

ment, even though the total amount of money involved was high. Purchase orders were made out and the business placed. Here the purchasing agent was through after he had secured the delivery and arranged for the proper payments. The engineer had just begun, however, and from the day the heaters were received, to the time they were in hundred per cent operation, he had made a dozen different plans and presented them to the shop before he was able to hit on the one that would convince the operators that they should be willing to give the new way a trial and find out for themselves that they could benefit as well as the company. Today if any attempt were made to remove the electric heaters and place oil in their stead there would be an uproar.

The point of interest here lies in the fact that without the engineer the agent could never have succeeded in getting the heaters started in production, and without the purchasing agent's ability to secure favorable terms on the transaction, the engineer could not have hoped to secure the necessary appropriation. In short, action on the part of either that would savor of anything but the closest team work would have eliminated the final \$300 a month saving which was effected.

Any individual, no matter what his point of control may be in a plant, if left to himself will tend to swing first all one way and then all the other, and it is impossible for any one individual to get the best result without a check from some outside source.

Word had gone out that only the best was to be bought by way of supplies for an extensive hydraulic system. This order with the authority of the production department backed by the management, was placed on account of the excessive loss of production time due to break-down and failures in certain parts of the system. One of the principal points of trouble was in the hydraulic operating valves, where there were four gaskets to each valve which, due to the construction, had to pass open ports each time they were moved. These gaskets lasted on an average of eight hours of continuous service, and when the best grade was obtained, cost something over a dollar each. When it is stated that there were some forty valves and that the plant operated twenty-four hours a day, it can be seen that the expense was considerable. The agent knew from the requisitions coming across his desk that the gaskets were failing, so it was natural that he should feel they were at fault and increase the price and quality of the grade purchased.

The engineer out in the shop, however, found that

he could not keep his pump valves, which were made of bronze, from breaking under the great pressure and getting into the line. He knew that these small pieces of bronze protruding through the ports of the valve were cutting the leathers and would continue to cut them regardless of their grade. He therefore got in touch with the agent and made his report to the end that the cheapest gasket made was substituted at a price of about fifty cents, and used until he and the agent could locate and install a bronze that would not break within a reasonable time. Together, the agent locating bronze sources and the engineer testing each make as it arrived, they were able to find one that stood up very much beyond their expectations. This was installed in all the thirty pumps and the results observed.

It was found that it would be unnecessary to go back all the way to the best grade of gasket after this bronze was in service and a compromise was hit at around seventy cents, which would give excellent service.

Together, they had once more saved about \$100 a day, without taking into consideration the increased production possibilities. Again it can be seen that had the agent been unwilling to bank on the word of the engineer and to play with him to the limit, or had the engineer been content to let the agent follow the letter of the order of best materials, very little, if any improvement, could have been realized.

Almost an unlimited number of examples could be given to illustrate the points in question. The foregoing, however, will probably suffice to bring similar conditions to the minds of the readers, and a brief summing up can serve to emphasize the importance of the engineer-purchasing agent combination, to the welfare of their company.

From the standpoint of management their contacts with the outside are fully as important to the company's standing as is the conduct of that company's direct selling organization. They can work together and act judiciously toward the outside salesman, getting results that in many cases are remarkable, or they can act at cross purposes and put their firm in very bad repute indeed. The management, furthermore, can know without investigation that the degree of good or bad accomplished depends directly on the thought management has given to the subject and the care they have exercised in establishing rules of order.

From their own outlook they can appreciate the fact that either is almost helpless without the assistance of the specialized knowledge and ability of the other. They can work together and build their positions up

to the point of company importance as great as any department answering to the management directly, or they can feel that each is sufficient unto himself and stay in the position of secondary consideration, from which once in, it is exceedingly hard to emerge.

The word "cooperation" is a much over-worked one, and will not be used in this connection, for, as a matter of fact, in order to obtain all that can be obtained, the agent and the engineer must do more than cooperate—they must be a part of each other. They must be able to go to that point where stops their individual authorities based on their respective qualifications, and they must be able to stop there with the unquestionable knowledge that the other will take hold and carry through.

If they can do this, neither need worry about the fact that his department started out as secondary in importance to others, for management will be utterly unable to place them anywhere but up at the front, the point toward which both are striving. A word at the council table and a voice in the business is a great deal better than the routine filling of requisitions placed and of repairing broken equipment as it breaks.

"There is nothing so good that it cannot be improved upon," providing facts can be made to replace opinions and the solution found in the assembly of those facts.

DISCUSSION¹

IT may not be generally recognized that the National Association of Purchasing Agents has applied scientific principles in the solving of its major problems. I think, therefore, it would be well to tell you, of the TAYLOR SOCIETY and our guests, of some of our more important aims, growth and accomplishments.

The fundamental objects of the association can be classified, generally, as follows:

1. Associating and organizing individual purchasing agents and buyers into a centrally organized body.
2. Fostering and promoting friendly relations between members with the resulting privilege of exchanging ideas and opinions.
3. Familiarizing the members with the products they buy.
4. Securing more uniform purchasing routine and methods.
5. Standardization of specifications, classifications, etc.

¹ By Claude T. Yates, Purchasing Agent, Corona Typewriter Co., Groton, N. Y.

6. Gathering and disseminating data relating to the general subject of purchasing.

7. Improving existing methods for the diffusion of market information.

8. The support of domestic industry.

The National Association of Purchasing Agents was organized in New York City in 1917. It has not quite completed its sixth year of activity. Starting with a membership of approximately two hundred, it has grown so that today the roster shows a little over four thousand members. The National body is composed of forty-two affiliated associations, three of which are in Canada.

While a large part of the period of association existence has been spent in formative work, it has among its records of accomplishments, the following:

A Standardized Catalog Size. Just a glance at any purchasing agent's catalog file will show the need of uniformity of size. This catalog standardization idea, however, did not originate in the purchasing agents association. Many trade organizations have attempted it, but it remained for ours to push the idea over "a line between theory and practice. The national catalog size has been endorsed, among other organizations, by the United Typothetae, and Secretary Hoover's Committee on Conservation in its official, printed report commends our work. One of the largest catalog houses in the country prints only catalogs that conform to the N. A. P. A. recommendations. Also the United States Bureau of Standards has given its approval.

A Standard Invoice Form. This is another visionary idea of long standing which our association has transformed into an actuality. Here our recommendations have the endorsement of the American Railway Association, the National Association of Cost Accountants and others. The U. S. Army and Bureau of Supplies of the U. S. Navy tell us that the standard form contains all the essentials of government accounting requirements.

A Standard Coal Contact Form. We, in Syracuse, are particularly proud of this for the reason that it was conceived within the walls of this room and formulated almost in its present form by one of our committees. To Mr. Mitchell, of The Rome Manufacturing Co., is due great credit for his work on this contract form and for his ability to fight his battles to successful conclusion with men of high standing and reputation in the coal industry. This contract binds both the seller and the buyer to an equitable performance. The "Black Diamond," probably the most active of coal trade papers, editorially