

value, but its capabilities, the utmost duty that can be derived from each unit, the percentage load that will render the highest efficiency, taking into consideration the interest charge on the investment, the depreciation accruing and the continual advance being made toward more perfectly efficient machinery by the manufacturers. This can be determined only by actual tests intelligently conducted; and the results, to be of value, must be so compiled as to be available for comparison with performance data in operation, as only in this way can the operation be brought to even approximate the ideal.

The standard by which everything must be measured is the service rendered; this applies not only to the service rendered by the plant to the utility, but by the utility to its customers. The service rendered the utility by its plant is governed entirely by the manager; by his ability to know his plant, to build and maintain an organization loyal to him and his aims, to derive the highest efficiency possible from his plant, to anticipate the demands of changing conditions and make the necessary provisions.

The determination of the value of the physical plant, together with the point of highest operating efficiency of each unit, represents but a small portion of the manager's work in securing the best possible service from his plant.

The work of building and maintaining a loyal organization is fully as important and requires infinitely more ability, judgment and application. It is, in fact, the test of the real manager, as the service rendered the utility by its plant is entirely dependent on this element. Personally, I have had no success with any form of organization having more than one head. This applies not only to the utility as a whole, but to each department and bureau, and in this connection one must always remember responsibility fixed cannot exceed the authority granted. To me, a bureau, department or utility with more than one head, a job with more than one boss, is as ridiculous as a two-headed hen.

In building his organization the manager must know the results desired, the qualifications necessary to get the results, and must be able to judge human values with this in view, otherwise he cannot hope to have a well-balanced, efficient organization. The manager's work is not completed with the building of his organization. To be of real value it must be maintained. It has none of the attributes of perpetual motion other than the constant expense. Its maintenance requires a world of tact, infinite patience, and, above all, absolute fairness, with a real knowledge of his physical plant, its value and possibilities with an operating force properly organized and thoroughly loyal; the service that can be commanded from its plant by a utility is limited only by the ideal.

The service rendered its customers by a utility is equally dependent on the manager for the attitude of his operating force will be largely a reflection of his own. He must always bear in mind that his customers have a right to expect prompt service cheerfully rendered, as well as courteous attention at all times. Absolute fairness is as imperative in the manager's dealings with the customers of the utility as with his operating force, as in no other way can he build up a real "good will" asset.

Standards of service are being established by the several public service commissions. A great many of those prescribed have been exceeded for years by a number of the utilities. Others will, I believe, work a real hardship on the utilities without materially adding to the service rendered the customers of the utility.

Every manager is continually confronted with changing conditions, not only as it affects the physical plant but

in the service requirements, the increase in population served, the extended area covered by his distribution, changes in direction of the city's growth; all these intently affect the utility and must be anticipated by the manager if he would avoid serious embarrassment in serving his customers.

If a manager really knows his plant as outlined he will not only be in a position to know, but will know whether it pays, and how well.

In my own work I have found that a slight change in the method of firing saved tons of coal in generating steam; that apparently slight changes in piping prevent unnecessary waste of energy; that a careful routine saves hours of unnecessary labor in reading meters and delivering bills; that a division of the city into payment districts, while in no way reducing the service to the consumer, saves the utility approximately a thousand dollars per year in office labor.

In the item of permanent records of his plant, a manager can, through careful selection or development of forms and accuracy in their use, save much unnecessary labor and render better service. I have found card systems and loose leaf records more flexible and, consequently, more readily adapted to the requirements of a utility.

To sum up, the manager must be all things to his utility and his customers. He must always be in touch with his plant, with his operating force, with his customers and with his field of work in general, as no utility can exist for itself alone. There is a constant advance in equipment, methods and service, and only by keeping fully abreast can any manager hope to render the best service to his utility, its customers and himself.

RAILWAY EARNINGS.

The following are the railroad earnings for the first three weeks of April:—

Canadian Pacific Railway.

	1916.	1915.	
April 7	\$2,482,000	\$1,766,000	+ \$716,000
April 14	2,577,000	1,701,000	+ 876,000
April 21	2,343,000	1,623,000	+ 720,000

Grand Trunk Railway.

April 7	\$1,155,486	\$1,008,320	+ \$147,166
April 14	1,024,505	864,658	+ 159,847
April 21	1,059,661	869,772	+ 189,889

Canadian Northern Railway.

April 7	\$ 677,000	\$ 457,000	+ \$220,000
April 14	668,900	463,700	+ 205,200
April 21	634,000	442,300	+ 192,000

The Canadian Northern Railway's figures for March are as follow:—

	1916.	1915.	
Gross earnings	\$2,607,000	\$1,898,500	+ \$708,500
Expenses	2,240,600	1,397,700	+ 842,900
Net earnings	366,400	500,800	— 134,400
Mileage in operation	8,270	7,181	+ 1,089

The company states that the decrease in net earnings compared with last year is due to snow blockades and other interruptions to movement of traffic, which increased operating expenses abnormally.

The March comparative figures of the Canadian Pacific Railway are as follow:—

	1916.	1915.	Inc.
Gross	\$10,380,981	\$7,852,989	\$2,527,992
Expenditure	6,950,651	4,879,974	2,070,676
Net	\$3,421,330	\$2,973,014	\$ 448,315