

under load, and immediately on the return walk slow down to a mile an hour, improving every opportunity for delay short of actually sitting down. In order to be sure not to do more than his lazy neighbor he would actually tire himself in his effort to go slow.

These men were working under a foreman of good reputation and one highly thought of by his employer who, when his attention was called to this state of things, answered: "Well, I can keep them from sitting down, but the devil can't make them get a move on while they are at work."

The natural laziness of men is serious, but by far the greatest evil from which both workmen and employers are suffering, is the systematic soldiering which is almost universal under all of the ordinary schemes of management and which results from a careful study on the part of the workmen of what they think will promote their best interests.

The writer was very much interested recently to hear one small but experienced golf caddy boy of 12 explaining to a green caddy who had shown special energy and interest the necessity of going slow and lagging behind his man when he came up to the ball, showing him that since they were paid by the hour, the faster they went the less money they got, and finally telling him that if he went too fast the other boys would give him a licking.

This represents a type of systematic soldiering which is not, however, very serious, since it is done with the knowledge of the employer, who can quite easily break it up if he wishes.

The greater part of the systematic soldiering, however, is done by the men with the deliberate object of keeping their employers ignorant of how fast work can be done.

So universal is soldiering for this purpose that hardly a competent workman can be found in a large establishment, whether he works by the day or on piecework, contract work or under any of the ordinary systems of compensating labor, who does not devote a considerable part of his time to studying just how slowly he can work and still convince his employer that he is going at a good pace.

The causes for this are, briefly, that practi-

cally all employers determine upon a maximum sum which they feel it is right for each of their classes of employees to earn per day, whether their men work by the day or by the piece.

Each workman soon finds out about what this figure is for his particular case, and he also realizes that when his employer is convinced that a man is capable of doing more than he has done, he will find sooner or later some way of compelling him to do it with little or no increase of pay.

Employers derive their knowledge of how much of a given class of work can be done in a day from either their own experience, which has frequently grown hazy with age, from casual and unsystematic observation of their men, or at best from records which are kept, showing the quickest time in which each job has been done. In many cases the employer will feel almost certain that a given job can be done faster than it has been, but he rarely cares to take the drastic measures necessary to force men to do it in the quickest time, unless he has an actual record, proving conclusively how fast the work can be done.

It evidently becomes for each man's interest, then, to see that no job is done faster than it has been in the past. The younger and less experienced men are taught this by their elders, and all possible persuasion and social pressure is brought to bear upon the greedy and selfish men to keep them from making new records which result in temporarily increasing their wages, while all those who come after them are made to work harder for the same old pay.

Under the best daywork of the ordinary type, when accurate records are kept of the amount of work done by each man and of his efficiency, and when each man's wages are raised as he improves, and those who fail to rise to a certain standard are discharged and a fresh supply of carefully selected men are given work in their places, both the natural loafing and systematic soldiering can be largely broken up. This can be done, however, only when the men are thoroughly convinced that there is no intention of establishing piecework even in the remote future, and it is next to impossible to make men believe this when the work is of such a nature that they believe piecework to be prac-

ticable. In most cases their fear of making a record which will be used as a basis for piecework will cause them to soldier as much as they dare.

It is, however, under piecework that the art of systematic soldiering is thoroughly developed. After a workman has had the price per piece of the work he is doing lowered two or three times as a result of his having worked harder and increased his output he is likely to entirely lose sight of his employer's side of the case and to become imbued with a grim determination to have no more cuts if soldiering can prevent it. Unfortunately for the character of the workman, soldiering involves a deliberate attempt to mislead and deceive his employer, and thus upright and straightforward workmen are compelled to become more or less hypocritical. The employer is soon looked upon as an antagonist, if not as an enemy, and the mutual confidence which should exist between a leader and his men—the enthusiasm, the feeling that they are all working for the same end and will share in the results—is entirely lacking.

The feeling of antagonism under the ordinary piecework system becomes in many cases so marked on the part of the men that any proposition made by their employers, however reasonable, is looked upon with suspicion. Soldiering becomes such a fixed habit that the men will frequently take pains to restrict the product of the machines which they are running when even a large increase in output would involve no more work on their part.

The Chairman. Now, with that definition of soldiering before us I want to ask whether I understood your direct testimony correctly to be that after you became foreman you ultimately succeeded in breaking up that soldiering, destroying the loafing, and removing the slow pace which you had found existing both in this automatic and systematic form, and thereby increased productivity?

Mr. Taylor. Yes, sir; to a large extent, but not entirely. I did not succeed in entirely breaking up the soldiering; I did not expect to succeed in that. As I told you before, we had the work in that shop laid out so that I think we were doing about one-third of a full

day's work, and I succeeded in doubling the output of those men on the whole, I should say. It is many years ago and I make this statement in round numbers.

The Chairman. But you had succeeded in increasing the pace to such an extent that you did increase the productivity?

Mr. Taylor. Doubled it.

The Chairman. Never having worked yourself at that increased pace, would you think it possible for you to determine the soreness of muscle or the tiredness of brain which the increased pace brought to the workmen?

Mr. Taylor. I had many times done work at full speed, just as practically all of the workmen in the shop had worked at full speed. They all did work at full speed. We would not have known what full speed was unless we had worked at full speed, but we invariably did that when there was no one around to watch us and when there would be no record kept of it which could be used to break a rate to our own disadvantage. In this way we all knew what the right pace was, and then we settled upon what we thought the company ought to have in the way of work.

The Chairman. Is it not a fact when you speeded up for a comparatively short time and did the work rapidly that you thereby determined the length of time in which the work could be done rather than the length of time in which it should be done?

Mr. Taylor. Mr. Chairman, in my statement of what I believed was a proper day's work for that shop I stated what ought to be done and what could be done—what ought to be done as a fair day's work—that is, what could be done and kept up through a long term of years without any injury to the man, but what, on the contrary, would develop him—make him stronger, happier, and more contented in doing it. It was perfectly proper pace and a pace such as you and I would be willing to take.

The Chairman. But that conclusion was arrived at by observation on your part, was it not, rather than by actual experience?

Mr. Taylor. By working myself and noting that I was not hurried; that I was perfectly contented; that I did not feel driven. It was personal experience and the experience of my