

Austrian and German labor and of American labor. Bread and beer swilling, and an occasional bit of sausage cannot give strength sufficient to compete with you."

The late Mr. Schoenhof, it may be remembered, was for many years one of the foremost American free traders.

To sum up: The American workingman has a productive energy greater than that of any other workingman, and this higher capacity is due to his being able to obtain more and a greater variety of food that is suited to his wants; to his being better housed and better clothed and having better surroundings than the workingman in other countries. Because he is a superior workingman it is profitable to make a more extensive use of machinery in America than in other countries, and this more general use of machinery has made it profitable to pay high wages, while at the same time it has reduced the price of commodities.

COMPENSATION OF SKILLED LABOR.

BY J. RICHARDS.

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The subject of skilled labor and wages is by no means a simple one. Its complexity arises from the rapidly changing conditions and relations of skilled industry during the last sixty years. It is a branch of social economics that has but little useful literature, and, indeed, none at all that deals with the equities of the subject, unless it be in the current serial matter of the day, and that is almost never impartial.

Even the word wages lacks logical definition. Does it mean the money compensation for workmen's time, or does it mean compensation for work accomplished? These things are essentially different and require terms to define them. The first is a rate of wages, while the second is the amount of wages. I beg that you will keep these terms in mind, because out of them and the relation between them must arise much that will be said of compensation.

The amount of wages, or compensation for work accomplished, is the labor cost that enters into commodities, and constitutes the real economic problem, the one that directly affects our industries and determines their success.

The rate of wages, or compensation for workmen's time, is a social rather than an economic problem, dealing with the intellect and skill of workmen, their ingenuity and power of producing; consequently it affects directly the workmen themselves.

The amount of wages is very uniform the world over when measured by product—indeed, must be so, as will appear—but the rate varies with the productive power of workmen.

It does not much matter to an employer whether it requires one, two, or three workmen to produce a given result

in a given time. He can as well pay the amount of wages to three men as to one man or two men. The amount of the wages, measured by production, is the matter he is directly interested in; but to the workmen the rate is a serious matter, directly affecting their social and other conditions, because it is a measure of their personal compensation.

Thirteen or more states have bureaus of labor statistics, which every year publish voluminous reports, amounting collectively to between four and five thousand pages. We have also a national bureau of labor statistics, equipped with all required means of ascertaining facts respecting the rate and amount of wages, with all that concerns or belongs to the subject of labor. Voluminous statistics have been printed. One document of more than 850 pages, called Young's Labor Statistics, was issued in 1876, and many editions of this have since appeared. In one place more than 50 pages were devoted to slave labor among the Egyptians and the Romans, and during the feudal ages in Europe—almost an insult to modern skilled industry—but in no case, so far as I know, can anything be found bearing upon the relative productiveness of labor, or upon the relation between the rate of wages and the amount of wages.

The first attempt in this country to distinguish between the rate and the amount of wages was made about 1887, when Mr. Schoenhof, of Paterson, N. J., was sent abroad, under a commission from the department of state to investigate into the amount of wages or the labor cost of commodities in Europe. The facts gathered by him can be found in the consular reports of 1888; but the inquiry was suddenly abandoned for political reasons, and since that time it has not received much attention in a public way in this country; but it is safe to say that until the relation between the rate and amount of wages is understood and appreciated by both employers and workmen, no solution of the present condition will be reached.

I myself had something to do with this matter. In 1886 the late Thomas G. Shearman, of New York, came to the works in England to ascertain something concerning wages, and was amazed when I told him the wages could not be ascer-

tained by the usual means, at least by the pay roll, because the work was contracted. He was a man of celebrity and of wide experience, and, at the time, a federal officer, and had always considered the subject of wages as one of rate only. At my suggestion he visited several works in England, and, on his return home, induced the president to send out a special agent to investigate in Europe the amount of wages or the cost of the labor component in various commodities. His investigations covered steel rails, boots and shoes, woolen cloth, and perhaps other commodities, as can be seen in the consular reports before named, also in writings of Mr. Schoenhof that I am not able to cite at this time.

To arrive at the first stage of a practical application of this theory of wages, the following postulates will be assumed:

First. The cost of manufactured articles of every kind is made up of four elements or components; namely,—material, wages, expense and profit.

Second. All staple articles of manufacture, such as enter into the world's trade, must have a nearly uniform or international value.

