

more or less engaged with details that involved ticket handling by direct operatives. It was a great annoyance at the time, and in after years it was amusing to recall that the operators, inspectors and move men often co-operated in a wholesale disregard for batch numbers on the tickets issued by the control board. They would select any corresponding lot and go to work on it. As a result the bulletin board clerk oftentimes spent two or three hours after the factory closed down at night, moving lots around to positions which the bulletin board showed they should occupy. The real trouble was that the units of work were too small, and the workers disliked the annoyance and delay between lots. Now the planning department is reduced to ten people, payroll computation including bonus for the whole plant is done by one clerk, and the cost department on the old basis is entirely eliminated by standards cost accounting.

Proper recognition of the worker's abilities is essential. Since this can be done only to a definite limit by promotion in position, other methods have to be considered. An operator's reliability, interest in work, ingenuity in producing helpful suggestions, a willingness to be trained and ability to perform a considerable range of related operations may all be recognized by differences from the base rate of pay established for a normal measure of these attributes. For an operator to be able to perform half a dozen operations, each one requiring some training, yields a flexibility of facilities and an advantage to the management which, under the principle of the division of advantage, should be shared by both parties. There need be no difficulty in the existence of a variety of hourly wage rates on any job if the basis of its existence is understood and all may partake who qualify.

This experience stretching over a period of more than ten years demonstrates that so far as the workers are concerned, a plan of development will always proceed satisfactorily, provided it is designed to give as well as to take; is sufficiently deliberate in its handling to permit understanding; is accurate in its detail, and not too cumbersome in its technique; is presented by those who command respect and is supported by a management which includes in its conception of scientific management a readiness to make changes whenever new and better ways are found and a willingness constantly to try to find those ways. Under these

circumstances the experience at this plant and at another plant in western New York, together with intimate observations of other situations under development, lead the writer to the firm conviction that workers are not fundamentally opposed to the principles and procedures of scientific management, but are, on the contrary, naturally responsive and readily appreciative.

## II. Experience in a Union Shop<sup>1</sup>

The early developments of scientific management years ago came at a time when there was generally a marked distrust of management by labor. The mass solidarity of labor and instances of concerted deception of management practised by workers, so graphically described by Taylor, were an inevitable consequence of management's attitude toward labor—an attitude which assumed labor to be a commodity, governed it arbitrarily and by rule of thumb, believed that labor should produce what it could be forced to produce, but should be allowed to earn no more than a prevailing standard of wages, and cut piece rates ruthlessly if higher earnings resulted from stimulation of exertion. The natural reaction of workers was one of resentment and resistance, which frequently in union shops took the form of strikes if protests bore no fruit, and in non-union shops took the more subtle form of sabotage.

Appearing in the midst of such conditions—as a protest to these attitudes of both management and workers and as a remedy for them—scientific management experienced the opposition of both parties, as was bound to be the fact with respect to anything new which challenged the assumptions of both. The opposition of management to the technique has gradually been overcome, as is evidenced by the fact that scientific management has become the effective basis of all good management throughout American industry; although survival of management's opposition is still apparent in the fact that many a plant which has been revolutionized by scientific management refuses to acknowledge the source of the revolutionary influence.

If such has been the attitude of management, it should not be surprising that the attitude of union

<sup>1</sup>By Dr. N. I. Stone, Industrial Councilor, New York; formerly General Manager of the Hickey-Freeman Company, Rochester, N. Y.

leaders toward scientific management was at the beginning and for sometime thereafter, positively hostile. Without special investigation of its mechanisms and their consequences for workers, union leaders denounced it as a doctrine and a system of practice. The American Federation of Labor under the leadership of the late Samuel Gompers assailed the introduction of the system in the government navy yards and succeeded in having the Congress specifically prohibit the use of the stop watch and all that went with it in the government plants. It is only in the past few years, toward the end of Mr. Gompers' life and especially since the accession of Mr. Green to the presidency of the American Federation of Labor and the stressing of the "human engineering" point of view by leaders of the Taylor Society, that a general appreciation of the broader aspects and the social benefits inherent in scientific management has gained ground and produced a profound change in the attitude of the leading spokesmen of organized labor in the United States.

It was against this background of general suspicion of and hostility to scientific management that the writer made his first attempt to introduce it in the clothing factory of the Hickey-Freeman Company in Rochester, New York, employing at the time about 1200 workers in a modern plant. Not only was it necessary to take into account the hostile assumptions of the workers, but the management had also to be convinced of the desirability of the change.

The officers of the company were frankly skeptical, willing to be shown but ready to discard the new system unless it proved to be a decided improvement over the old and well tried system which, no matter what its theoretical shortcomings might be, had enabled the company to grow and prosper over a period of some twenty years.

The foremen, with one exception, were openly in arms against the new system; partly from a natural conservatism of men who had grown up under the old regime and knew only one way of running a shop, and partly from a feeling that their authority over the workers and security of position with the firm were likely to suffer as the new management succeeded in introducing a system in which they would be playing the part of novices.

It was therefore necessary to proceed with extreme caution and to take account of the psy-

chological situation. The greater part of the first year of the writer's incumbency as labor manager of the company was spent in consolidating the relations between the company and the workers as well as their union. The writer's appointment as labor manager coincided with the official recognition of the Amalgamated Clothing Workers of America by the employers. This recognition came about as a result of negotiations without resort to strike, and the employers felt that they ought to derive some benefit from the resultant good-will. On the part of the union and its members there was a feeling that after the many years of comparatively low wages prevailing in the clothing industry of Rochester they were entitled to tangible benefits from the new order of things. The recognition of the union was signalized by a general increase in wages and a reduction of hours to forty-four per week. This took place on April 1, 1919. The year that followed marked the culmination of a period of unusual business activity and extraordinary demand for labor which resulted in great increases of wages even in non-union plants as the only means of retaining the services of their help. The unionized clothing industry of Rochester felt the effects of the general situation and two general increases of wages followed the one granted April first. In addition to the general increases of wages there were numerous increases of wage rates for individual workers paid by the week, which they were able to exact by claiming that they were offered higher wages elsewhere because of the prevailing shortage of labor. These cumulative increases resulted in advancing the wages of Rochester clothing workers from 50 to 100 per cent in less than one year. But they coincided with an equal if not even greater increase in the cost of living so that they failed to satisfy the workers who were constantly demanding more. The enormous increase in labor costs, coupled with similar increases in the cost of cloth and other raw materials, resulted in a corresponding rise in the price of clothing which forced consumers to economize, leading finally to the famous "buyers' strike." The first rumblings of the approaching storm were beginning to be heard.

It was at such a moment that the workers received their first introduction to scientific management in the Hickey-Freeman plant. The writer knew that the first steps in the process would be