There is another phase of this scrap business that has not received the attention it should. The scrap pile tells a wonderful story of success or failure to those who study it. We buy material and use it. It gives us good, fair, or poor service. How many know about it? A few here and there. And quite frequently those who know consider it in their interest to hide that knowledge. And how are our officers to learn these things? They can't run around looking over all the little scrap piles on the system. But suppose we have a central yard. They can and should go there occasionally and see for themselves what is going on. The scrap yard should be in charge of the stores department, but representatives of all departments should visit it just as often as they can to learn things for themselves and help along the good work by giving the men in charge the benefit of their knowledge. They will be welcome as the flowers in May.

Now it may seem that I have cast reflections on the mechanical men in this matter. Well, I have nothing to take back, and could say much worse things than I have said or intimated. But we must look at things in a proper light or from a proper standpoint. The car man's business is to repair cars. The locomotive man's business is to repair locomotives. That is what he is paid for. If he does his work well he stays on the payroll. Is it any wonder then that he is interested in that work? And he has enough of such work to do to take up most of his physical and mental energy. How then can we expect him to take that interest in scrap that the matter deserves? He can't, and he won't. And when we ask and expect him to do it we, and not he, are to blame for the results. The handling of scrap is properly the work of the stores department. We give the mechanical men their new material, not always just as promptly as they want it of course, but we do give it to them. So let us take their old material from them and make the best possible use of it, put it in shape to receive the best possible price for it as scrap, or rescue the good material and turn it back to be used. When we send them their new material they catch our mistakes, if we ever make any? And when they return the old, we will catch theirs. All in the interest of the company we work for.

The railways of America have been for many years destroying old cars that have outlived their usefulness. Some roads in the extreme west have taken their old cars out in the mountains and dumped them into a gorge. There was a reason for this. They had no market for scrap out there, and they figured that to dismantle the cars, collect the scrap and haul it east would cost them more than the scrap was worth. Railways in the east and middle west have disposed of their old cars in various ways, but most of them have disposed of them by allowing their car department to destroy them by burning, the scrap to be sorted by the same department. Nine out of every ten men who do not understand this matter fully will say that is a good plan. The car man builds and repairs cars. He is just the man to destroy or dismantle them. Well, the nine men would be wrong. The stores department should do this work. Why? Because they are material men by training. Does that sound strange? Well, let me say something here that is not often thought of or spoken about. To become a thoroughly competent master car builder, master mechanic, roadmaster or storekeeper on a railway a man must put in a number of years at his work that if put in at college and special training would make him a doctor, lawyer or college professor, and this applies to many other railway occupations in addition to the few mentioned. If this is true, and I think it is, then is it not only reasonable that the men with such training should do the work for which they have been trained. In other words, let the car man look after his cars, the locomotive man his locomotives, and keep them fit for use as long as possible. But when they are no longer of use as cars or locomotives they become material, to be sold or saved, and they should be returned to the material man. When the car people are called on to dismantle or destroy cars they look on it as an extra and disagreeable job to be got rid of as quickly as possible. They quite often have to use men at this work whose services they require elsewhere, and men to whom they pay more than laborers wages, while it is a job for laborers. Is it any wonder then that the thing is rushed through under the key note of destruction—let the tail go with the hide idea, rather than with the idea of reclamation, or save the tail and as much of the hide as possible?

There have been published recently two very interesting papers on this subject, one by a car man and one by a storekeeper, both from roads in the United States, and in these papers the car man and storekeeper agree for once, that the methods followed in the past in the destruction of old cars has been all wrong, and that if the cars are handled by the stores department the work will not only be done cheaper, but a very large saving be effected by the saving of useable material, and increased price procured for the scrap when saved from fire damage and properly sorted.

Referring to a paper I read before the Storekeepers' Association in 1912 I find I used this expression, "In considering anything we should first of all consider whether it is worth considering," and I believe we have established the fact that the scrap or salvage of our railways is well worth all the consideration we can give it. The creator of the world is above all creation because He can create. Man is above the rest of the animal world in that while he cannot actually create he can, and does, take the material furnished by the creator, and by the use of the talents given him combine and fashion these elements into the forms he requires, the forms suitable to his needs. In this he comes close to actual creation and rises to the point where he is just a little below the angels. In the combining of these elements and the fashioning of them to his needs is man's highest work. How far behind this highest is the work of him who, after these combined elements have served man's purpose in the forms in which he has fashioned them, stops them on their way to destruction and, with less labor and effort than first expended on them, returns them to man's use. Make no mistake about it, the scrap man is doing a wonderful work in the world. It is true he is not so highly regarded as the merchant who in his beautiful store sells at a profit that which other men brought into existence, but he is doing a more useful work, for he is saving something, and he is receiving his reward.

To go back to my paper of 1912 I find this: "How many of us can honestly say that in this matter of salvage we have done all of the things we should have done, and left undone all of the things we should not have done. In other words, do we know that this part of our business has been handled to the best possible advantage? Is it not a fact that there has been a divided responsibility in this matter that has not tended to the best results? On whose judgment is much of our material put into the scrap pile, and just how thoroughly is that scrap pile culled over before it is delivered to the buyer? These are questions we should ask ourselves, consider them carefully, and answer honestly. We waste more or less, but as we gain knowledge we should waste less rather than more. Our railways do not waste more in proportion to the magnitude of their undertakings than do others in other branches of human effort, but we do waste. Fifty per cent. of all our loss and waste is the result of lack of education, the balance is pure 'cussedness.' This lack of education is not confined to any class or department. That we have insufficient storage facilities is due to lack of education on the part of our higher officials. They have not been educated up to see the necessity for them. The abuse of oil cans and tinware is due to pure cussedness on the part of those using them. The holding of valuable material by section men is due to lack of education or proper instruction. The loss in air and steam heat, hose and couplings is a combination of the two evils."

Further on in that paper I noted this, with reference to doing the salvage work: "Do not let us place such work in the hands of cheap men, men who do not know what they are doing. The best we have and the best we can get is none too good for this job, and no matter how good he may be he will still want the advice and assistance of the car man, the locomotive man and the storekeeper. We must guard against further waste in trying to effect a saving."

The economy game on a railway is a man's game. Any fool can spend money, the greater the fool the more money he can spend and the less he will get for it. But it takes a man and a wise man to save money for our railways, and we have but few men today who are fitted for the job. Some years ago one of the technical papers published an article in praise of a shop foreman who had made much money for his company by taking from the scrap pile 12-in. ends of 2-in. square steel and making coal hammers for locomotives out of them. This amused me so much that I wrote the editor, giving him the actual cost of a coal hammer made in this way, and gave him the cost of a coal hammer we were using. The foreman's hammer made from the square steel cost $1.45. The hammer we were using at that time cost 10c. I also asked him if he thought I could buy this foreman's scrap pile where he had 12-in. pieces of tool steel. The editor asked me to please excuse him for not publishing my letter and figures, as he did not care to emphasize the fact that he had been as big a fool as the foreman who had misled him.

Not so very long ago I found a shop foreman making track cold sets from scrap tires. He was wasting money very fast by destroying good scrap by wasting coal and labor on it. You may hear men tell of making spanners from old steel crank pins. When you hear such talk stop and do a little figuring. A crank pin that would make a spanner would weigh 10 to 15 lb., as scrap it