Third. The amount of wages, entering into the cost of manufactured commodities, is also nearly uniform, and must be so, irrespective of the rate of wages paid for their production.

Fourth. The rate of wages depends upon what workmen produce, or upon efficiency of their labor, and to some extent on artificial values.

Fifth. Fluctuations in the rate of wages are commonly a result of demand and supply.

Sixth. The amount of wages that can be paid to produce a commodity is not an accident, but is the result of fixed commercial laws of general operation, and upon the relation to other components.

Briefly expanding some of these postulates, the first one, relating to components, is merely an axiom, capable of proof by simple accounts. Profit, as a component, is just as essential as material, labor or expense. Without profit, no industry can be carried on, and when the amount of profit is declared or known and is reasonable, it never leads to dis-

content or labor disturbances. A man so obtuse as not to know that profit is an essential component cannot be an intelligent mechanic.

The second postulate is also an axiom. Machinery, cotton cloth or any other commodity cannot have a difference of price in different markets except as affected by local taxes. For staple products of all kinds there is a world's price, which can vary within narrow limits only, and the range between these is constantly becoming narrower, as the price of commodities becomes more fixed in the neutral markets of the world; so obviously must the sum or value of the components be fixed. The aggregate must come out the same. If the cost of one component is raised, that of the other components must be lowered accordingly; and as material, expense and profit are approximately uniform, or should be, so also must the amount of wages be, but not the rate of wages. This may vary in any degree without disturbing the balance of components. The amount of wages in a watch must be the same in Waltham as it is in Geneva, although the rate of wages paid to workmen be as four to one, as was the case twenty years ago. The watches made in these places met and were sold in London and had to conform to a general price.

When the balance of these several components—material, labor, expense and profit—is lost, and their aggregate exceeds what we may call the general or world's value of the product, then the industry affected must either die or be moved to a new environment. Industry follows the line of least resistance, especially in these times when powerful combinations are indifferent to localities and when local or empirical skill has nearly disappeared in our industries.

I mentioned a general or world's value of products. We are all the time coming nearer to such a standard for common commodities, and the fallacy of the demand and, in the same degree, the supply theory is becoming apparent. All commodities, including wages, have a natural value, measured by the cost of their production, and it seems strange that anyone should think so important a matter as the general rate of wages could be governed by so transient a cause

as demand and supply. It is, in fact, assuming that the rate of wages is an accident and not the result of a fixed law of exchanges, as has been pointed out.

The fluctuations of the labor rate are undoubtedly affected, if not produced, by demand and supply; but to contend that the general rate of wages in any country is thus produced, or governed, shows scant acquaintance with the subject. There is nothing to hinder skilled labor from flowing to any point where it is scarce, and, therefore, better paid. There is no duty or legal restriction on labor. It enters free into nearly all countries. In one week it can be transferred from New York to San Francisco, and in eight days from Manchester to Philadelphia.

Wages may rise for a time when there is a sudden demand for some product and a want of labor at some particular place; but this lasts only until workmen can move to that place and wages soon settle down to the normal rate.

No one would think of investing in a manufacturing or other business if he believed the important component of labor was to be the result of an accident or of demand and supply, which is the same thing; but this is not the principal evil produced by such a doctrine. It is one of the main causes, perhaps the principal cause, of strikes and many other circumstances that attend on skilled industry. Under such an assumption workmen naturally conclude there is no limit to wages and the more they can exact the better.

Mr. Jay Gould, during the great strike on the Missouri Pacific railway system, in 1887, said: "Labor is like any other commodity. Its value depends on demand and supply." If this is true, why should not his workmen cut off the supply and increase the rate? Like Shylock, the workmen on the Missouri Pacific lines were only practicing the iniquity which their employer taught.

Jay Gould was a worthy representative of the school to which he belonged—one that incites men to commit blunders and crimes by taunting them with their dependent position, and telling them their earnings and the conditions of their employment are an accident and not amenable to economic laws, which both employer and employed must alike respect;

also, that labor and capital, instead of being joint agencies mutually dependent on each other, are antagonistic elements or components in useful industry.

I will now revert to the circumstances of employment, or the conditions under which personal service is rendered, and in doing so I will take the privilege of using a few extracts from a lecture delivered before the engineering classes at the Stanford university, in 1898, on Works Administration.

