

of the foreign element, so-called. The attendance at these boxing tournaments crowds the hall—if the hall were bigger the demand would be sufficient to fill up a hall two or three times as large. We have to limit the attendance. There were during the winter forty bowling teams representing different factories, twenty-four of men and sixteen of girls.

There was a basketball league with twelve teams of men and six of girls. The Association also conducted a musical festival during the winter.

For the present spring and summer there is an organization of baseball leagues with forty teams, twenty-four of men and sixteen of girls. This would be much larger, except that we are limited by the number of diamonds available. We haven't enough diamonds to put in a larger number of teams.

There is a pushball league for both men and women; a volleyball league for men and women. There is a tennis league for men and women. Sixty teams are in the quoits league. This Industrial Association will conduct a series of outdoor dances and twelve outdoor boxing tournaments during the summer. It has also organized a motor cycle league and a bicycle league.

WILLIAM B. DICKSON, Chairman of the Board and Vice-President of the Midvale Steel and Ordnance Co., writes as follows in *The Annals*, No. 174, page 13.

Most men have a test which they unconsciously apply to their fellows. With some, it is their form of religious belief; their party affiliations; their intellectual attainments; or their social or financial status. As I grow older, I find myself applying to all men with whom I come in contact, this test: Is he democratic or aristocratic in his ideals? And to the extent that he puts into practice in his daily life either of these ideals, I am attracted to or repelled by him. I have been amazed, and at times disheartened, at the number of men and women born and reared in the United States, who have no true conception of the ideals on which our government is founded; and not all of these, by any means, have been found among the rich. Like Louis XV, they appear quite content to act on the idea—"after me, the deluge."

An aristocrat is one who tries to get out of the social order more than he contributes to it, *i. e.*, he wants something for nothing; his ideal social system is one where the permanency of his unearned income is assured at the expense of his fellow-citizens; and he is serenely regardless of the fact that in order to accomplish this economic miracle somebody must get nothing for something. There are a great many varieties of aristocrats, ranging from the common hobo, who comes to your back door to receive his unearned bread, up to the politicians, most lawyers, some Napoleons of finance, kings and kaisers; and they all have in common one very interesting trait, *i. e.*, a profound contempt for those from whom they draw their unearned sustenance. The cootie is your true aristocrat. If it were possible to penetrate into the mental processes of this parasite, we would doubtless find that it has a profound contempt for its host. I would, therefore, suggest as the proper heraldic device for the man who draws more out of the social organism than he contributes to it, *i. e.*, one of the so-called aristocrats or privileged class—"a cootie couchant on a field of gold."

The trouble with this Association is that it cannot accommodate all the factories that want to join. There are seventeen factories which are held on the waiting list because we cannot handle with sufficient grounds and diamonds all the demands.

The league publishes a paper, "The Industrian," which is subscribed to by the employees who wish to take it. An interesting part of all this work is that both the employers and the employees pay. The dances and boxing tournaments—the dances especially—constitute a source of revenue and those who attend pay. Some 30,000 people attended the dances and paid entertainments during the past winter. Employees thus pay towards the work of this league.

Plans are being formed in connection with this Association to establish a recreational park on the lake shore which will be for the benefit of the employees.

I have been able to tell you only briefly of this activity. Mr. Bodine, who is the director of it, will be at the Chamber Saturday noon between twelve and two o'clock, and will be glad to tell any of you who are interested in the matter more about this cooperative effort in Rochester.

But the term of reproach which always interests and pleases me most is, "radical." I am glad to be called a "radical" providing I have something to say as to the definition of the term. I accept that which Gladstone gave when he was once asked to explain the difference between the British parties. His definition was as follows:

Conservatism—Distrust of the people, tempered by fear.
Liberalism—Trust of the people, tempered by prudence.
A Radical—A Liberal in earnest.

The dictionary defines "radical" as, "of or pertaining to the root; fundamental; thorough." If, when I am gone, those who knew me best could honestly write as my sole epitaph: "A Radical, worthy of the name,"—I could not wish for a more honorable remembrance.

BALANCE OF WORK¹

by
WILLIAM D. HEMMERLY²

AN increasingly important function of scientific management, but one for which very little concerning its development and application has so far been presented, is the balance of work.

In an industry managed according to scientific management principles, it is necessary to create a mechanism which will make it possible for the management to ascertain accurately, constantly and instantly the condition of the plant so far as work ahead is concerned.

The Sales Office should be advised as to available manufacturing capacity so that delivery promises may be more intelligently made and selling policies modified if necessary.

The Employment Department should be kept informed as to various classes of help available at all times so that proper steps may be taken to properly adjust conditions in this respect.

The Mechanical Department should be notified as to the status of special tools, jigs or fixtures so as to eliminate delays due to insufficient manufacturing equipment of the sort it is responsible for supplying.

Even with the pronounced advantage of properly planning work ahead of machines and operators through the medium of the route sheets, tickets, planning boards, pneumatic tubes and an excellent order of work or scheduling scheme, it has been demonstrated that the balance of work supplies a basis for better planning than was possible before its introduction.

The advantage of the balance of work function is already recognized by some of the leading managers and management engineers of the country, and is conceded by them to fill a long-felt want of the Planning Department, and where successfully used, it is so used because it stands on its own merits; it is probably due to the fact that its importance is not recognized or that its existence is not realized that it is not more commonly used in existing planning departments today.

It is obvious that the balance of work function is more easily started in planning departments already successfully operating, and it is not considered wise to

attempt to start the balance of work methods in the pioneer stages of the Planning Department development, but to introduce them as soon as a certain degree of perfection of production control has been attained. This period varies in different plants, but ordinarily would be as soon as the route sheets, time cards and schedules are successfully operating.

The balance of work is based on the factory's manufacturing unit, which may be the pound in plants such as bleacheries operating on a tonnage basis, the yard in concerns such as cotton goods finishing plants running on a yard basis, but preferably should be the time unit, especially if the time factor is obtainable as in plants operating on a bonus basis.

In order successfully to operate the balance of work function, it is necessary to ascertain and maintain statistical information regarding the actual manufacturing capacity of all existing machines or work places, employees and special tools on a weekly basis. This information is usually obtainable from data already on hand in the Planning, Employment and Mechanical departments.

Several types of mechanism for maintaining the balance of work have already been successfully used, but the type of equipment to be adopted depends largely on circumstances or local conditions and opinions.

A sorting tray method illustrated in Fig. 1 has been considered desirable by some.

An index visible (Fig. 2) has been used by others. A hook type planning board (Fig. 3) has been chosen by others.

Any one of the above types is acceptable because it serves the purpose ideally if it is assured that it properly ties in with existing methods or mechanism and harmonizes with the policies and conditions of the factory.

Whatever the type of mechanism to be used, its general arrangement is the same as that of either of the others, and the pockets in the trays or the card holders on the index visible or the hooks on the boards are labelled so as to indicate by classes the available manufacturing capacity for each of four weeks, it being considered important to submit weekly balance of work reports to

¹A paper presented at Rochester, N. Y., meeting of the Taylor Society, May 7, 1920.

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