductive purposes ; and that a third equal sum will probably fail to represent what has been invested during the same time in enterprises, industrial or productive in their inception or purport, but which are now unproductive in the sense of returning any income to those who contributed. A part of this latter aggregate undoubtedly represents change in the distribution, and not absolute waste of capital or wealth ; but the items of loss omitted in any such estimate, and of which it is impossible to take more than general cognizance, would, if obtainable, undoubtedly carry the aggregate of the destruction or impairment of the world's capital since 1860 far above the sum or the figures above mentioned. Had all these losses fallen exclusively upon the United States, they would have been equivalent to the destruction or transfer all its existing accumulated wealth,—the result of all the capital earned and saved, or brought into the country, since it became the abode of civilized man. In the case of Prussia, a country of small fortunes and small incomes, the losses sustained by 432 joint-stock companies since 1872, as measured by the fall in the market prices of their stocks, has been recently shown by Dr. Engle, of Berlin, to be equal to nearly six years of the public revenue, and to represent a very large part of the comparatively small savings of that nation. In short, the world, for the last fifteen or sixteen years, has been especially wasting its substance,—playing on a great scale the part of the Prodigal Son,—and such a course, if persisted in, will, in virtue of a common law, ultimately bring nations as well as individuals alike to the husks. Such, however, through invention and discovery, has been the comparatively recent increase in the world's power of production, that resort to the husks need be but temporary ; and, were it not for continued war expenditures and bad economic laws, the restoration of the world's impaired wealth, through economy or increased industry, would soon be effected.

We find the following statement in a note :

The fact is now very generally recognized, that the capital which, under the stimulus of war and a vicious fiscal policy, has been invested in the United States since 1860 in iron-works and woollen-mills, and which represented the savings for years of the labor of a very large number of persons, has been in great part as much wasted as though destroyed by fire or sunk in the ocean. A most remarkable item of evidence in support of this statement is to be found in a communication on the state of the Woollen Goods Trade in the United States, made to the New York World under date of February 17, 1877, by one of the most prominent manufacturing firms in New England (Mudge, Sawyer, & Co.) in which they state " that there would be no improvement in the [woollen goods] trade until the mills ceased over-production ; that if one half of the machinery

were stopped or burned the general trade would be good ; that there was too much woollen machinery in the country for our market ; and that, as we could not export any description of woollen goods, we should have to wait for the growth of the population or the wearing out of the machinery." Or, in other words, in the opinion of those best qualified to judge, one half of the capital invested in the woollen manufacturing industry of the country (worsted goods excluded), amounting according to the last census (1870) to \$49,400,000, is so useless and harmful that the general interest of the trade would be improved if the buildings, machinery, etc., which represent and embody such capital, were subjected to conflagration or compulsory inaction.

We proceed with another extract on the subject of the economy of labor :

Omitting anything in the way of preliminary discussion on this point, and coming directly to the consideration of hard, positive facts, attention is first asked to a remarkable analysis of the conditions of producing cotton cloth in 1838 and 1876, as recently presented to the New England Cotton Manufacturer's Association by Mr. William A. Burke of Lowell, Mass, and founded upon the records of the operations of one of the Boot Mills in that place in the respective years mentioned. The important fact brought out in this analysis is, that 90 operatives, (men and women) engaged in the manufacture of cotton in one of the best mills in Massachusetts, produced regularly in 1876, with 16½ hours' less labor per week, more cloth measured in pounds, and of nearly the same quality, (No. 13.64 yarn being spun in 1838 and No. 13.93 in 1876), than 231 operatives working in the same mill did in 1838. Other results of interest shown by this analysis are, that the cotton-mill (male) operative of Massachusetts in 1876, working 60 hours per week, receives 40 per cent. more in wages than did the operative of 1838, similarly working 76½ hours per week ;—women 47 per cent. more ; that the average profits on the capital employed in the same manufacture have not increased relatively during the same period in anything like the same proportion, and probably are not as great absolutely to-day as they were forty years ago ; that the standard of health among cotton operatives is higher now than formerly, and the standard of intelligence lower ; twenty-five per cent. making their marks on the pay-roll of 1876, as compared with eleven per cent. who thus signed in 1838.

