HENRY FORD

MOVING FORWARD

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CHAPTER I. THE WAY TO WEALTH

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Is it possible that this country is losing its business bearings? There is talk of high wages being a burden, of raising prices to cover increased costs of production due to low demand, of curtailing output by agreement in order to prevent the country being flooded with goods, and even of passing laws to cure unemployment.

If wages are at all generally cut, if prices are raised and if production is rationed by agreement so that all the manufacturers in each branch of industry may have a certain amount of business regardless of whether or not they deserve it, then we might as well close the book of American progress. For business will have confessed its inability to provide leaders who can lead toward a greater and more widely diffused prosperity that will abolish poverty.

That would be a sad ending to our national progress. It is, however, an inevitable ending if the business of the country refuses to recognize its responsibility and hopes by catchwords and slogans to achieve that which can be attained only by hard, unremitting thought and hard, unremitting work.

Good business, which in turn means general prosperity and employment, is not something which comes about by chance. It is a result of the skill with which business in general is managed and business in general is only the sum of the activities of the business units. Through all the years that I have been in business I have never yet found our business bad as a result of any outside force. It has always been due to some defect in our own company, and whenever we located and repaired that defect our business became good again regardless of what anyone else might be doing. And it will always be found that this country has nationally bad business when business men are drifting, and that business is good when men take hold of their own affairs, put leadership into them, and push forward in spite of obstacles. Only disaster can result when the fundamental principles of business are disregarded and what looks like the easiest way is taken. These fundamentals, as I see them, are:

(1) To make an ever increasingly large quantity of goods of the best possible quality, to make them in the best and most economical fashion, and to force them out on the market.

(2) To strive always for higher quality and lower prices as well as lower costs.

(3) To raise wages gradually but continuously—and never to cut them.

(4) To get the goods to the consumer in the most economical manner so that the benefits of low cost production may reach him.

These fundamentals are all summed up in the single word "service" but that word is so often used just to cover cheap and easy gestures involving no thought or work, that it is necessary to point out that service, to be anything at all, must be the basic policy of a business and must carry through its every action. The service starts with discovering what people need and then supplying that need according to the principles that have just been given. One must keep ahead of the needs of the people and not sit around simply filling what is called a demand. That is what I mean by leadership. When leadership slackens, then business slackens and the business begins to run the managers instead of the managers running the business.

Whenever the leaders of business find the public buying eagerly, the tendency is to settle back on the job and let well enough alone. There was formerly a tendency in such times to raise prices in the hope of getting in all possible amounts of money while the going was good. In consequence, in what were called times of good business, the effort was not to keep business good but to get money quickly, and since raising prices always seems to be the quickest way of getting money, the prices were raised and raised until they went above the level of the buying power, and then all at once the buying would stop and, instead of good business, we had bad business. Fortunately, most men have now learned the fallacy of trying to make money by raising prices, and we had little or no price raising in the period of our business history that terminated in the stock market panic of October and November of 1929.

At the beginning of the period of speculation, the business of the country was running along very nicely and evenly, with the sole expectation of gaining profit through work, which in the end is the only way that any profit can be gained. Men kept trying for lower prices and higher wages—that is, to establish sound and enduring business.

Then, as the opportunities for making money in the stock market appeared, more and more the attention of many of the men who had been leading business and many of the men who had been helping them and many of the men who had been working for them became diverted to speculation. It reminded me of the farmers when the city was expanding and real estate agents were subdividing outlying fields. The farmers kept one eye on the lookout for a real estate agent and the other on the plow. It was very bad for farming. One eye on business and the other on the stock market proved very bad for business.

The proper conduct of a business requires every ounce of leadership that it is possible to exert. There can be no let up and no attention to anything else. But inevitably this attention to the stock market drew attention away from business and dulled the edge of the urge always to advance. Customers were too easy to get and to keep, and business in general, instead of trying to make better products, sought to attain a greater volume of products and not to bother much with price reductions or wage increases. Everything was going so smoothly that there seemed no reason for undue disturbance or alarm. The true occasion for alarm was deeply hid. It consisted in the complete stoppage of improvement in quality of goods and in methods of manufacture, which in turn causes a stoppage in the increasing values of the purchasing money. There is bound to come a time when things are offered for sale at so much more than they are worth that the public will hesitate to buy them, and then will stop buying altogether and may even fall into a panic about what it has bought. I do not know anything at all about stocks.

