

upon as the bone and sinew of the concern; each one should be imbued with a feeling of loyalty to his foreman, and have such a sense of the chain of responsibility, from the call boy up that he will realize it is only by his individual efforts that the best results can be obtained. The foreman who gives thought and study to his business, and is thorough in system, straightforward, honest, and true in his dealings with his staff and other departments, excels; the most careful foreman is one who, while exercising close supervision, is possessed of tact and diplomacy, as no matter what the conditions are or how much expense has been gone into for equipment, etc., if the staff is not properly managed the result will be disappointing.

The importance of knowing costs promptly is an absolute necessity in successful locomotive dispatching this does not necessarily mean elaborate statements of figures, etc., but rather implies a systematic method of expending money, watching and knowing costs on lines that are applicable to any other business. To quote from H. H. Vaughan's presidential address at the recent Master Mechanics' convention: "In short, that without in any way reducing the interest we have in locomotive engineering, we take up in a far more business-like and serious way the financial problems connected with the operation of the loco. department, the form of organization that will give the best results, and the commercial aspect of work of the motive power official in conducting his department as though he were manager of a large business enterprise."

A foreman who can in a quiet way make it known to his staff just what a job is worth, and if necessary be prepared to demonstrate that he has gone into the question sufficiently to know his statements are correct, will enjoy the confidence and loyal support of all.

Investigations should be made into cases of damage and the cause ascertained if at all possible, so that all questions relating thereto may be answered promptly and recommendations outlined that will assist in reducing possible future cases to a minimum. It should be the ambition of those handling correspondence to feel that when a file of papers connected with such an investigation leaves their office, the investigation is complete as far as they are concerned.

The chargeman or leading hand should so figure on his work that only at a time when power can be best spared should heavy repairs be undertaken, at which time it is preferable to see that all that is possible is done, and done in such a manner that there shall be no necessity to hold the locomotive out of service at the first turn around point, to go over what had not been properly done in the first instance. The chargehand should be in the relation of a doctor with the locomotives as patients; he should know the particular ailment or tender spot of each locomotive and by encouraging engine crews to explain defects and talk over conditions, be in a position to decide just how long it would be wise to keep an engine in service without attention; this will greatly assist in the economical handling of repairs. He should make it apparent to his foreman that there need be no anxiety as to his ability to handle his position, or of the question as to whether he can carry the responsibility of work done under his supervision, by cultivating friendly relations with both loco. crews and shop staff; he will soon find them becoming so interested that they will of their own accord feel like sharing the responsibilities, thereby lightening the daily load.

The chargehand should consult with his foreman regularly as to his doings and how he figures to handle his work; he should feel it is his privilege to make recommendations that will, in his

opinion, result in economy or a betterment of shop conditions. He should be prepared to give an intelligent and honest expression of opinion as to the cause of any failure, having in mind that it is his business to know, and if it is a case of either faulty workmanship or material the facts should be given without hesitation, making it clear that he is in all respects worthy of the position he has been selected to fill.

The machinist, boilermaker, blacksmith, and carpenter should be closely in touch with the chargeman or leading hand and should lose no opportunity of bringing to his notice conditions or defects that may have been observed which, in their opinion, might lead to failures. Since from this class of men intelligence and skill are looked for, each one should, when given a job, use thought as to how the work is to be performed with the best possible dispatch, always having in mind that a failure from inferior workmanship reflects on the shop and directly on himself, and also bearing in mind the fact that when vacancies occur for higher positions, selection is invariably made from among those who have been energetic, thoughtful and loyal in the general performance of their duty.

The engine hostler is a very important person in the roundhouse staff; he should be the diplomat of the concern, and being in daily contact with the locomotives and crews, must by meeting the men familiarize himself with the condition of their engines. He should know of any defects that would necessitate the blowing off of boiler, emptying of tank, changing of wheels, etc., and should in turn arrange to place the engine on the proper pit allotted for the work required, and incidentally advise the chargeman of his doings; he should know the individual peculiarity of the men, and give serious consideration to the importance of their getting all the rest possible, and by his many acts of common courtesy inspire such a confidence as would cause the foreman no concern regarding detentions from waiting engineers and firemen. Should a cause of discipline be under consideration, the hostler should be of such standing that he might be looked upon as a referee and be prepared to give a straightforward opinion if questioned by the foreman.