First. In the scale of personal service is slavery, where workmen are not responsible.

Second. Time service, in which workmen are partially responsible.

Third. Piecework, where a workman is responsible for his own work alone.

Fourth. Contract work, where a whole working force is collectively responsible.

Now these four methods or systems of service have the several degrees of responsibility named; that is, from all to nothing. Responsibility is the key to efficient skilled service. It forms the distinction between free and slave labor and the incentive of effort. This proposition may seem strange, but it is certainly true. Whether it be a cause or a sequence, or both, we need not stop to inquire, so long as we find it a constant characteristic of contented and efficient effort on the part of those employed.

In respect to slavery, that no longer exists in any country where skilled industry is extensively carried on, and we need to refer to it only in illustration. A slave is not responsible for the product of his labor. That may vary more or less in proportion to what a master gives in return; but personally a slave is not responsible, because he is not a free agent. Emulation, respect and a sense of duty may in a limited degree enter into his incentives; but the subordination of his will and the fear of punishment are the main causes that enforce his service.

Time work, wherein the workman is paid for a term of service, is yet the most common form of employment. It stands next to slavery—not very near to it, perhaps, but next in the scale towards responsibility—and is practicable only

because of the sense of personal honor and of justice due to the degree of self respect existing among skilled workmen.

Under this system workmen are responsible so far as their sense of manhood and emulative pride produce responsibility, but no farther. A man is hired by the hour, day, week or month; but the terms are indeterminate. His wages are merely a rate. If he spoils his work or fails to render such service as common custom demands, he can be discharged and nothing more. The conditions of his engagement do not make him responsible. If he spoils work or fails by incompetence to earn his wages and a profit for his employer, it makes no difference; the law will give him his wages irrespective of everything but willful negligence and the malicious destruction of his employer's property.

The results attained by a time system in this country are certainly a compliment to the integrity and good faith of the skilled workmen of our time. Contrast it, for example, with the usages of common trading. If exchanges were to the same extent based solely on good faith and manly honor, would a like result follow? I am not claiming that faithful service is always rendered from honorable and unselfish motives. The penalty of discharge is always present, and the sentiments engendered by unions or trade organizations are often independent of an employer's interests, so that we can only wonder that the circumstances are not worse, when the time rate manner of compensating skilled service is considered.

The extent to which time work is used in skilled industries may be cited as an argument for its necessity; but it is not universal, and is constantly becoming less. Greater progress would long ago have been made toward a better system had it not been for efforts that have been made toward paternal systems, such as profit sharing. These efforts, made, in most cases, by earnest and philanthropic men, have nevertheless failed to meet the real causes that lie at the bottom of labor dissension.

Such a statement as this needs some defence, but one may ask, what have workmen to do with profits not earned directly by their efforts and skill? Only a part of the profits

in an establishment are thus earned. The profits depend on many things beside faithful and efficient labor, and, if profits not earned by labor are divided with workmen, it is a gift or bribe that destroys their independence and responsibility. The better class of skilled workmen of our day do not want such favors. This sort of patronage, especially when it takes the form of free gifts, is especially provocative of discontent and dissension indicating, as it does, class distinction and an unfair distribution of profits. What workmen want and need is justice, fair dealing and responsibility for what they themselves perform and produce, and above all to learn what part this is. They have no right to more. They have as much reason to risk their labor as an employer has to risk his capital, service, management and implements, and what is wanted is to segregate the labor component and let it rest upon its own responsibility, do away with premiums, and, so far as possible, with a time system of service. It is degrading in the skilled industries of our time, and, while it cannot be at once removed, a beginning can be made, and above all we can study its nature and effects in the labor problems now convulsing the industrial interests of the country.

To illustrate this matter I will mention that, when in Switzerland, I visited the works of Messrs. Sulzer Brothers, at Winterthur, where 3,500 men are employed in machine making. There was a large building called a Casino, containing a library, dining hall, bath rooms for hot, cold and Russian baths, a fully equipped surgery, etc. The cost of this building could not have been less than \$100,000, and I said to Mr. Henry Sulzer, senior member of the firm, "This Casino is a great concession to your workmen, for which they are no doubt very grateful." His answer was, "We did not give the Casino to the men. It is an essential part of the works, built out of earnings, and belongs to the workmen as much as to the firm. They manage it. It is a community property." "But," said I, "the profits to build the Casino were deducted from those of the firm." "Not at all," said he, "we had our share."