But I do know that the manufacturing of stocks can be carried on in much the same way as the manufacture of articles, and their prices can be run up in the same way as commodity prices and with the same eventual result. Shoddy stocks can be made to sell at high prices.

The lesson that should be apparent from all this is that in the end everybody is the loser and no one the gainer by speculating in things already made whether those things be commodities or whether they be paper shares in corporations. Prosperity and progress are in things yet to be made. Another lesson is that nothing can be taken for granted in business. If a business be allowed to run on as it is, just because the output is being bought, and no attempt is made to improve either the output or its method of making or to lower prices, then one day it will be discovered that there are no buyers. Every business, if it expects to be prosperous, has to keep ahead of the public. It cannot simply travel along.

If the nation's recent experience will have taught the lesson that no money is to be made except out of service, then it will have been worth all that it cost. The country needed some such education on a large scale as a step toward that kind of business which elevates the whole country and not just a few people. We may have been helped toward the view that goods and services are seldom luxuries, that it is nonsense to talk about people being better off with less, and that the only real luxury is a retired business man. For a part of the troubles which are said to be due to overproduction are really due to the habit of thought that a man has a station in life, and that too much in the way of goods and services may not be good for him—that he must be guarded against extravagance not by education but by withholding goods and money from him. There may be a personal nobility in poverty but it is a class distinction that we can do without.

Undoubtedly there are defects in the money system which sometimes prevent the free flow of goods and services, but we do not as yet seem to know enough to put our fingers on what exactly are the defects. We do know that periods arrive in which people in general, although their needs keep constantly increasing, have not the money to buy that which will satisfy their needs. There is no logical reason why, with ample facilities for production and an always increasing desire for consumption, there should at any time be one of these periods in which the desires cannot be fulfilled and the production utilized simply through lack of money. In fact, is it proper ever to say "lack of money"? Is it not fundamentally lack of something else? Money is like any other kind of machinery—it can be improved and is being improved constantly. But along with the machinery must come an instructed people that can properly operate it. Money, as we often say here, is like coal out in the big coal pile at the back of the shops. But what kind of management is it that fails to replenish it? The country has just had a clear lesson that money is a by product of industry. When we give our entire attention to its sources—that is, to industry—there is no lack of money. The money market or the stock market did not cause the recent experience of business. It was men's neglect of business that upset the stock market. Business is the source of supply and surplus. Even a stock market cannot afford to neglect it.

No one has yet been born who can manage both to manipulate the market for its stock and also to do business in such a way that it will be profitable. The two do not and cannot mix. We have had acutely brought home to us what it means to have a considerable portion of the country take its mind off doing business and engage in a career of speculating in stocks.

The immediate cure for depression, and by depression I mean a period when men are out of work and not able to improve their standards of living, is told in one word, "quantity" quantities of goods pushed out into the world.

But it is not enough simply to manufacture goods. There is a great deal more to the process than that. There is no service in simply setting up a machine or a plant and letting it turn out goods. The service extends into every detail of the design, the making, the wages paid, and the selling price. None of these can ever be taken as right—they can only represent the best efforts of the moment. That is why quantity production demands so much more leadership than did the old production. Anyone who sets up a big plant to manufacture a product and then takes for granted that no further changes in design or materials or methods of making are necessary will in a curiously short space of time discover an overproduction and then the owners will start talking about the market being saturated.

A market is never saturated with a good product, but it is very quickly saturated with a bad one, and no matter dollars. It may be in added quality—that is, in giving more for the money. The very best reductions are those which comprehend both price and quality. A price reduction which is gained by reducing quality is not really a price reduction at all, and the public reacts in no uncertain way. There is no quicker or surer way of destroying confidence in a business than to make a price reduction which represents the giving of less and not of more value than before.

However, the reducing of prices solely to increase sales is not a sound business policy, for then the attention may shift from manufacturing to selling. Sales are primarily the result of good manufacturing and not of persuading people to buy. There is no difference between decreasing prices in order to gain sales and maintaining prices just because people seem willing to pay them. If prices are used as baits for buyers, to be raised or lowered as the buyers feel about it, it is in effect a handing over of the control of the business to the buyers to do with as they like. That is a very real control and it is exercised in very drastic fashion. This country has seen it exercised time and again.

