

for machine shop work, but have not had the time as yet to publish this data. Some time ago I sent you our book entitled "Concrete, Plain and Reinforced." This is a much more elaborate looking book than the one on "Concrete Costs," and yet it does not involve one-half the labor to write it taken in the latter

I am of course very much interested and pleased to hear that you propose to reprint the book on "Shop Management." This, for practical men, is much the more important of the two books.

I most sincerely hope that your Minister of Marine, Mr. Bodin, will introduce our methods into the French navy yards. He is entirely right in stating that it is unjust to the State that it should not share in the gain which is made, and I am sure that Mr. Bodin would find the French workmen entirely ready to share the gain made under our system with the State. This has proved true in all cases in this country.

You are already leading us in France in having established a laboratory in the Conservatoire des Arts et Métiers for studying human effort. Your scientific methods are so magnificent in France that I confidently expect that in many ways the French people will lead us in the introduction of the principles of scientific management, before many years.

I cannot reiterate too often the great appreciation which I have for the work which you are doing for scientific management in France.

Very sincerely yours,

Fred. W. Taylor

P.S. I am having sent to you, from the publisher, a copy of a book called "Making Both Ends Meet," by Miss Sue Ainslie Clark and Miss Edith

MODERN industry is extraordinarily complicated and will become increasingly more so. Every article is composed of a great number of separate pieces In the end this complication gives a more economical result, but only on condition that all the services combining to a common end are perfectly co-ordinated, that each one does his task at the right time. This is so essential now that there is no modern enterprise

Wyatt, giving the results of Miss Wyatt's investigation in several of our companies employing scientific management, in which women were working. I may say that Miss Wyatt, when she first started this investigation, was bitterly opposed to the principles of scientific management. She believed that it would result in great injury to the working girls; but the outcome of her investigation, as you will see by reading the last chapters of the book, was just the opposite. She found scientific management a very great benefit to the working people. I am sending you this in view of the statement made in the French papers that our system of management is injurious to the workman.

I have also asked the Secretary of the Society for the Promotion of Engineering Education, at Ithaca, New York, to send you a copy of the "Symposium on Scientific Management and Efficiency in College Administration," comprising among others, papers presented at the Efficiency Session of the Twentieth Annual Convention of the Society.

November 13, 1913

My dear Mr. Le Chatelier:—

I have just received an advertisement of the second edition of "Principles d'Organisation Scientifique des Usines," which was published by H. Dunod et E. Pinat, and which is now being sold at two francs per copy.

I am delighted that the work is placed before the public at so low a price, and want to again thank you for the wonderful interest which you are taking in this matter.

Very sincerely yours,

Fred. W. Taylor

where this co-ordination is not the object of the constant attention of its directing head. This is what they call his administrative function. Taylor has not invented co-ordination but he has made a study of it, as he has all of the factors of production, with extreme care, always applying the maxim: "Reflect before you act." (Henri Le Chatelier, *Philosophy of Taylorism* to be printed in a future issue of the *Bulletin of the Taylor Society*.)

Vehicular Accident Prevention¹

A Study Conducted in the Delivery Department of R. H. Macy & Co., Inc.

By J. E. OGARA

Superintendent of Delivery, R. H. Macy & Co., Inc., New York

THIS paper might better be called "The Evolution of an Accident Campaign"—for that is the story I shall tell. In order to describe the process properly it is necessary to have a setting, or status quo, into which on November 10, 1926 was introduced the intensive accident campaign known to all by the earmarks of drivers' meetings, car cards, blackboards and bonuses.

During the years immediately leading up to the accident campaign era in the life of the metropolitan stores, R. H. Macy & Co., Inc., piled up, I believe, more than its share of vehicular accidents, caused without doubt by careless manipulation of vehicles by drivers. The usual things were "done about it." If a driver had too many accidents he was fired; those in the process of being fired were thundered at. Perhaps the driver caught more hell for accidents than he did for other inattentions to duty; perhaps he did not. At any rate, the corrections were admittedly few and haphazard at best. Instead of making progress we seemed to be slipping and our insurance premiums increased each year. On November 10, 1926 we entered the lists as the first store to employ a nationally known safety engineer, undertaking an intensive drive to improve our condition. This drive was not confined to the delivery department alone. It embraced the whole store and without doubt was responsible for materially reducing the number of preventable accidents. We shall here confine ourselves, however, to the campaign with the store's drivers.

A word about the drivers is in line, however, before beginning. Employment statistics show that our store compared favorably with other stores in turnover and in the age of drivers. We consider these two factors important because it is well known that the promotion of safety depends in

¹Printed by permission of the National Retail Dry Goods Association before whose February, 1928, convention this paper was presented. The paper was also published in their *Bulletin* for April, 1928.

some measure on the driver's feeling of security in his job and on his sense of responsibility. It is generally agreed that the latter quality is not universally possessed by youth. In incentives on the job we also compared favorably—or, it might be said, poorly—with the other stores. The starting wage for a driver was \$27.00 a week. At the end of six months' service he was given an increase of one dollar a week and a similar increase for every successive year that he worked thereafter, up to a maximum of \$38.00 a week, regardless of his performance on the job. This so-called automatic salary advance plan is important in this connection and, incidentally, its use in the department store delivery field is almost universal. Modifications, if they exist, lie only in the amounts paid in other organizations.

With the above as a background it is possible to proceed with the story of the campaign. The safety engineer brought to us safety technique which can be summarized as follows:

1. Weekly meetings with drivers.
2. Bonus payments to each driver of \$5.00 for every twenty-five consecutive days of driving without an accident.
3. Large blackboard displays in each delivery station—a message designed to remind the driver of the need for safety. Some of these messages were ingenious and attractive. We also employed red and green blinking lights at each end of the blackboard in the store delivery stations.
4. Small cards carrying a reminder of safe driving attached to the dashboard of each car. Different colored cards and printing inks were used. One reminder car card reads, "Drive as you would if the pedestrian near your car were your mother."

At meetings of the drivers the safety engineer and the delivery superintendent described to them the necessity for safe driving and pointed out in an easily understood fashion the underlying principles. After a short period of trial it was decided to hold