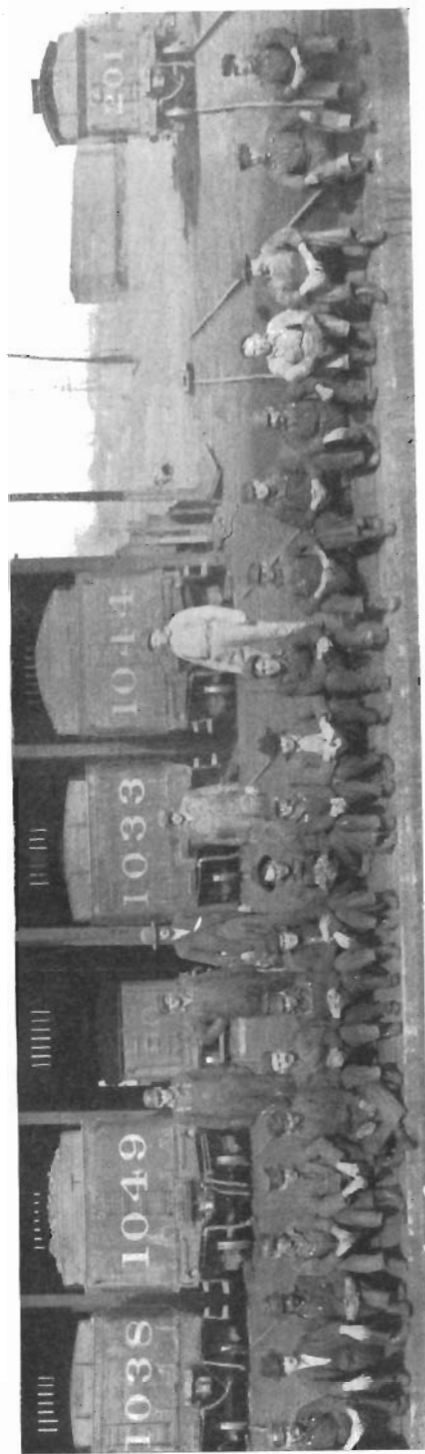


EMPLOYEES SOUTH SIDE ROUND HOUSE, SPRINGFIELD, MO.





Vol. VIII, No. 3

SAINT LOUIS, MO.

March, 1914

## PERSONALISM IN RAILROADING

*H. W. Jacobs, general engineer, in an article in the Engineering Magazine, brings out some ideas well worthy of the attention of those interested in railroad service. A large portion of this article is herewith presented:*

Some have the quality of idealization or imagination without the creative or practically constructive force; their ideas are still-born and fail to survive from want of ever receiving living expression; others have qualities of patience and slow persistence bringing into real being ideas or purposes which are set before them; but few combine these qualities in successful degree and the few that do are the leaders and masters.

Most men in charge of modern enterprises, however, are not true leaders or commanders; as in our political scheme, so also in our industrial organization, the men are executives—they approve or veto, they select, they give form to and execute the ideas of the staff, of others. And so it must be; the manager must hold the welfare of the business entrusted to his supervision—as it may be advanced by any policy, whatever its source—above a personal egotistical valuation of his

own originality; and the lesser man of the staff, who is employed for his good ideas, but who perhaps has not the other qualities essential to an executive (since he has not earned the managerial position) should welcome and be glad in the opportunity afforded of having his ideas elaborated into concrete, living, useful daily realities, rather than stand to one side and think "I, I contrived this thing, but others, because they have money to employ me, get the credit and the benefit."

The value of ideas, lies in the ability to use them constructively and to execute them. Day-dreams are generally of less value than the time spent in building them.

In industrial enterprises—manufactories, shops, transportation companies—the sympathy and co-operation of the foreman and others most immediately directing the actually productive labor, is most essential for

the successful introduction and application of progressive and useful ideas and methods.

I have known foremen and engineers, who, when it was first sought to introduce improved methods and devices or advance types of locomotives, thought it was their duty to try and defeat the object of these devices and new designs by failing to run the jig or to operate the tool and engine to their best advantage. This is destructive criticism of the worst type, because it cheats those who employed these men, as well as because it is dishonorable to those engaged in putting these tools and ideas into effect.

In the motive-power operation of a railroad, a road foreman of engines, more than any other man, should be the evangelist among engineers and expound the new methods of progress, and like other reformers, should be able to paint with a broom the object to be attained.

An engineer on the road should be as supreme on his engine as a captain on his ship; undoubtedly it is true that many "engine failures" are due to the fact that in some cases engineers are directly opposed to the shopmen and their work, even being encouraged in such an attitude by some of the officials, such as road foremen of engines, to report engines for unnecessary work, in order to burden the shop men needlessly, or to show a disposition not to assist in keeping an engine going when some defect develops, so as to throw the blame for this condition upon the shop men.

It is a road foreman's duty to criticize and to have corrected any improper work done in the shop. No one who is not supersensitive objects to criticism that brings out weak spots in any method or plan, as criticism of

this kind is far more helpful than undue praise which makes a man feel that he could not make a mistake if he tried. There is also a kind of criticism which helps neither the giver nor the recipient; the kind that is destructive and not constructive in the least. True, it may set the originator thinking that perhaps a certain point may be improved, but there is no hint of the critics ideas on the subject, nor indeed whether he has any. It is one thing to look over an innovation, such as a method, or tool, or practice, and to give out the uncalculated for statement that it is "not as it should be," or that "one would not have done it in that way"; and it is a very different thing to be presented with a problem and to be asked to devise a method of putting it into effect and practical operation. In many cases the critic has offered no suggestions in the beginning and only condemned the work that has been put into practice to show that he knows that it might have been made or done differently. The conception and putting into effect of tools, methods or practices requires a certain amount of imagination, which is a quality that is lacking in a critic of the destructive type. He can see a method after it has been thought out and put into effect, and he gets the idea that a difference here or there might be better; but when it comes to creative criticism, making a suggestion of value, the destructive critic is all at sea. The constructive critic on the other hand has suggestions for improvement that are real, points out ways and means of making desired changes and is a real helper rather than an irritating fault-finder.