The policy of constantly reducing prices has really more to do with management than with sales and should be considered from the manufacturing point of view and not with primary regard to the ideas of the sales end of the business.

If a price be maintained merely because there is apparently no sales reason for reducing it, what is the effect on the management? Does it constantly press to reduce costs so that the maintained price would translate into a constantly enlarging profit account? That is exactly what does not happen. The maintenance of the price eventually puts the management to sleep. There is a tendency to let well enough alone, and well enough never can be left alone. Nothing can remain static. Things are either moving forward or moving backward. If a management lets well enough alone for six months or a year, the business will inevitably get out of its control little items of waste will creep in, bigger items will follow them, and in the end costs will be so high that the profits will vanish. There is no way of keeping a management always at its work unless the economies which it effects are carried over into lower prices and higher wages. For then each advance is marked by a lower price peg. Once a peg is put in, the management must continue to do at least as well as it has ever done. Usually it must do much better. That is why there is more than sales to be considered in a price lowering policy.

The policy strikes at the very heart of management. If one keeps the price always as high as one can, there is no margin for an increase when fair treatment of the product and the public requires an increased price. The public will meet an increase in a product that has dealt squarely with it before. But it is only when one lowers prices without regard to whether or not the public is willing to pay a higher price that the public maintains a confidence which not only results in steady buying but which permits an advance in prices if conditions should make such an advance necessary. One cannot use a margin and also have it. The public will know from experience that the advance is being made only because it cannot be helped, and therefore it will not resent the advance and no goodwill will be lost. It is better to have a good margin for a necessary increase than for an enforced drop. A product that has been priced at what the traffic will bear cannot get help from the public in an emergency, and it often cannot get help in itself, because such a policy softens the muscles of management—it has had too much easy living. Thus the pressing for better methods has always with us brought so many unlocked for economies that profits simply cannot be avoided. Our problem has always been to keep profits down and not up. There can be no other result from the price decreasing policy and the constant challenge to management which it involves.

These fundamentals are not peculiar to the automobile industry and they apply to any business, large or small. They are universal. If they were adopted, a flood of properly made goods would flow through every nook and cranny of the country, drive out high prices, produce employment everywhere at good wages, and make poverty impossible. The getting of these goods into consumption is the problem of business leadership.

The question is not simply to have people buy more goods but to have them buy more of the goods which will benefit them. We use the word "buy" because that is the only method that we know of distributing goods. We must use money.

The limits of production will be reached when everyone has all the goods he needs or can use to increase his comfort in living. And since every improvement in goods or the methods of making creates a new need, the day when we can actually have overproduction is far distant.

Take our theories of what is extravagance and what is economy. In the business world it is considered wasteful for a manufacturer to retain a machine that will satisfactorily do work, if another machine appears which will do the work better or more cheaply. American industry never hesitates to scrap a machine the moment that a better one can be had. That is considered as economy in business. But our old notions of economy, which in business we have shaken off, still hold in the home affairs of the individual. It is considered economical to retain a thing in the home until it is worn out—regardless of the wear and tear that it may involve on the human beings concerned. That is not economy at all but extravagance. We progress as we conserve human energy—as we get more for the expenditure of the same effort. That principle in a true national economy has to be carried over into the life of the home. Our homes and our ways of living are still too much influenced by the Old World standards.

In our younger days we knew men who wore their coats until they were green and threadbare and these men were called thrifty. It was a thrift that hindered progress. There was no exchange, no circulation of services, no life in such an attitude. Goods are made to be used. There can be no other reason for their existence. Use is the power that keeps the wheels of life moving.

But how are the people going to find the money to buy these goods? That again is the business of management—of leadership. If we wait upon demand, we shall wait forever. Demand does not create, it is created. If we begin a large production of goods and make the wages high enough, then a supply of buying power will be spread through the country which will absorb the goods—provided they are properly made and properly priced. And the flow of exchange, which is the blood of society, will be resumed. There is only one way—and the way of production is the beginning of it.

If we should achieve what is called a stabilization of industry, making just what is asked for and no more, the power to buy the goods would fall off—for enough purchasing power to buy would not be distributed. The ideal of stabilization is a pretty one, but it stabilizes the wrong kind of condition. It stabilizes the kind of condition the country wants to be rid of. It would result in certain stagnation, for there would be no pressure towards bettering goods or methods and we should begin to sag.