The piecework system, by which is meant personal contracts with particular workmen—a mixed system, in which a part of the working force is made responsible and the rest are employed on the time method, is a bad system in many ways, for many reasons. In the first place, it is discriminating and unequal; and secondly, there is no impartial standard from which prices can be determined. The price is a matter of chance, depending on the choice or conscience of the employer. It is a provincial idea, so to speak, and is a crude effort toward a contract system. It increases the responsibility of workmen without adding much to their independence. It does not succeed unless very carefully adjusted.

We are well aware of the extent to which it has been carried out in various shops, especially in New England; but if one will look into the matter carefully, it will be found that, wherever successful, there have been a very high class of workmen and some features of a contract system involved that modified discrimination among the men, and that rates were not fixed by accident or independently in each shop, but by rules that have been generally established by custom in a district. Individual piecework is an undemocratic idea, not consistent with the spirit of our times, and will, no doubt, pass away for something better in the future.

The next system of service, if that term applies, is what has been called the contract system, or, as we may call it, the responsible system, in which labor is set off as an independent element in production.

To make clear what is meant by a contract system of labor, the best way will be to illustrate by an assumed example; and, as one class of manufactures is as good as another, a joiner works will answer the purpose.

In a factory of this kind are prepared all kinds of timber, house furnishing material, such as flooring, ceiling, doors, sash frames, moldings and so on. All these things have regular prices, because made very uniform for average houses, and there are price lists published that apply over wide districts. For some things, like doors, sash moldings and flooring, the lists apply to the whole country within reasonable distances

of transportation. The work, when not included in the price lists, is made to estimates in which the labor is always made up as a separate item, and the labor in listed articles is either known or ascertainable in all establishments; is better known, indeed, than other elements, such as material and expense, that must be included in estimates.

Suppose, then, that a joiner works is to be established, and that the owners, instead of hiring men by time to do the work, establish a contract system for the labor. The men are employed as in any other case, and are permitted to draw, in proportion to their rank and skill, a certain amount of money each week in proportion to the usual wages paid in such establishments; but the work, as a whole, is all contracted to the men, or to the shop, as we would say, and whatever money is advanced for wages is deducted pro rata from the labor estimates due at the end of the week or month for work turned out. The men being apprised of, or already knowing, the rate for making standard work, no difficulty would arise from this, and all irregular or special work would have to be estimated and include the element of labor. That amount could be posted in the works, or entered in a book kept by the foreman and accessible to the workmen. Each man would, as is the present custom, enter, each day, on his time card, the number of hours engaged on different jobs, which would, as is also the custom in most places, have a catalogue or order number that would be entered on the tickets, with the time given to each number or order.

The whole shop would now be working on a contract system; every man, boy and apprentice included, and at the end of a month, week or any other time convenient, the completed work could be made up and compared with the amount paid out in advances to the men. If there is a balance due them, it is divided pro rata among all, in proportion to their pay rate, as indicated by the weekly or daily wages on which the advances are made. If there is a deficit, the men must make it good by a corresponding reduction.

All losses, by accident, carelessness or inefficiency of the men, should be made good to the firm or company, and all losses chargeable to the owners by detention, want of material

or implements, or accidents due the plant, would have to be made good to the men. If a man seeking work represents himself falsely as to his skill or rank, the owners need not concern themselves about that. The men in the works will attend to that matter; because if rated above his capacity he would be imposing on all the rest and lowering their wages.

The establishment would be co-operative, divided into two departments or interests closely allied and interdependent. The workmen would have nothing to do with material, expense, profits, risks, or capital, except in sustaining these as a foundation for their own part. The labor and their compensation would depend on their own efforts and skill. No foreman to watch the men would be required. They would do the watching themselves, and do it in an effective manner. Drones would be weeded out, or, what is more likely, they would be reformed, or not exist at all under such a system. The working force would be independent, interested, and responsible. If a man needed assistance or favor, the whole force could extend it by giving him easy work, or in other ways. It is an ideal system, but is not an idea. On the contrary, it is a demonstrated fact.

The main ground of objection to a contract system of labor is the matter of estimates; but does anyone undertake work without an estimate? and do not such estimates include a labor component? There may be a few exceptions, but not many.