Then there are those who oppose new policies, but who do not openly

object to them. These men in referring to some advocate of an improved method will admit that man's brilliance, or ingenuity, or peculiar ability and will follow up this apparently friendly attitude with an apology (indulgent perhaps and a little patronizing) for some supposed weakness of character, bad habit, incapacity, religious belief, of the person under discussion, couching the expression in such terms and selecting the particular defect that is to be enlarged upon in such a way as most to appeal to the prejudices of the hearer.

Equally restrictive to the introduction of any new device or system on a railway is the extreme element of conservatism that has such a stronghold in the minds of the average railway official, from the heads of departments down to the foremen and even to the men in the shops; a conservatism fostered by years of unbroken habitude and firmly established by following devoutly the recurrent routine of daily duties. From this conservatism itself, coupled with a fear of disapprobation should a mistake be made in the adoption of some method or device differing from the old and established regime, springs a destructive criticism which, though it may be given with the object of self protection, often results in an irreparable loss, both the object of criticism and to the criticiser.

Most railroads are continuing to use almost exclusively the simple engine of half a century ago, modified only in its size and power, but employing the same essential design; and American railroads have been behind other engineering progress in questions relating to the mechanism of their locomotives. The marine engine had its real development during the identical

period in which the steam locomotive has so potently changed the face of the land and the destinies of its denizens. "Fulton's Folly" was a simple side valve engine operation upon a transverse shaft and the locomotive of today is little more. But the marine engine soon turned to the screw propeller, soon adopted the economical compound cylinder type (largely stimulated by experiments in the United States navy) further extended this principal to the use of triple and quadruple expansions, of twin and quadruple screws and has lately adopted the still more efficient and facile steam turbine. And the art of marine motive power will not stop here. Already plans are seriously discussed looking to the application of some form of gas or oil internal-combustion motor on shipboard; indeed these motors already propel the swifter, cheaper and more convenient power boats of smaller size.

What parallel to this can the railroads show? True, in fifty years our locomotives have increased from thirty tons to two hundred and ninety tons, total weight, but in the same period steamships have increased from eight hundred to forty thousand tons displacement and marine engines from three hundred to seventy thousand horse power. But where the compound engine was early adopted on shipboard from reasons of economy of operation and space occupied per power unit developed, those reasons, still more important in the narrow confines of rail traffic, have not until recently been effective in railroad circles in America in making success of the compound locomotive.

There is nothing the matter with the compound locomotive; the only trouble with the use of these engines in the

United States is that they require a greater attention, a greater detailed supervision of their finer mechanism, than is the case with simple engines which are cheaper to build, perhaps cheaper to maintain (though not on a performance-unit basis) and certainly less efficient in the use of power and in the haulage of loads.

As proposed by one engineer, we should have today, instead of simple engines and boilers whose greatest efficiency is demonstrated to be at about 180 pounds pressure, superheated and turbo-generators transmitting power to all wheels of the locomotive unit through electric motors; possibly even we should have gas engines, driving through a similar electric arrangement or through a mechanical transmission.

Since the advent of the common spike years ago no important step has been taken to replace a device admittedly wanting in qualities most to be desired in a spike, holding power and preservation of the tie; yet the common nail spike has such a firm place in the minds of the conservative that it is only recently that the screw spike has received any attention, though admittedly the screw spike is far superior to its competitor in every respect, as its extensive use in Europe where lumber is dear and labor cheap, has demonstrated conclusively.

There are many other examples easily called to mind which only serve to bring out more strongly this element of conservatism. The old adage of "Let well enough alone" has been a slogan on the American railway, but it is fast losing its convulsive power. One can almost distinguish with clearness a dividing line springing up among the employes of American railroads—the old and new blood, the

man whose convictions are not to be modified and the man who is "willing to be shown."

An analyst of railroad conditions while speaking of the application of intelligence and methodical system to the problems met in the course of ordinary and extraordinary experience, and the influence they may have in improving the workaday opportunities, has aptly said:

"This element of pride and self-glory makes the ordinary man of authority plant his feet and balk when system is proposed. He wants to do everything himself and gets all the glory. If record and system are applied rigidly enough the proper course will be as plain as the channel into a harbor marked with lighthouses and buoys. Columbus is more of a hero than the sea captain of today who courses the ocean with charts, lighthouses and buoys which mark the channels through which the man in authority should sail his affairs. This man, however, realizes that his personal glory dwindles when he sails in charted seas. Hence he says: "No system for me."

Of course it is apparent that the thing for such a man to do is to seize the opportunity and make charts where there are none, so that not only will he more certainly and swiftly arrive at his objective port, and avoid treacherous shoals and reefs by the way, but also achieve the distinction of providing charts where there was only wind and water before, and of piloting the way for the more timid who follow.

No event of life is trivial; no task, however humble, is beneath the dignity of the high soul.—*Richard Wightman*.