The purpose of industry is to produce goods that serve people. It is no part of the purpose of industry to support people, and if we start into industry from the angle of making it support a certain number of wage earners, then we destroy the purpose of industry and therefore make it incapable of supporting people. In other words, production exists to create goods which will serve people.

If, however, high wages are not paid and there is no pressure towards ever higher wages as production increases, then the output will not be absorbed and there will be no reason for producing it. Thus, although industry does not primarily exist to pay high wages, it cannot exist in any large serving capacity unless it does pay high wages.

The approach, however, is important. If we imagine that industry exists to support people, then the more men that it employs the better. In this view an employer who took on two hundred men at two dollars a day would be better serving the public than one who took on fifty men at eight dollars a day. That sort of program is often urged as in the interests of society: employ more men, they say, even if you have to pay them smaller wages.

It is, on the contrary, directly against the true interests of society and makes for poverty. The man at two dollars a day will have no surplus spending power at all and he will not be a factor in the market. The man at eight dollars a day will have a spending power and in the use of that power he will be bound to create work so that the other men will eventually have well paid employment. There can be no greater fallacy than thinking that employing large numbers of low priced men is humane or helps the country. It is only helping to make poverty universal by paying low wages and keeping men on, regardless of the demands of the highest production.

The task of industrial leadership is not to find jobs for as many men as possible but to find high priced jobs for as many men as possible, and the start has to be with a few high priced men. For not otherwise can the low costs be attained which will increase consumption and make more high priced jobs necessary. Production calls out man power; production is not called out by man power.

We are traveling a road that no one has ever traveled. The way is not easy. Many well meaning people have held out that there is another road and the going is much easier. They point to the road of regulated prices, state aid, and the sanctifying of things as they are. They do not know that the end of that road is a very hard one.

There can be no substitute either temporarily or permanently for work and leadership.

It may be that the road we are on is not worth traveling. But that point should be decided before we take the other road. For we know that the other road leads back to universal poverty.

CHAPTER II. THE FEAR OF OVERPRODUCTION

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Although there is much talk of the dangers of overproduction, the fear is not that the supply of goods will be too great. The real fear is that the supply of profits and wages may be disturbed.

The workman fears that if more is produced than the public will buy he will be unemployed until the public catches up with the oversupply. The employer fears that unsold goods will stagnate and that he may have to sell them at a loss. We are all of us both buyers and sellers. When we are buyers we do not worry lest well-made goods be offered to us too cheaply. We are glad to find the bargains. First-class goods and commodities can always be sold—at a price. It would seem that overproduction is not quite what it pretends to be—it is not a curse to everyone.

It may be possible to have an actual overproduction—a condition in which first-class goods are not bought because everyone already has a supply of them. But it is always a relative condition and not at all to be confused with oversupply. Overproduction is always with reference to a ready market but oversupply is to be considered with reference to the ability of the people to consume the product if they had the money to buy. That is, we think of overproduction when selling becomes slow, whereas only complete fulfilment of need could make us think of oversupply. The condition of oversupply has not as yet obtained in this country. Of what commodity has every citizen yet had enough? What has been called overproduction is thus not overproduction at all. The country has had stocks of unsold goods when the power to buy them has been absent. But both the need and the desire to buy are always present. I am assuming, of course, that the unsold goods are of a design and a quality to meet the needs and the desires of the people.

At all times, but especially at the end of a boom, the market contains goods that remain unsold not because of overproduction but because there exists no reason why anyone should buy them—whatever their past usefulness, they no longer fill a need. Their owners may make a great noise about business being bad, but the fact is that the goods are so badly designed and produced as to make it poorer business to sell them than to junk them. Business sometimes seems slow only because the public sense of values and design is moving faster than the inventive resources of some manufacturers. In a very real sense it is the personnel of business that is slow and not the public, Most manufacturers know that, all other considerations aside, it does not pay to put out poor stuff. It may be sold for a while, but at some point—the point where public knowledge and taste take a step ahead—the buying will stop and the manufacturer will have on hand unsaleable goods. If the channels of business were never clogged with goods that have no excuse for being, a recurrent cause of business depression would be removed.