This objection arises mainly from a desire to conceal the components of an estimate, and out of a system that has no fixed rate of profits. If employers have a rule of get all you can, they should not complain if their workmen adopt a like rule. And if employers cannot provide and maintain a reasonable expense account, to be charged to product, and can not estimate the components, including labor, they must not expect co-operative effort in their works. There are difficulties to overcome, all must admit, but how many we do not know until efforts are made to establish a contract system.

In the Manchester district, and I believe over England generally, this system prevails in the machine works of the

country, and the accounts for wages are nearly double as much as on the continent of Europe. In the Cornwall Iron works, at Birmingham, there are about 6,000 workmen, and, from information given me by one of the owners and the manager some years ago, I doubt whether, among all this number, there is any mechanic paid on the time system. I once brought out from England example accounts to show how the divisions are made in the Geesley Iron works, at Manchester, and published the matter here.

Some such system is used in the Baldwin Locomotive works, Philadelphia, where, for 25 years, and after a great strike at that time, not a word has been heard of labor dissension. The same result will, no doubt, occur in any works where the skilled work is made free and responsible.

The policy of the skilled labor organizations in this country is at this time directly arrayed against the individuality and responsibility of their members, demanding that they do only time work, determine the working hours, limit the amount performed, avoid responsibility, destroy all distinctions of skill and become a homogeneous class like common unskilled laborers. One can understand how routine and unskilled labor might resort to a policy that must, to some extent, eliminate individuality, responsibility, and manhood, in order to defend itself against the aggressions of organized employers; but skilled labor of our time is another matter and requires a different system.

I fear that by adopting the tactics of unskilled labor, the mechanics of our time have missed an opportunity of becoming a co-operating factor in our skilled industries, assuming the responsibility of their part of the work and basing the wages demanded upon the product of the wages, looking at the rate instead of the amount, and, as remarked, have lowered their calling to the rank of common labor, thereby provoking an opposition that is as serious as it is extensive.

In demanding a time rate for wages, irrespective of skill, and limiting the work produced, skilled workmen have assumed the Jay Gould theory of wages, adopting the demand and supply theory, which leads to cutting off the supply to raise the rate.

The employers are obliged to act on the same theory, while most of them well know that the labor component in their cost account could be reduced, and the rate of wages raised 25 per cent by a contract system in which the workmen would be free, responsible and co-operative in their efforts. I am not arguing in favor of the employers' position; I am only showing that they accept the workmen's demand and supply theory at its own valuation.

It may seem a selfish proposition to set off skilled labor as a peculiar calling. It must become so or disappear. The intellectual standard required is all the time increasing. Implements supplant empirical skill. The colleges are each year furnishing a greater share of the apprentices. In some recent visits to works in the eastern states I was amazed to find how many of the apprentices had come from the colleges, and how rapidly such young men advanced. The natural sciences are taking the chief place in our institutions of learning, and if the skilled workman cannot conquer a place above the rank of common labor, it will be his mistake and misfortune.

The skilled labor component in industrial production presents at this time a greater problem than ever before. It is surrounded by new circumstances, by vast combinations of capital and interests that naturally tend to separate employers from workmen and to promote what the unions seem to be aiming at—the elimination of the individual and substituting a catalogue number in his place.

The aims being the same on both sides, the issue is thus narrowed down to how wages can be exacted or withheld. Animosities are growing stronger, and what the end will be no one can foresee. Secret profits, secret organizations, elimination of the personal element and of humanity, point to an increase of labor disturbance, which, as our European friends predict, will have its center in this country and its focal center on the Pacific coast.

I think that anyone who has carefully observed the matter, must conclude that the first and only logical remedy is to make skilled labor responsible, so that its earnings shall arise

directly out of its product by some method such as has been indicated.

Suppose, as another example of a contract system, the owner of a foundry were to assume an estimate for iron, fuel, sand expense, losses by accident, profits, and so on—data which his own books will furnish—and then contract with the workmen to produce the castings by the ton, paying a weekly wage, charging it to the labor estimate and dividing the surplus if any, pro rata among all the workmen—not dividing it between the workmen and the firm, as the profit sharers propose to do, but giving it to the men who earn it. Castings could be put into classes, according to weight, green or dry molds, and so on.

