

settlement of which in one way or another must be achieved.

Among other things the very size of the modern corporation has forced upon the leaders of industry an appreciation of the necessity for the proper and systematic planning of all operations of their business, the formulation of such plans being determined by such facts and data as seem pertinent. In the various plans which have to be considered, not the least important is that of planning for production. Every plant, whether it be large or small, must of necessity make production plans of some sort whether the mechanism be simple or complex, and the fundamental and ultimate object sought is the reduction of costs with a consequent increase in profits.

The question arises, therefore, whether it would promote more precise and economical technical management in our plants if cyclic fluctuations could be materially reduced? Most manufacturers are confronted with the problem of the seasonal cycle, which in many respects may be likened to the business cycle, except that it may be more precisely measured both as to duration and movement. Not all types of enterprise, however, are affected in the same degree, the canning industry perhaps representing one extreme and the office appliance industry the other. In any given plant the desire of management, whether possible of accomplishment or not, is that, for the attainment of ideal results, production should proceed on a uniform basis. If production requirements for a given period, say a year, can be given to plant management, it will be their endeavor to provide for that production on this basis or as nearly so as circumstances will permit. Violent fluctuations will be avoided. If they can adjust their plans so that uniformity of production results, they will attain maximum efficiency with minimum expense. If, however, they are forced to continually adjust their production plans to meet sales increases or decreases, inefficiency and high expense must necessarily follow.

Now is it not reasonable to assume that if uniformity of production is to be desired in the seasonal cycle, such uniformity is also desirable in the business cycle? When we determine upon a carefully thought out production campaign for the year based upon well calculated sales analyses, we can be reasonably sure of the approximate attainment of our objectives, since the period is relatively short and results can be more readily forecasted. The broad swings of the business cycle, however, present difficulties which are either absent for the time in the seasonal cycle, or else are so close as to be

readily apparent and therefore easily weighed in their influence on conditions.

Laying aside for the moment any discussion of the possibilities of forecasting the extent of the business cycle and providing for the conditions which may arise therein, let us assume that we can determine with the same degree of accuracy the volume of sales throughout the period of the large cycle that we can in the period of the small one. In such a case may it not be possible to lay down a production program which, while perhaps not maintaining the degrees of uniformity possible in the smaller cycle, would none the less avoid the extreme heights of production in periods of prosperity as well as the extreme depths in periods of depression?

As has been stated by the speaker, the worker desires steady employment, and it is certainly to the advantage of the manufacturer to bend every effort towards this end. With uniformity of production and employment, a planning department is able to gauge with maximum accuracy the production possibilities, not only of the plant as a whole but of the various departments of that plant and even of individuals. With such conditions of uniformity, it is readily observable that among the benefits derived may be found the following:

1. Minimum labor turnover.
2. Minimum personnel for certain activities, such as for instance, employment or industrial relations, instruction, planning and to a certain extent supervision.
3. Maximum output per productive hour with a consequent minimum plant investment.
4. The attainment of a more precise control of the flow of goods in production with a consequent maintenance of minimum inventories.
5. Retention on the pay roll of specially trained or highly skilled minor executives, who in periods of depression might be dispensed with, only to be later replaced when the upward swing of the cycle sets in.

Now if we admit that it would promote more precise and economic management if we could materially reduce cyclic fluctuations, we are then confronted with the problem as to whether or not there are probable ways in which the management of enterprises, acting either individually or collectively, can accomplish the desired results. Seeing controversial breakers ahead, I am tempted to say, "There are," and let it go at that; but I do wish to give brief support to Mr. King's contention on this point. For example, there are to be found conspicuous examples of firms which, first having solved some of the problems of seasonal fluctuations of production, have then gone on and extended

the scope of their plans to the solution of the problem of cyclic fluctuations with notable success.

I am deeply impressed with Mr. King's suggestions, which are pertinent and well worthy of very serious consideration on the part of all manufacturers. They do not, nor do I think that it is his idea that they are intended to, present a complete solution of the problem of cyclic fluctuations, but they are nevertheless important factors therein.

Not every firm or industry will be able to utilize the methods of other firms or industries. Major principals, however, can or should be more or less readily established from which each organization may build the plan best adapted to its particular requirements. For instance, industry as a whole may be divided into two general classes; that which produces goods for consumption directly by the ultimate purchaser, and that which produces material for fabrication by other manufacturers before passing into the hands of the ultimate purchaser. In the former case the manufacturer is immediately dependent upon public buying, and is in a position to gauge for himself the extent of the demand and plan accordingly; whereas in the latter case the manufacturer is dependent upon the correct judgment and the careful planning of many different manufacturers who may or may not gauge the demand with any degree of accuracy. Each class, therefore, must establish policies best adapted to the conditions under which it operates, and within these classes there are of course many sub-classes which likewise will vary their plans according to the circumstances. There is this thought to be borne in mind; that any steps tending to eliminate the extremes of cyclic movements in any given concern by the same token adds its bit to the reduction of cyclic swings as a whole, through the more regular employment of its labor.

It is not my intention, nor do I feel competent to suggest the various means by which cyclic fluctuations may be reduced. Obviously, regular employment would be one of the factors tending towards this end, but it would be an act of supererogation, I believe, to further amplify the excellent suggestions made by Mr. King. There is, however, one striking point brought out in the paper to which I should like to call attention. He says, "the recent investigations of the Federal Reserve Banks show that both during good times and bad the total value of sales of retail stores tends to remain approximately a fixed quantity; and that this being true it necessarily follows that as retail prices fall, the physical volume of sales must grow larger." Thus, for

example, in a recent investigation it was found that of 159 department stores reporting, the index numbers of their sales were 117.7 for 1920, and 111.5 for 1921, sales for 1919 having an index number of 100. From the standpoint of the manufacturer, this would represent a very slight fluctuation over a period of three years. Does this not suggest at once the thought that in many lines at least, sales and fiscal policies might be so planned as to more nearly equalize production and demand, and if the same volume of sales would result under such a system of equalization throughout the cycle, would not the profits of the company so planning be greater, and would not the condition of that company from every standpoint be better at the conclusion of the cycle than if it had followed the more tempting path of "making hay while the sun shines"? During periods of prosperity, when customers are clamoring for goods and competitors are driving their production departments to the utmost—possibly building additions to their plants in order to get a still greater volume of business—the temptation to rush in and seize every possible bit of business, with a glorious disregard of consequences, is apt to be well-nigh irresistible. Stockholders are anticipating substantial dividends after the lean years. Every influence tempts us onward to pile profits upon profits. We realize dimly that some day must come a recession, but as the wish is father to the thought, we think that that day will be long delayed and that when it comes we shall in some way, not at all clear, extricate ourselves from the difficulties which have beset us under similar circumstances in the past.

Bearing in mind the specific suggestions contained in the paper, it would seem that the following thoughts may be used as a foundation upon which to build the planning structure:

1. Know the theory of the cycle.
2. Study general business conditions and the details of your own particular business in comparison therewith.
3. Know at all times your position in the general cycle and your cycle.
4. Formulate definite sales, production and financial policies.
5. Above all have the will to resist in periods of prosperity the siren lure of large sales and big profits obtained at the expense of the future of your business, and the courage to plan and execute for the future when in the depths of depression. The will to resist in time of prosperity; the courage to plan and act in time of depression!