If, however, first-class goods that do meet needs cannot be sold in ever-increasing quantities, then the trouble narrows down to an insufficiency of buying power. This may be due to the price of the article being too high or—more commonly—to the price of too many articles being too high. It may not be possible for the manufacturer greatly to lower his prices at that moment, although if he be progressive he will always be able to make some price reductions, but if the public is to be given all possible benefit, the business of price reductions must begin with the price of materials, continue through the cost of manufacture, and be completed in decreased costs of distribution. The manufacturer often sees how swiftly the economies in manufacturing are swallowed up in wasteful distribution and this distribution may not be within the control of the manufacturer. There is no point in economizing in manufacturing if at the same time the suppliers and distributors charge all that the traffic will bear. This is merely to emphasize the fact that the task of putting business on better foundations depends on every department of business and not alone on the manufacturer. Nothing can be cheap when any part of a commodity is dear. The only point where we cannot consider cheapness in the sense of price reductions is in human labor. Labor costs must be kept down but the only infallible way of doing this is by keeping wages up.

In general it can be laid down as a principle that prices to the consumer can always be cut, and in an emergency it may pay to cut the prices to below the line of profit. The increased business will in the course of time create larger profits. We have a number of times cut our prices below what we believed to be the cost of production, and the immediate benefits have been of two kinds. The larger volume of business resulting has not been the most valuable of the benefits. That which has most profited us has been the effect which this arbitrary cutting of costs has had on our organization—that is, on all of us. It has always made us more alert and more resourceful. I find it is more profitable to give more attention to the producing organization than to the selling market. We pay comparatively little attention to what is called "the sales end of the business." We believe that the sales are largely determined by the ability and progressiveness of the manufacturing organization. Therefore it is not without experience that I say prices can always be cut, and with great benefit to both maker and user.

The lowering of prices may sometimes of itself be enough to bring articles within the range of buying power. But buying power is not a constant figure. Lowering prices is only one way of increasing it. It must be increased absolutely as well as relatively, else the market for things will not be constantly expanding. Therefore it is not enough only to lower prices. Industry must also aim at continuously providing out of its operations a larger and larger income for everyone connected with it. This brings up for review in a very fundamental manner the whole subject of industrial management and finance.

It must be settled in our minds, first, that this thing which is generally spoken of as overproduction has never as yet actually occurred. The occasional stagnations in the free flow of goods from producers to consumers seem to have no connection whatsoever with the quantity of goods produced. Instead of fearing genuine overproduction we should welcome the day when it may be possible, for then everyone will be supplied with all of the goods and services he needs or wants. From the beginning of time there has been a striving for goods. There has never been a period when people in general did not want more and more goods —although there have been periods when people definitely gave up the hope ever of getting them and accepted poverty as an inevitable fact. Some of them were even persuaded that poverty was a virtue instead of a social disease. We must candidly agree with the moralists who contend that mankind does not exist only to possess material objects, but it is most certainly true that, until society from top to bottom is satiated with goods, we shall scarcely have the opportunity really to discover what life is about. Therefore we can look forward to the day of actual overproduction as the day of emancipation from enslaving materialistic anxiety. Unfortunately there is no prospect of that day coming soon. The people as a whole have not as yet suffered from plenty.

Of the three elements which alone or in combination cause the stagnation which is so wrongly spoken of as overproduction, two are within the control of business itself, while the third is largely within its control. Quality and price are affairs of design, engineering, and management while the increasing of buying power is, for that portion of the nation's income which results from industry, an affair of design, engineering, management, and finance.

Since a surplus of unsold goods is never due to factories having actually produced too much, it is not surprising that the superficial view that depressions are due to overproduction invariably leads to adopting measures to relieve the situation, which in fact only makes conditions worse. The patient is given a drastic treatment for a disease he has not.

In the older days of medicine the doctor, after making his diagnosis, invariably let out some of the patient's life blood. The patient was supposed to get stronger by being made weaker. Our business doctoring is still in that stage.