I can imagine no impediment to such an arrangement, except a want of confidence between employers and workmen; and, if confidence is wanting, we are in a bad condition indeed. I have acted as arbitrator in settling disputed points in such a system, and have found no trouble whatever. If tackle broke, or if losses occurred, by accident partly the fault of owners and partly of workmen, or if faulty castings were made, such things were adjusted without difficulty; and I must add that in no case were there any unreasonable demands on the part of the workmen, who became, in effect, copartners in the business, and relieved the owners of many details of management and of expenses attendant on time work.

The basis on which contract work must rest is an inflexible honesty in accounts and in all other matters; and, unless this component is present, there is distrust, and the co-operative idea cannot be put in practice. Under a contract system I have no doubt that the product of a certain amount of wages would, in most cases, be increased 25 to 50 per cent over what time wages would produce, and there would be no grounds for strikes and contention, when custom had established prices, and this would soon follow.

Even our Asiatic friends are moving in this direction. The Chinese take contracts for building dykes in the Sacramento valley at a certain price per cubic yard.

The title and scope of this paper do not include any remarks upon the immediate causes that have led to recent strikes of skilled workmen; but, as these causes are the results of conditions that have been discussed, some brief remarks will be in place here. Principal among these immediate causes is the fluctuation of prices in products and commodities, especially in the necessities of life, such as fuel, food, and clothing. During several years past these have appreciated in price from 30 to 40 per cent, according to different authorities. This is a tremendous change, even at the lowest figures. The increment in the price of commodities has been distributed among the components of production. One portion, I do not think more than 10 per cent of it, has gone to wages, and the rest is distributed among the other three components—material, expense, and profit. A good deal is consumed in rebates to foreign buyers of products.

We need a campaign of education, not only in determining the labor component in commodities, but also in the relation of wages to prices; and, above all, we need education in the policy and circumstances that can so suddenly affect the balance between the various components of cost. One would naturally expect a redundant literature on this subject from the unions; but, so far as I know, they do not discuss even the elementary laws that govern wages. The amount and rate are never separately considered, and, until this is done, no solution of the labor problem is possible on logical grounds, or need be looked for.

When skilled labor demands greater compensation, let such demand be put upon logical and equitable grounds, and it will find support in both public opinion and in legislation. A strike is war, and war is a relic of barbarism. The Swedes have a saying, Killing people proves nothing. This might be translated into, Destroying wealth, time, and business proves nothing.

If the labor component in production falls below its proper place, let skilled men show and prove this thing, and if strikes are then unavoidable workmen will have public sympathy. If a manufacturer sells his product abroad for a third less than

he does at home, and taxes his workmen and his countrymen to make up the difference, let this be shown. If the expense account and profit are overestimated, and if the labor element is cut down accordingly, let this be shown; but force without reason is war, and war is barbarism.

The boards of conciliation and arbitration in New Zealand offer at this time the most advanced solution of labor disturbance in so far as treatment is concerned. It dispenses with the barbarism of labor war, is logical and deserves attention in all countries. The limits of this paper do not permit its discussion here, further than a suggestion that it be examined carefully by everyone interested in the subject.

THE PREMIUM SYSTEM OF WAGE PAYMENT.

BY ALEXANDER E. OUTERBRIDGE, JR.

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If an observer should notice a gang of ten men in any large establishment standing idle all the day long he would naturally be amazed at the apparent lack of discipline; yet it may be confidently asserted that there is no establishment employing a thousand men in which the actual loss of time every day, through idling and gossiping, does not exceed in the aggregate the entire time of ten men for ten hours each day. A loss of but six minutes a day in this way by one thousand men equals 6,000 minutes or 100 hours, or the equivalent of the full time of ten men for ten hours. Thorough supervision of each one in order to prevent this evil of loitering—which in factory phraseology is designated soldiering—is a physical impossibility. Unlike the slave of olden time, whose sole aim was to accomplish as little as possible, even under the stimulus of the lash, the operative of to-day turns out the largest product when he is a willing worker, not needing constant overseeing. The true way, therefore, to influence the individual to accomplish the best results for his employer is to convince him that in so doing he is accomplishing the best results for himself. Few operatives succeed in obtaining regularly day by day the maximum output from any machine; some have not the requisite skill, others fail through lack of attention to small details, such as forethought and method in grouping or assembling the work, others through laziness or disinclination to turn out more than a certain amount of finished material in a day. An operative may also, perhaps, through lack of constant attention to the work, unconsciously limit the output of a costly machine and thus cause loss to