Taking up this investigation at the point where Mr. Burke leaves it, Mr. Edward Atkinson of Boston has next been led to the conclusion, that the value of the food and fuel products purchased and consumed by the cotton-operatives of Massachusetts in 1836 was, on an average, about \$200 per annum for each person ; or that the 231 operatives in Boot Mill No. 1 of Lowell, and a like number in every other similar cotton-factory in New England, in 1838 consumed, in the aggregate, food and fuel products—mainly of American production—to the extent of about \$46,000 per annum, and also that it then required the labor of 460 farmers, miners, and other laborers, working slowly and imperfectly, and earning each, over and above the subsistence of himself and family, a surplus of \$100 per annum (an estimate probably in excess of the average surplus earnings of this class of American producers for the time), to supply this food and fuel requirement to the 231 cotton-operatives. The ratio of economic or industrial equilibrium between cotton-cloth producers and the producers of other commodities essential to a comfortable livelihood in 1838, in the United States, was, therefore, approximately as 231 to 460.

Since then, as already shown, 90 cloth producers have come to be able to make as much cloth in 1876 as 231 similarly employed persons could do in 1838 ; while the annual *per capita* cloth consumption of the country has not materially increased during the same period, and, measured in pounds, has sensibly diminished. But, at the same time, increased power of production and

supply has also come to the producers of useful things other than cloth ; and to such an extent, especially to the producers of food in the United States, through improved agricultural machinery and larger and cheaper facilities for transportation, that the labor of one farmer on the fertile lands of the West will probably go as far in 1876 toward feeding the cotton-mill operatives of Massachusetts as the labor of two farmers could have done in 1838. The change which has taken place in the economic relations of the cloth-makers and food-producers of the United States since 1838, in consequence of these increased facilities for production, is probably, therefore, somewhat as follows :—

Ninety cotton-operatives, with an average annual food-purchasing power each of \$300 (increased from \$200, since 1838, by increase of wages), will now purchase and consume farm-products, or their equivalents, to the aggregate value of \$27,000 per annum ; requiring the present labor of 135 farmers, producing \$200 per annum through improved machinery and processes (as compared with 460 in 1838) over and above the subsistence of themselves and families. The ratio of industrial or economic equilibrium between cotton-cloth producers and the producers of other commodities essential to a comfortable livelihood in the United States in 1876 was therefore approximately as 90 to 135 ; or, in other words, the labor of 225 persons is as effective in 1876 in meeting the demands of the country for cloth and food products as was the labor of 691 persons in effecting similar results in 1838 ; and, as a consequence of this change in the power of production, the labor of 466 other persons have, within this time and within the special industrial sphere under investigation, been rendered unnecessary ; and they have been compelled to enter into relations with new wants and new capabilities of purchase in order to find employment. Results similar, and possibly even more striking, are afforded by the analysis of other leading American industries. Thus, in the manufacture of boots and shoes, three men working with machinery can do at present what, prior to 1860, required the labor of six men to effect ; while the individual or *per capita* consumption of boots and shoes in the United States has probably been more uniform during the same period than is the case with almost any other commodity. At a convention of the stove-trade last year (1876) in St. Louis, it was also officially reported, that under what may be called a healthy trade there was at least 33 per cent. greater present capacity for making stoves in the United States than the country requires ; and that three men now, with the aid of machinery, can produce as many stoves as six men unaided could have done in 1860. In the manufacture of straw-goods, 300 hands in one of the largest factories in New England do more with the sewing-machine than what a comparatively few years ago required a thousand to effect when sewing of the kind was done by hand ; and the steam-press turns off four hats to the minute, in place of the old rate of one hat to four minutes. Similar results, derived from the consideration of our industries as a whole, are also given in the last national census, which shows that while the increase in population in the United States from 1860 to 1870 was less than 23 per cent., the gain in the product of our so-called manufacturing industries during the same period, measured in kind, was 52 per cent., or near 30 per cent. in excess of the gain in population.

We shall quote another extract showing the increase in 1876 over 1860, in persons employed in certain leading industries, and in the amount produced.

A comparison of the conditions and results of manufacturing in the city of Cincinnati, published in the New York Commercial Bulletin, during the past year (1876), included the following curious table, in illustration of the relative increase in the number of persons employed, and the quantities produced in the various leading industries of that city during the period embraced between the years 1840 and 1876 :—