

munity; they are no more grasping and selfish, nor are they less so than other classes of people. It may be a debatable question as to whether they are or are not more grasping than other people. There is one thing, however, we can be perfectly sure of and that is, whatever else they are or they are not, they are not fools. And let me tell you that a workman, after having received one cut of that sort in his wages as a reward for turning out a larger day's work, is a very extraordinary man if he doesn't adopt soldiering and deliberately going slow instead of fast as a permanent policy so as to keep his employer from speeding him up and then cutting his piecework price. I soldiered when I was a workman, and I believe that even many of the most sensible workmen, understanding the conditions as I have outlined them, will inevitably adopt the policy of going slow. Under those conditions it would take an exceedingly broadminded man to do anything else than adopt soldiering as his permanent policy. I will not say that this soldiering is the best policy for the workman to adopt, even for his own best interest in the long run, but I do say that I do not blame him for doing it. In spite of the miserable policy of cutting piecework prices when men increase their output, I believe that those workmen who do not adopt the policy of restricting output and going slow, i. e., soldiering, will in the end be far better off than those who soldier. Certainly, this whole situation is no fault of theirs; they didn't introduce the system which makes soldiering seem to be necessary, and if blame rests anywhere it certainly does not rest with the working people, but somewhere else.

Now, the first thing that I want to make clear, then, before starting in to describe what scientific management, or, as you, Mr. Chairman, have called it, the "Taylor system," is (if you will allow me, however, I will substitute the term scientific management for the "Taylor system"), with the understanding that the two are equivalent in the future—the fact that I wish to make clear is, first, that this restriction of output, that this going slow on the part of the workman is an almost universal fact in this country, and that from the workmen's point of view there is ample justification for

the policy which, in the main, they have adopted. That is what I wish to make clear as a foundation for what I shall say later. Now, let me first, in the broadest kind of way outline or describe what I look upon as the essence of scientific management.

There are many elements of scientific management, many details connected with scientific management, that it is utterly impossible to go into details in a hearing of this kind; but I want to try and make clear before going much further into the history of the development of scientific management—I want to make clear what may be called the essence of it so that when I use the words "scientific management," you men who are listening may have a clear, definite idea of what is in my own mind, because I know that what is in your mind when the words "scientific management" are used has a totally different meaning from what is in my mind, and I want you to know what is in my mind when I use these words. I want to clear the deck, sweep away a good deal of rubbish first by pointing out what scientific management is not. I think that will clear the deck a good deal.

Scientific management is not any efficiency device, not a device of any kind for securing efficiency; nor is it any bunch or group of efficiency devices. It is not a new system of figuring costs; it is not a new scheme of paying men; it is not a piecework system; it is not a bonus system; it is not a premium system; it is no scheme for paying men; it is not holding a stop watch on a man and writing things down about him; it is not time study; it is not motion study nor an analysis of the movements of men; it is not the printing and ruling and unloading of a ton or two of blanks on a set of men and saying, "Here's your system; go use it." It is not divided foremanship or functional foremanship; it is not any of the devices which the average man calls to mind when scientific management is spoken of. The average man thinks of one or more of these things when he hears the words "scientific management" mentioned, but scientific management is not any of these devices. I am not sneering at cost-keeping systems, at time study, at functional foremanship, nor at any new and improved scheme

of paying men, nor at any efficiency devices, if they are really devices that make for efficiency. I believe in them; but what I am emphasizing is that these devices in whole or in part are not scientific management; they are useful adjuncts to scientific management, so are they also useful adjuncts of other systems of management.

Now, in its essence, scientific management involves a complete mental revolution on the part of the workingman engaged in any particular establishment or industry—a complete mental revolution on the part of these men as to their duties toward their work, toward their fellow men, and toward their employers. And it involves the equally complete mental revolution on the part of those on the management's side—the foreman, the superintendent, the owner of the business, the board of directors—a complete mental revolution on their part as to their duties toward their fellow workers in the management, toward their workmen, and toward all of their daily problems. And without this complete mental revolution on both sides scientific management does not exist.

That is the essence of scientific management, this great mental revolution. Now, later on, I want to show you more clearly what I mean by this great mental revolution. I know that perhaps it sounds to you like nothing but bluff—like buncombe—but I am going to try and make clear to you just what this great mental revolution involves, for it does involve an immense change in the minds and attitude of both sides, and the greater part of what I shall say today has relation to the bringing about of this great mental revolution. So that whether the details may be interesting or uninteresting, what I hope you will see is that this great change in attitude and viewpoint must produce results which are magnificent for both sides, just as fine for one as for the other. Now, perhaps I can make clear to you at once one of the very great changes in outlook which come to the workmen, on the one hand, and to those in the management on the other hand.

I think it is safe to say that in the past a great part of the thought and interest both of the men, on the side of the management, and of those on the side of the workmen in

manufacturing establishments has been centered upon what may be called the proper division of the surplus resulting from their joint efforts, between the management on the one hand, and the workmen on the other hand. The management have been looking for as large a profit as possible for themselves, and the workmen have been looking for as large wages as possible for themselves, and that is what I mean by the division of the surplus. Now, this question of the division of the surplus is a very plain and simple one (for I am announcing no great fact in political economy or anything of that sort). Each article produced in the establishment has its definite selling price. Into the manufacture of this article have gone certain expenses, namely, the cost of materials, the expenses connected with selling it, and certain indirect expenses, such as the rent of the building, taxes, insurance, light and power, maintenance of machinery, interest on the plant, etc. Now, if we deduct these several expenses from the selling price, what is left over may be called the surplus. And out of this surplus comes the profit to the manufacturer on the one hand, and the wages of the workmen on the other hand. And it is largely upon the division of this surplus that the attention of the workman and of the management has been centered in the past. Each side has had its eye upon this surplus, the working man wanting as large a share in the form of wages as he could get, and the management wanting as large a share in the form of profits as it could get; I think I am safe in saying that in the past it has been in the division of this surplus that the great labor troubles have come between employers and employees.

Frequently, when the management have found the selling price going down they have turned toward a cut in the wages—toward reducing the workman's share of the surplus—as their way of getting out whole, of preserving their profits intact. While the workman (and you can hardly blame him) rarely feels willing to relinquish a dollar of his wages, even in dull times, he wants to keep all that he has had in the past, and when busy times come again very naturally he wants to get more. Thus it is over this division of the surplus that