

moderate indication of possible loss. With only a thin margin of profit above costs it is a simple matter to deduce that a rise in costs or a fall in selling price will absorb all profits or even incur a loss. Whenever the cost of manufacture exceeds the sales price the enterpriser faces disaster.

Movements in price are beyond the control of the individual enterpriser. While he may be capable within limits of maintaining or regulating prices in definite and highly integrated fields of enterprise, for instance in the automobile and steel industries, he is powerless in almost every other field of endeavor. The gyrations of the price level are beyond the control of the individual concern or even groups of concerns. The enterpriser is at the mercy of an unstable price. This is the basis of his fear of loss.

2. *Peak Demand.* The amount of idle equipment in an industry is often governed by the peaks and troughs of demand for its output. The fluctuations of the industry's business cycle, or the fluctuations of business as a whole, call for a reserve of equipment to stand idle in readiness partially to meet competition in supplying additional output.

It is held in some quarters that the fact of setting up equipment for peak loads accentuates the so-called business cycle and creates the peak which is being prepared for. Though there are periods of time and occasions when equipment available is insufficient to take care of demand, these instances are less often and rarer than when surpluses of equipment exist. Though the steel industry is continually faced with unfilled orders, these orders are set for a time in the future. That a good portion can all be filled in the present may be proved by the data on per cent of actual to possible output.

3. *Retarded Demand.* The inability of a market to absorb the full product of industry may spring either from the magnitude of the price, business depression or general inability, for one or another reason, to stimulate demand. The enterprising business man weighs the possibilities of large output at a lowered price, yielding in the aggregate a larger profit than a limited output at the market price. The number of men who reason as does Ford, for example, who operates his plant at full capacity and efficiency, lowering costs and sales prices and creating demand, is unfortunately limited. This is one factor in maintaining industry in partial idleness.

Demand is also limited by the fact of a business depression. At the trough of a cycle the market is glutted with goods produced in the distant and recent past and awaiting sales. Demand is stifled and prices drop. Production cannot proceed economically for a time. Equipment must remain idle.

Another source of idleness traced to markets is the general inclination of business men to believe that the demand saturation points may have been reached. Such producers, by training and inclination, consider the operation of plants at reduced efficiency normal because they have known only such a condition in the past. There is a general complacency which prevents their discovering markets before their very eyes at home as well as establishing outlets abroad.

4. *Increased Efficiency of Machinery and Plant.* An excess of capacity is being continuously built up by the introduction of newer and improved machinery and plants. Inventions and developments in the technological arts never cease rendering equipment and plant partially or entirely obsolete. The processes of competition require the weeding out of the less efficient. Nor do these less efficient plants exist only because of improvements in the sciences and arts.

There is an incalculable number of enterprises whose only original purpose of incorporation is to squeeze into some nook or cranny of the business world. Large-scale business is engaged in a war with such firms. The efficient smaller firms survive and grow while the inefficient waste away and add to the store of unused capacity. Old plants replaced by the new are held for possible future returns to owners.

5. *Inefficiency of Labor.* In the absence of complete automatization of machines considerable responsibility for the volume of output rests on both the employe and the manager of an industry. If either or both are impressed with the fact that their efficiency will glut the market, self-preservation will tend to reduce output. The laborer will choose full employment and partial efficiency against partial employment and full efficiency.

Though this obstacle to production often disappears with the introduction of completely automatic machinery and the application of principles of scientific management, there still remains a fertile field for its operation in small industries and in those industries where the idea of glutting pos-

sesses the employers.

Most often it is the entrepreneur who is responsible for such inefficiency of labor. It is he who allows things to drag along while he labors under a timidity preventing him from going forward in production.

6. *New Enterprises and Failures.* A prolific source of unused equipment is the steady influx of new enterprises into the field along with the growth of demand for goods and rises in price. New enterprises are incorporated whenever business conditions are favorable.

The number and size of business failures both increase with the increase in new incorporations. Failures mean the pouring into an industry's reservoir of a large quantity of equipment which is doomed to remain idle until the tide turns. The businesses that fail are the least efficient, and it might be argued that the percentage of equipment in use should rise in the end. This would be true if the new inflow of equipment were not more than necessary to meet the new demand over and above the demand which is met by reserve capacity.

7. *Unstable Price Level.* An unstable general price level is another cause for the existence of idle equipment. It has been mentioned along with the influences of new enterprises and failures, risk of loss, lack of markets and peak demand.

These influencing conditions stand in relation to an unstable price level as immediate and direct forces to a basic underlying force. In other words, a changing price level is responsible to a large extent for the influx of new enterprises and the failure of many, new and old; it is responsible in a large measure for the risk of loss and it is a powerful agent making for the ups and downs of the business cycle.

Economic Significance and Conclusion

When we review these reasons, we are apt to think the solution to the problem impossible or

even unnecessary. Such an opinion is presumably based on some knowledge of the financial and economic features characteristic of the condition of overcapacity.

One thing certain is that the cost of ownership of unproductive enterprise is borne directly or indirectly by the consumers of goods. The cost of new or improved equipment is taken care of through accounting practices which involve either the augmentation of the plant and equipment account or the writing off of displaced equipment through the depreciation and obsolescence accounts. In one case the consumer pays for the cost in the element of fixed charges while in the other he pays in the element of depreciation, both overhead items entering into the cost of manufacture. In either case, when capital equipment does not produce the cost of misplaced capital the investment is borne by the consumers. From the standpoint of consumption the significant thing is that these excess charges wrongfully deprive consumers of an increment of purchasing power and tend to stifle demand for industry as a whole. From the standpoint of productive endeavor funds are misdirected into channels where proper use is not made of them. Both evils are deplorable. A retardation in the normal growth of living standards and a postponement in the train of civilizing events which always follows from such higher standards are the heavy price which society pays.

And yet there is no real reason for this limiting of our productive powers. Engineering materials, knowledge and the energy to produce are our heritage. All we need is the courage to apply ourselves to newer economic devices to bring about the social advances quite within our power to achieve. The problem is one more of economics and finance than of engineering. Just as soon as the American people undertakes the task it shall solve this problem and open the way to a nobler and richer material life.

IN THE latest of the sciences to be developed, that which deals with the art of living in communities, what is required is not only a perpetual widening of the social purpose of the people as a whole, but also a larger and larger

measure of foresight, invention and technical efficiency in the specialized groups of brain workers on whom, for the most part, the execution of this social purpose will necessarily devolve. (Sidney and Beatrice Webb, *English Poor Law History*, p. 1023.)