The principal managerial job in any concern is the coordination, the composition, the integration of the impulses, energies, and interests of the three principal groups of human beings-the investors, the customers, the workers-keeping effective powers at a maximum, wasteful resistances at a minimum. The special interest of each group is a serious disqualifying factor for the job of coordinating three such special interests. Among the working force taken as a whole there are characteristics which tend somewhat to diminish this qualification. But if, for example, equal votes per capita should be thrown among them as in the political system, the choice of management undoubtedly would tend more strongly in the direction of the special interest than would in any way be desirable. But there exists, spread throughout the group, varying proportions of managerial activity-in itself, as we have seen, an understanding, coordinating activity. When we can find the way with the aid of John Williams' psychologists to measure the degree of this activity in each and to apportion accordingly an influence in choosing of management, we shall have an electorate of maximum qualification and minimum disqualification. Then if there is added to them by some scheme of proprietorship a share of the investors' interest, and by education or by some as yet uninvented scheme of more organic nature, a share of the consumers' interest as well, a very great advance in social fitness for the hiring of management will have been accomplished. Until that time the best approximation possible can be made by selecting out as wisely as may be the special sub-group of the working force in whose work the managerial element is of predominant magnitude, and placing among them the opportunity and responsibility for the election of the final governing body.

## F. Who Can Choose the Choosers?

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In a word, I believe, then, that only management can hire management. It is not merely that abstract reasoning points that way: experience hints strongly that efforts to get out from under the artificial system of investors' control will be persistent and ingenious. An inside group frequently forms itself and controls the control, focusing stockholders' votes by one means or another. Only for financial purposes, not for good operating, is a concern considered effective if fully controlled by absentee investors and run by hired men. But because of our ingrained custom of measuring success by the money that is made, as we say, some such are commonly thought of as successful merely when flotations have been successfully based upon them, though as operating organizations they may reek to heaven. For success in productive effort we all hanker after the old style of firm whose members had their time and their money tied up in its fate. And investors and others of the financial men, when trouble is in sight, seek for him who can get into the game all over, who will both manage and control, who will be management hired by management.

And the future, as well as past experience, holds hints of its own. The more entirely investorial a control becomes, the more wholly absentee it is, the more awkward becomes its task of hiring management. Is it not now becoming too awkward to hold its own in the hard fight of the next years? And, too, as the world's open spaces close up—forcing upon us not only stiffer competition but a firmer credit structure and easier capital—will not managerial ability of high enough order to win be the scarce commodity rather than capital and so win the control it can claim not only as its scarcity price but as its appropriate social engineering function as well?

T IS my conviction that the humanizing of all the devices of industry, mechanical, financial and managerial, is going forward on a scale so large as to constitute the outstanding industrial advance of our times. A working-out of lofig-pent forces—I think permanently for the better—is going on under our eyes, and it is time we made ourselves aware of it. To the remaining adherents of "strictly business

principles" in business I have no doubt this new order looks radical enough. Many of those who are themselves responsible for the healthy advance now under way seem content with having progressed to the point where they now stand. In their view the progress has gone on as far as it can and will. I think it is going on. (A. Lincoln Filene, A Merchant's Horizon, pp. 208, 210.)

## Coordination of Sales and Production

How the Walworth Manufacturing Company Establishes
Precise Sales-Production Schedules

By JOSEPH H. BARBER

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N INDUSTRY and commerce, all things are become new." The present day industrial administrator is becoming newly acquainted with the term "correlation," but the need which leads him to correlation studies is not new. He has long realized that his promise of success is assured only as he harnesses the industrial mechanisms and human energies within his control in tandem with the economic forces beyond his control. And now, through an increasing understanding of "correlations," he is stimulated to hope that the enticing theory of business cycles may be brought down to earth to serve his ends and to yield its share of influence in increasing profits to appease the clamoring stockholders.

Briefly this term "correlation" implies, first of all, that all activities — political, industrial or personal, and national, local or individual—pursue their respective courses in recurring sequences of ups and downs; and second, that their respective up and down fluctuations can be reasonably well measured and compared the one with the other. Further than this, the term implies that each administrator may discover that the rise and fall of his business as an individual economic unit may have a definite relation to the rise and fall of some other closely allied economic unit, or even to the rise and fall of the nation's industrial activity as a whole.

This possibility has been continuously denied by many writers who have considered their practical experience as proof. Recently there has appeared a popular discussion of the subject which definitely states "that there isn't a single business in the world to which the theory can be applied. Elaboration of that one statement might fill a book. The point is this: The cycle theory, which is founded on the idea that when one thing happens in business something else may be expected to happen, is applicable only to the total of business conditions in general."

<sup>1</sup>A paper presented at a meeting of the Taylor Society, April 25, at Cambridge, Mass.

Recalling the experience that we have had in our attempt to tie up the theoretical business cycle with our practical affairs, we find it difficult to agree with the final conclusion of the writer in spite of his clear argument in the case of some points of major consideration. The purpose of the present discussion is to present sufficient of what we have done in this connection so that you may understand the direction and scope of our activities and so that you may judge for yourself whether effort directed toward the solution of this knotty problem may be expected to return a profit to the investing enterprise. As an axiom, it may be stated that business cycle studies are not effective in the profitable sense unless they may be "brought down to earth" in a tangible way-unless they directly influence the quantities and time of initiating work orders into the shop in a suitable coordination with the quantity and time of sales orders to be received from the consumer.

As a part of a background of information, which one must have in order to comprehend our problem of production control against estimated sales, let us review the development of the company. This development had its first beginnings some six or seven years ago, and all the various adjustments and revisions of the company's previous activities had always in view the ultimate statistical control of a large, extended and complicated manufacturing and distributing corporation.

You will be interested, first, to know what we make. The product which we sell to our customers comprises some 23,000 items, all of which are listed in our catalogues and nearly all of which we intend to carry in stock ready for the customer's order. Of these 23,000 items, 17,000 items are manufactured in our producing plants. Of the 17,000 items a small group of only 600 items comprises, upon a tonnage basis, two-thirds of our full tonnage demand. The other 96 per cent of the 17,000 items comprise only one-third of our tonnage production and, as you would naturally