The prescriptions, whatever they pretend to be, all get wound to raising prices, cutting down production, and decreasing the buying power of wages both directly and indirectly. A very fashionable prescription aims at cutting down the production until it exactly fits the demand. It is an interesting thought but it proceeds upon the fallacy that production depends upon demand. The opposite is the truth for business. Demand depends upon production and so if the production drops the demand will drop and therefore under this proposed scheme production and demand will go hand in hand to oblivion. This, however, is not very serious, for an industry that would consent to have the amount of its business fixed by rule is headed for oblivion anyway. Many territorial arrangements between sections of an industry fall under the same head. Sometimes these arrangements are disguised as mergers. A merger of corporations may be distinctly beneficial in bringing together a number of units that belong together, but it is more usual for weak than for strong corporations to merge. No lamp posts have been provided for weak or overstimulated business to cling to and so they are apt to cling to one another. The embrace is called a merger.

However, the reorganizing of so many industries to meet the conditions of to-day—even though the reorganizations do not meet the conditions—is at least a recognition that the need for reorganizing exists and that we have passed the peak of a certain phase of industry. The recognition of that fact is the first step toward a more thorough reorganization which will insure steady progression and make impossible the recurrence of such orgies as have from time to time taken place in the stock market.

The changes which are now coming about are, as has been indicated, very comprehensive. They involve more of a change in our mental attitude toward things than in the things themselves. We need a new view of the business unit, of its profits, of employment, and of thrift. Essentially we must get rid of the notion that we are the servants of business and proceed to put business in its proper place as our servant. This means that all along the line we shall have to cease serving things and make things serve us. We need a higher and more wholesome thrift in which things will be valued only for the service they render and only so long as they render it. We have to get rid of that miserly attitude which is born of fear and which results in hoarding instead of using. This applies to our business organization as well as to our personal affairs. A change has already come about and we might as well realize it. The change need not of itself bother anyone. It is the natural order. The pessimist who sees things going to pieces is not deluded; he is correctly reporting what he actually sees. The optimist who sees things soaring to perfection is an equally good reporter

—he sees what he says he sees. But neither sees the whole picture.

Their reports of what they see are true, but they are not comprehensive. Certain established customs, methods, processes, institutions, and traditions are undoubtedly going to pieces, and irrecoverably. This irrecoverability strikes fear in many people. They want yesterday to come back. But yesterday is not coming back. The old era is dead and is being buried bit by bit.

It is the collapse of many dominant methods and institutions that alarms people. That need not alarm anyone. The evolution is perfectly natural.

One of the great changes that have come about has to do with the increasingly large number of men who are no longer working exclusively for money. To-day none of the real leaders is working for money. All of them have sore money than they can use, and they continue to earn money in large amounts as a part of the machinery of Monetary supply for the whole of society. All so-called private fortunes are nothing less than public reserves. I have noticed that those who work exclusively for money and for a time earn it do not retain it unless they continue the use of it for the public. The desire for mere money has a way of defeating itself—a very sure way. It is quite the same with a business and particularly so wider the new order of things. If the main objective of any business is the earning of a fixed dividend, then that business is surely doomed. Profits must come as an incident to doing the job well or they will not come at all. There is nothing fixed about any business and it has to be prepared at any time to change its product and methods if manufacturing. A unit of industry, a business—call it anything—is only slightly a collection of buildings and machinery. An estimate of the value of any business based on the property or facilities it owns is practically worthless. No one would think of paying carpenters according to the kind of tool chests they had. The man with a good set of tools ought to do better work than the man with a poor set and therefore command a higher wage. But that would have to be demonstrated; it could not be taken for granted.

A factory is only a tool, and its value lies in its production. This production is based on the power and the methods that the managers have put behind it. In many respects the factory itself is a greater thing than its product. If the product is a machine of any sort useful to the public, that is the thing admired; but the really admirable object is the machine that makes the machine: the factory organization and equipment that make the thing which the public buys. The factory is a potency which may be turned to many uses besides that for which the public knows it best. Power, the knowledge of power, the use of power, and not merely the specific product of power in which for the moment we happen to be interested—that is what an industrial establishment signifies.

A manufacturing company is only as good as its product, and unless that product be constantly improved it will not constantly draw the public to its buying. That is elementary, but often this fundamental seems to be neglected, for not otherwise could so many companies be judged for financial purposes solely on their past records. A record of success presupposes that some valuable experience has been gained. But if the company loses its active management—the men who made its success—then that company, no matter how much property it has, must make its way all over again unless the new managers are able to avail themselves of the former experience. This is frequently shown in an old company which under a new management goes in for quantity production, not to meet demands as they are created, but just to produce a great quantity of goods to force on the market. Under these circumstances quality is always neglected. The neglect may not be—probably is not—intentional, but if the emphasis of the management is upon volume then the men all the way down the line will feel it, inspection will be put aside if it interferes with output records, and of course the quality will go down.