The apprentice of to-day may be looked upon as the mechanic of the future, and while it is true the different companies have taken a greater interest in the training of the boys, and as far as they can have made it possible for the boy to enjoy all the privileges necessary to qualify as a successful journeyman, it must also be borne in mind that time has brought about change in equipment, more efficient machines, systems and methods of handling repairs, so that the responsibility for the training of the boys from the shop standpoint has increased in proportion, and it is the duty of all fair-minded men to keep this before them, and so by their example make it apparent to the lad that his selection of the trade is a wise one. The cultivation of studious habits and perseverance, and generally of manly deportment, should

be encouraged from the start; there should be a feeling grow up between man and boy that their interests are mutual. By exercising kindness and patience the man will soon see the fruits of his labor in the training of the boy, who will seek his advice and confide his little difficulties and secrets to him; this will be the time to discourage any inclination to coarseness or unmanly behavior and to impress on the boy to at all times endeavor to keep the dignity of the trade uppermost in his mind, so that when the time comes for the boy to start out for himself, he will be a mechanic reflecting credit on the shop that turned him out. A story occurs to me at this moment of a man who secured a position in an up-to-date shop, who on starting was given a piece of work that required accurate filing; the foreman noticed in passing by the new man that he was handling the file like the bow of a violin. On calling the man's attention to this, and intimating that work of that kind could not be permitted the man replied: "If I only had the file I served my time with, I could show you how to do a good job." The point I wish to bring out is that in the training of our boys we should endeavor to teach them the use of any file; or, in fact, of any tool or machine so thoroughly as will ensure getting everything possible out of it.

To the enginemens belong the task of conducting their respective duties in such a manner that by their individual and collective efforts, the district with which they are identified generally, and themselves individually, shall be prominent in favorable mention when comparisons are being made. The changes that have recently been made, and those that are constantly taking place in locomotive design, call for not a little thought and study on the part of engine men. The engineer of to-day should closely watch the new devices introduced, and only be satisfied after he has become familiar with the workings of the same. He should avail himself of every opportunity of being present when any discussion or demonstration is being made pertaining to his business, and should aim at becoming an authority on some particular feature of his business. This, along with a keen sense of economy, the exercising of care and intelligence when reporting repairs required, having in mind what it costs to perform work that might be done more economically, at a time for instance when the boiler is being washed and the like, and the exercise of thought and judgment in other ways, will result in considerable saving. The ideal engineer will be careful to see that no entry of repairs required is recorded over his signature that there is any doubt about; there are always ways and means for the proper method of locating defects, and until such defects are known the report should be withheld. When on the life there should be a desire to gain a reputation for good judgment in train handling in order that the superintendent and train dispatcher may be justified in making the statement that they have men on their districts who can do, and are doing, good work, for experience has shown that superintendents and those in charge are liberal to a fault in sounding the praises of enginemens rendering good service.

The economical use of fuel has always been, and I presume always will be, a subject of interest. There can be no question as to what can be accomplished when all concerned are fully alive to this question, and while the engine crew can, with careful practice, take advantage of each and every move made by each other in respect to this item for the most efficient working of the machine, I would beg leave to quote the following extract, bearing on this subject, from the report of the committee dealing with this at the Master Mechanics' Convention of June,

#### A PERSONAL MENTION.

The Managing Director of the Railway and Marine World left Toronto hurriedly, Oct. 15, to sail by the s.s. New York for Plymouth, en route to London, Eng., in response to a cablegram advising him of his second daughter's sudden, and apparently hopeless, illness there.

This mention will explain his present inability to attend to personal correspondence and other matters requiring his individual attention.