went into hospitals, too large a percentage, sometimes 50 per cent of them died, although the operation was successful.

Our trouble is not that we don't know how to switch cars, it is not that we don't know how to get trains over a railroad, it is not that we don't know how to make those trains fine and comfortable for passengers or to meet the needs of the shipping public, but we cannot perform our operations without the infection of carelessness: and the only way we can eliminate it from our railroad operations is to make each individual man on our railroad an expert in the performance of his operations.

So we need to study each individual operation and see where the bug gets into that operation, and develop a technique that will assure efficiency every time that operation is performed.

WEDNESDAY AFTERNOON SESSION

October 4, 1933

Report of Committee on Train Service Accidents

By D. G. PHILLIPS

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The speaker said in part: In 1932 there were 63 employees killed and 326 injured in train accidents, while in train service accidents for the same period there were 367 employees killed and 6,861 injured. So without minimizing the importance of safety work in connection to train accidents, these figures show us the much greater field for work in the prevention of train service accidents. In 1932 there were six times as many killed in train service accidents as in train accidents, and 20 times as many injured.

In 1932, 20 persons were killed and 307 were injured in accidents while coupling or uncoupling cars or locomotives. The remedy for this class of accidents naturally suggests itself, keep from between moving cars that are about to couple, do not attempt to make any adjustments in the coupling apparatus of a moving car that requires you to go in front of the car. Such adjustments should be made when car is still. We believe that proper supervision can eliminate entirely this class of accidents, but if a supervising official stands around seeing men doing work in this manner and says nothing, just so long will accidents of this kind occur.

During 1932, 9 persons were killed and 123 injured while coupling or uncoupling air or steam hose. The principal cause of employee injuries coming under this heading is due to attempting to do their work without proper protection and from inadvertently uncoupling air or steam hose under pressure. If accidents of this kind are to be prevented, it is absolutely necessary that where a blue flag rule is applicable, such a rule should be made and should be complied with. However, frequently in switching operations there is no opportunity for the use of a blue flag. In such cases, not only the men doing the work, but those working with them should be on the alert to see that no movement is made when men are between the cars. Of course, the man himself should be sure that air and steam are shut off before any attempt to uncouple hose, and even then they must be careful, as steam and air are frequently trapped and remain for sometime in a short section of hose. Supervising officials should not overlook the failure to blue flag when the rule so provides and should watch to see that the man understands the proper method to uncouple air and steam hose.

In 1932, 12 persons were killed and 593 injured while operating hand brakes. Injuries arising from operating hand brakes result largely through men losing their hold on wheel, slipping or falling, or by sudden move of train or when tightly set brakes are released, or thrown or knocked from the car by brake club or revolving wheel. While it is true that defective brakes are frequently found it is also true that if the employee properly braces himself and holds the brake wheel properly, a defective condition is not going to cause an injury. Employees must be taught when handling brakes to constantly be on the alert for sudden movement of cars.

In 1932, 2 persons were killed and 210 injured while operating switches. Before a man operates a switch, he should be in such a position that the switch lever cannot strike any part of his body or feet, especially where a switch is being thrown with the engine or car almost on the switch. There is a great danger of serious injury due to lever flying around, but if a man will place himself in a position free of the lever, all danger from flying handles is removed.

In 1932, 520 persons were killed and 3,946 injured while getting on or off cars or locomotives; however, 471 of those killed were trespassers. A number of railroads prohibit men from getting on or off moving locomotives and, of course, men are seldom injured; but on the other hand it is possible if a man has his mind on his work to get on or off of the moving engine or cars without danger of accident. No matter how careful a man may be he is liable to slip if attempting to alight on ice, snow or mud. When about to alight from a car or engine, he should make that his special order of business until safely on the ground and be governed by the conditions at the time and place he is about to alight. All rules are valueless, however, unless complied with and they will not be complied with unless those in authority exercise the supervision that they should exercise and see and know that the rules are being enforced.

In 1932, 1,445 men were killed and 3,911 injured in accidents (train service) at highway grade crossings. Although the subject of grade crossing accidents will be handled in a separate report, it also comes within the scope of this report. While it is true that nearly every accident could be prevented by the exercise of ordinary care on the part of the automobile driver, that does not mean that the railroad must not do what it can to lessen the danger of grade crossing accidents. The neighborhood of the grade crossing should be kept as free from obstructions as possible. The crossing itself should be kept in first class condition and, above all, our enginemen should comply with rules with regard to whistling. Good whistling has avoided many a grade crossing accident; bad whistling has been a contributing factor to many accidents that have happened.

1. Switch crews and train crews working at stations should be prohibited from dropping cars across highways, their engines going down one track and the car going down another track, without protection on the crossing by a member of the train crew.

2. Switch engines, switch runs and local way freights backing cars over crossings at uncontrolled speed and without proper protection on the crossing should be prohibited.

3. Passenger trains and switch movements backing up with tail hose at the rear over highway crossings, should reduce speed at all crossings that are not protected.

4. Cars being kicked over crossings without engine attached should be protected.