the use of wage incentives. At any rate, the fact that he received the very hearty cooperation of the labor organizations without the use of wage incentives coincides so exactly with my own experience that it makes me believe that there is a very much more fundamental reason for the necessity of eliminating the financial incentive than many managers realize. My own experience in dealing with labor organizations indicates that 100 per cent cooperation can be obtained only when the creative and not the acquisitive motive is appealed to.

When I went to Canada in 1917 to take charge of a group of paper mills there, I found them 100 per cent unionized (although there was not, at that time, a contractual relationship). Shortly took charge, a letter was handed to me by the local committee at one of our plants, which read as follows:

We, the members of Pulp Sulphite and Paper Mill Workers Union, Local No. —, after a careful investigation have decided that the cost of living is far in advance of the wage scale, and voted unanimously at a special meeting held the 20th of April to demand a 25 per cent increase in wages, to take effect on May 1st, 1917. Further voted that no able-bodied man shall be paid less than \$2.50 per day, wheher day or tour worker, aş it is impossible for a man to keep a family on less. Further voted that any man after working 15 days if he refuses to become a union man when called or by the Union will have his card removed from the rack, also that our business agent shall have free access to the mill.

An answer to this letter is necessary on or before May

We remain, yours in anticipation.

Committee.

You will note that the letter was signed anonymously. The labor organization, not being officially recognized, preferred to keep its officers' names in the dark for fear of discrimination against them. I finally found out who the Committee were and sent for them, explaining to them why a 25 per cent increase was out of the question, by showing them that the extremely small earnings of the previous year would be completely wiped out by such an increase. I went on to say, however, that we did want to increase the wages to the prevailing rates in the industry, but could do so only if the men would earn the increase. This I pointed out meant that they must help us to plan ways and means to improve our martufacturing processes; in other words, we did not want extra physical effort, but more brain work.

In order to bring this about, I explained that "we must follow the scientific method instead of the rule-

of-thumb method of doing things." I also explained that there was nothing mysterious or "high-brow" about science; that it simply meant finding out why things went wrong, so as to prevent them from going wrong again, and why they went right once in a while, so that we could make them go right more often.

"When we have the information," I said, "we can use it in one of two ways. We can either tell you what to do, without telling you, why—the autocratic way; or we can put the information into your hands so that you can do the correct thing without having to be told—the democratic or Anglo-Saxon way."

They wanted to know how this could be done, so I explained how records of actual manufacturing accomplishments could be made available continuously to those individuals and groups who were responsible and how this always produced joint interest in increased efficiency. Before I had finished, the Grievance Committee became so much interested that I thought I had made a real hit. So I said to them, "I wish you boys would go back to your Local and ask them to appoint a Committee, one man from each department, to talk over the wage question so we can put that behind us. Be sure, however, to tell them what I have said to you about the necessity for earning the increase and also explain why we cannot give a 25 per cent increase in wages at this time."

Then the Committee woke up. The chairman said, "Mrt Wolf, that is a tough job you just put up to us. Do you know what the Local will say if we go back and tell them what you have said and argue in favor of it?"

I said, "No."

"Well, they will say you put one over on us."

I said, "But don't they trust you fellows?"

"Oh, yes, but we can't explain it the same as you

I then said, "If that is all there is to it, let me come down and talk to the Local."

So it was arranged. I asked our financial man to go to the meeting with me so that he could give the men the financial picture, for it was not very bright. I, of course, told the men what we were proposing to do, explaining to them what I had previously explained to the Committee. They were very much interested, particularly when I said that we did not want to speed up any one physically, but wanted rather to create conditions where they could help us to plan ways and means for improving our methods of pro-

duction. The appeal was primarily to their intelligence; not to their emotions. We had similar meetings at two of our plants.

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At the second meeting, the National Organizer for the Dominion of Canada was present. He had been discharged for his activities in organizing the Local about two years prior to my coming. After I had finished speaking I called him by name, asking if he were in the room. When he came up, I shook hands with him and congratulated him. He didn't say it, but he looked, "what for?" I said, "Because you have organized this mill 100 per cent and you ought to be proud of it. If you had not done so, it would have been necessary for us to organize a Local through which to deal with our employees. You see, you have saved us all that trouble. Would you mind telling the boys here what you think of our plan, and whether or not your organization, as a Union, could cooperate with us to get the kind of results we have been talking about?"

Of course, he made a speech in favor of the program, for, after all, what a man wants most is a chance to use his planning faculties and this was what we were proposing to give our workers a chance to do.

As a result of this meeting, the men appointed a Committee to dispose of the wage question. After we got that behind us, we began working with our superintendents. As you probably know, the "rule-of-thumb" superintendent is one of the hardest nuts to crack in our industrial life. He is the product of the system, however, so we must not blame him for it. We knew that when we began keeping records of what was actually would show up weaknesses in our methods. However, we wanted our superintendents to realize that we could not-hold them responsible for what they did not know and that we did not want them in any sense to feel on the defensive when inefficient practices were shown to

After we thought the superintendents were in the proper frame of mind, I sent for Jerry Carey, International President of the Paper Makers Union. In 1897 Jerry ran a paper machine and I back tended for him. Though he knew that I was a practical paper maker, he was inclined to be suspicious of me because the mill I had operated in New England was known as a non-union mill.

When I explained to Carey that we wanted to begin keeping records of our paper machines, he told me in unmistakable terms that he was opposed to

records because they tended to make among the men. As he expressed it: "I have seen knock-down, drag-out fights at the end of a shift, because of disputes arising as to who should get credit for a roll of paper coming off the machine at the time the shift changes,"

Carev explained that they wanted a spirit of good fellowship and brotherhood among the men and that. competitive records of production tended to destroy this feeling. I explained to him that we did not want to install records of this kind, but records of quality. He wanted to know if I meant a recording clock to tell when the paper was off the machines, so that the superintendents could call the machine tender down the next day. I said, "No," and then explained to him just what I meant, showing him a lot of records made from actual operations. Carey listened for about an hour and finally banged his fist on the table and said: "By, George, I'm with you! When you first spoke of records, I did not know you meant records like that. Do you know what that means?"

I said, "What?"

"It means," said Carey, "that the craftsmanship will come back into the paper industry. In these big companies a man is fast being made into a machine. The tendency is to have the machine tender run the wet end of the machine and the back tender the dry end; the third hand 'jacks' the rolls out to the finishing room; the fourth and so on. They have specialists come in to sew the wires, change the machine clothing, things that the paper makers ought to do. It is because we want our men to be all around paper makers that we insist upon the members of our organization doing work of this of having it done by the maintenance crew."

He then pointed out to me that the result of records which stimulate a man's thinking process could not help developing the craftsmanship idea and be wanted to know just what I had in mind. I explained to him that one of the principal difficulties we were having was the varying weight of the paper. I was sure, I told him, that if the machine tender had a continuous record of the weight of the paper as it came off the machine, and if this weight were plotted against an ideal standard line, the machine tender would be just as much interested in having the weight uniform as the management. This meant putting a man on each shift, for every two machines, to take