

part of the bounties of this world are consumed by the wealthy classes. The reverse is the truth.

"The best index of progress in the world is the increase in output per individual, it being a measure of the increase of prosperity of the individual. The 'good old times' slogan indicates the user to be ignorant of conditions, as increase in output per man has provided such a variety of good things of life that the workmen of to-day live as the kings of yesterday. Luxuries of history are considered necessities now."

Reverting to the previously discussed condition in the farming industry, apart from those who provide the food supplies in the United States, sixty-five per cent. of the population may now engage in other industries as against the twenty per cent. years ago. This indicates increase in output per individual, which is the object of scientific management.

The second belief the workman entertains as a reason for going slow, Dr. Taylor emphasizes as being again in no way attributable to the man himself. It is illustrated by the case of a workman being paid \$2.50 per day and making 10 pieces a day, entering then upon the piece-work system. The foreman pays him twenty-five cents per piece for the ten pieces which he turns out. Gradually the laborer increases his output, probably reaching twenty pieces per day, thereby doubling the contents of his pay envelope. Both laborer and foreman are well satisfied with the result.

But at the annual meeting of the board of directors, the pay-roll may properly be called for and closely examined. The foreman must explain his action in paying \$5.00 per day instead of \$2.50 per day. A storm of protest ensues, savoring of competitors' prices and pay-rolls, and resulting in measures to prevent the supposed ruin of the firm's labor market. The foreman is obliged to reduce the workman's salary to perhaps \$2.75 per day.

"There are a great many bitter things said against the workingman, concerning his selfishness, his tyranny, etc.; some of them are true, but there is just one thing that the working man of our country is not—he is not a fool. It is only necessary to give him one lesson, or at the most two, and he becomes a 'soldier' for life. He studies just how much the management will permit him to earn, and that is the amount of his output."

The fallacy of going slow is of such vital importance that the evil of it cannot be pointed out too strongly. There is not the slightest doubt that this is the greatest evil of the age in England. She is suffering from under-production, not over-production, and no voice is raised in protest. England preceded this continent by a generation in the adoption of the policy of "soldiering," and the result has been detrimental in the reputation of the working man hailing from her shores, although he is, especially the steel worker, the most skilled workman in the world. The speaker cited cases where the laborer from across the seas absolutely refused to increase his output, curtailing it at every turn, thus necessitating drastic measures against his employment. The same thing is going on in England to-day and is the reason for unemployment and poverty. The policy of curtailing output strikes at the very root of the trouble.

"The first step of scientific management was to endeavor to prevent this diminishing output, and each succeeding step has been an earnest endeavor to remedy other existing evils in previous forms of management. Scientific management is no new or untried theory, and is no food for profound suspicion. It is a gradual evolution tested and proven step by step. It is the fruit of many men's ideas. Some years ago over fifty thousand men were working under its principles while the number has probably doubled since that computation was made.

"As in the case of all labor-saving devices, the ultimate result is that the general public gets the entire profit. The

end of it all is that the whole world is going to profit from it. At first the companies that have introduced it are reaping large profits, many of them more than doubling their output. They are the pioneers, and as such are entitled to the gains."

A workman under scientific management immediately increases his wages from 33 to 100 per cent. This increase is not the greatest good to the working people, however, but the change of mental attitude toward work on the one hand and employers on the other is a more important part of their lives. They have changed from war to peace. There is now co-operation for the same object. The old suspicious watchfulness is supplanted by confidence, peace, conscientious work, and, on the whole, a feeling of satisfaction and pleasure that the employers are profiting as well as themselves. Scientific management has been introduced in almost every department of industry, and in the thirty years in which it has been thriving there has not been a strike in a place where it has been in force, although scores of strikes have occurred in other and similar works.

"It is not any efficiency device for increasing output; it is not a bonus system; it is not a cost system; it is not motion study, or time study; it is not unloading a lot of blanks at the goods entrance and saying, 'There is your system, go ahead and use it.' Most people think of it as one of these things. Scientific management cannot and does not exist until there has been a complete mental revolution on the part of the workmen and the employer, and until this great and complete mental revolution has taken place, scientific management does not exist."

Part of the cost of manufacturing is the cost of material. Another part is the cost of production of the article, and a third is the overhead expense. The difference between the sum of these three and the selling price is the surplus. All labor troubles are due to the division of this surplus. The workmen desire as much as they can get in the form of wages, etc., and the owners as much as they can get in the form of dividends. Under scientific management they have ceased combat over the division of this surplus. The result has been a surplus so large that both contenders get more than they ever received before. The workmen get at least 33 per cent. more wages, and the company gets larger profits. This is one result of the mental revolution.

Dr. Taylor pointed out forcibly the delusion almost universal among workmen that the division of the surplus in the past has been entirely wrong; that the working men are not getting their proper share of the general profits of capital and labor. Although in some cases it is true, their feelings have been rashly augmented by the labor leaders, newspapers and the public. In an article on "Division of Capital," in the Atlantic Monthly of June last, Norman Faig showed their conviction to be wrong. All that the working man can ask for is that the profits that accrue to capitalists should come to the people of the United States. They themselves could not demand all this profit. If it should be divided in the manner suggested there would be thirteen cents per day per man as dividend. It shows conclusively that the hope of the workman does not lie in the division of capital. It lies rather in an increase of output.

The speaker outlined the older type of management where, for example, 500 to 1,000 men in perhaps twenty different trades, have acquired their knowledge, not by books, but by observation and by traditional word of mouth. This is just the condition that obtained in the middle ages, and still largely obtains. Yet, in spite of lack of progress his trade is the workman's greatest asset. To achieve the best results one realizes that he must get the initiative of his workmen, but one's realization of "soldiering" forces him to the conclusion that to render this initiative the workman must receive a larger remuneration than his competitors.