The only things of any great intrinsic value in our group of industries, for instance, are the materials and supplies of a general nature which are on hand awaiting fabrication to our special ends, and these we keep down 10 a minimum. As for the buildings and machinery, they must be valued in dollars according to the meaningless methods of accounting that are required by law. Actually are worth only what we can do with them. Our is not the mere material fabric: it is twenty-five rears of time, twenty-five years of experience, built into management and method and machinery. The greatest elements of a machine or a shop are those you do not see—the invisible essence of time and devotion, and slowly acquired wisdom that has gone into it. It is our business as managers to design a shop that will make the product, and, since every day we should learn something about how to better our product or the manner of its making, both product and the shop are constantly changing.

Our policy—which we have found no reason to amend—has been to regard ourselves as charged with discovering the best way of doing everything and to hold every process employed in our manufacturing as purely experimental. Several years ago I said:

"We know from the changes that have already been brought about that far greater changes are to come, and that therefore we are not performing a single operation as well as it ought to be performed. We do not make changes for the sake of making them, but we never fail to make a change once it is demonstrated that the new way is better than the old way. We hold it our duty to permit nothing to stand in the way of progress—in the way of giving better service with all that follows in wages and prices."

This policy keeps one continuously balancing the merits of improvements both in methods of making and in design. This, of course, includes materials, for in no direction has there been greater progress than in the working out of new and stronger steels and composite metals. Some changes are forced by the shortage of materials, and some by the unreasonably high prices imposed by the material suppliers, but the majority are the results of experience. The first question to answer concerning any suggested change is:

Will it result in better service? Service runs in many directions. Among them may be listed:

(1) Lower costs. This is a service to wages, profits, and prices, and thus to more business.

(2) Strength and durability. These serve everyone.

(3) Appearance. This is a factor of rising importance.

After examining a suggestion from the end of service, one has then to go into the cost of making the change as compared with the economy to be effected. One has to take the long view and estimate in the light of experience whether the change will increase volume.

It has been our policy since 1908 to have a single base model with a few variations based on accommodation to various needs, and make improvements on that model from time to time, but without abandoning the fundamental conception of the model. That was our contribution toward checking obsolescence in the hands of the owner.

The trouble with mass production—and the phrase "mass production" is quite misleading—is that it tends to become rigid and keeps on producing regardless of the market. It has been supposed that our company was an exponent of mass production. That has never been true, and I have often explained why it was not true. We have merely made a great many automobiles using the methods which we found most economical. The product has always ruled the methods of making. This is another way of saying that the needs of the public have ruled.

Rigid machine production of the kind known as mass production quickly comes to an end, for it violates the first principle of large-scale production—which is that the makers must constantly improve the design and quality of the goods turned out. That is the inexorable law of production and it has been proved time and again. Only a few of the standard articles of twenty years ago are the standard articles of to-day. Why? Those earlier articles became standard only because they always met the needs of the people. They were bought because they could always be depended upon to be first-class, but they were first-class only because they were constantly improved—although possibly the improvements were seldom mentioned. But if, after the reputation of the articles had become assured, and those who had built the reputation rested, or were followed by men who were content to take the product as they found it and depend on the fine reputation, then dry rot set in and the product steadily slipped back and another product took its place. No product ever remains standard. It has to be kept standard.

It is true that mass production frequently piles up great stocks of goods which cannot be sold and this leads to the belief that mass production results in overproduction. Inflexible mass production does start to pile up goods the moment the goods cease to suit the buyer or are too high in price, but this is not the fault of the production methods. It is the fault of the managers in thinking that one design or one method can for long continue. Indeed, if mass production were what it is supposed to be, there would be some cause for alarm—but only among the mass producers. For they would lose by it. It is the large producers who constantly change methods and designs; it is the small producers who cannot change. Among the peasants of Europe or the coolies of the Far East life is standardized. For endless generations they have been doing the same things the same way. Machine production in this country has diversified our life, has given a wider choice of articles than was ever before thought possible—and also it has provided