

ten days, she became his safety supervisor from that time on, and he was never thereafter injured. That was one of those object lessons that cannot be forgotten.

I was also much interested in the idea of repetition of safety instructions. I have two daughters whom I taught to drive an automobile. I said to them: "There is just one rule in driving an automobile, that I want you to remember; and that is to learn to talk to whoever is sitting alongside of you without moving your head sideways." I drilled this idea into the head of the younger one time and time again until she got it down pat. One day she was driving alongside of me and I said suddenly, "There's a new house." Instantly she turned around and looked at the new house, and then she caught herself. I don't believe anyone could catch her on that kind of thing again.

I have heard it said that the railroads are obsolete, that their equipment is run down, under-maintained, and everything of that kind. I was greatly interested in that, so I checked up a while ago carefully and I find we have a decrease in ownership of freight cars of 337,000 compared with 1925. There has been a decrease in freight trains. We have better cooperation in loading and unloading. You do not get the full results of the efficiency and movement unless you reduce the units required to handle that business. How much has the reduction of 337,000 cars in the handling of a given business contributed to the safety movement? How much has the retirement of 1,091,000 cars since 1923 and the addition of approximately 900,000 new ones added to the safety movement? If you buy a new car that is better than the old one, it is a move toward safety. If you buy a locomotive that is better, you add to safety. If you can handle more cars on the train, you have less opportunity for employees to become injured. The more safety you operate the more economically you operate.

I saw some figures prepared by someone in a statement, I believe by Mr. Palmer, comparing the last ten years with the previous ten years, showing that the payment for personal injuries alone showed a decrease of \$160,000,000. To carry it further, to make a comparison on the question of the reduction in the cost of operation due to wrecks, derailments, etc., we have something in excess of a billion dollars saved during that same period.

Report of Committee on Statistics

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The speaker said in part: I want to summarize as briefly as I can some of the previous reports of this committee, because it is necessary to give a basis to what I am going to recommend today.

In 1921 the first report covered the question of accuracy. In 1922 we were able to report that the Interstate Commerce Commission had adopted a million man-hours as the basis for comparisons by roads and by occupations. In 1923 we made a general analysis of fatal and non-fatal injuries due to being struck by trains. In Salt Lake City in 1924 for the first time the possibilities of reductions were apparent, because up to that time we had no knowledge of what we might do, and even then our conclusions were predicated largely on our practical imagination, because the statistics were more or less in a crude state no further back than 1924. We, therefore, recommended the 35 per cent goal.

In 1925, recognizing the necessity of a definite program, the committee worked

up twelve skeletonized bulletins for publicity and recommended that the Association adopt these as a regular program. In 1926 we presented four resolutions on the basis that the remedy for accidents on the railroads rested directly with trainmasters, road foremen, master mechanics, and division engineers. In 1926 we introduced four resolutions appealing to these four classes of supervisors. There were miscellaneous analyses from 1927 to 1931, particularly in charts that were put out showing the different departments of each railroad, how they stood in comparison with each other. I think that was an innovation that marked great progress. In 1932, for the first time, we suggested the possibility of a standard rate; we suggested for the first time the possibilities of standard casualty rates.

I have here a statement which is a composite of the accident situation on all the railroads in the United States. It is one that shows casualties in the seven classes of service, from 1923, 1931, 1932. In maintenance of way and structures in 1932 we have, roughly, 4,000 accidents; in maintenance of equipment and stores we have also 4,000 accidents; and in "other transportation" which is nearly all station, we have nearly 2,000 accidents. Then in train and engine service, we have in round figures 7,000 injuries. If you examine those rates you will notice a very marked drop from 1923 to 1931. But we came to an impasse in 1932, and showed almost no improvement. As a matter of fact, in the maintenance of equipment department the rate was virtually the same each year.

There are two significant features to that statement. The first is the fact that we made no appreciable progress in 1932, and the second is the preponderance of accidents to train and engine service employees.

The total number of accidents to all employees last year was, roughly, 18,000; in the train and engine service, however, 7,000 accidents occurred, which is 38 per cent of the total, while the train and engine service had only 19 per cent of the man hours.

There is something, however, very much more significant even than that, and that is the rate in engine service is very small indeed, and in the passenger service there is no more hazard than with clerks.

The fact that the train and engine service predominates indicates that we must concentrate our energy on that department, and I am prepared to say that I don't believe that from a purely numerical standpoint the hazard in train and engine service is materially greater than it is in the shop or in the maintenance of way department, and that the explanation for the poor performance is that we as a body have not done our job, and that the trainmasters have not done their jobs, and that individually and collectively we have got to get together and find the solution for the train service accident situation, which is indicated very clearly by an analysis of the statistics.

I want to speak of the fluctuation in train service accidents. Fifteen trainmen were killed in 1923 on account of negligence in connection with train orders, and not a single one in 1931. That was good work, wasn't it? No, it wasn't good work, but just largely luck, because in 1932 there were ten of these accidents.

Now let me turn to another matter. I will not mention any roads specifically, but I have taken fifteen roads and designated them as No. 1 to 15, inclusive. Isn't it indicative that something is decided wrong when we find that the first road I have listed has a rate of 2.40, and the last road has a rate of 13.40? There is something wrong somewhere, there is some deficiency, as surely as figures can indicate it.