

In the repair yards we have augmented our blue flag protection with lock switches and flags equipped with a derailing device in many instances. Too much stress cannot be placed upon carelessness at all repair yards. The car repair tracks should be locked and the blue flags placed by a man or men carefully selected for this job. When the time for removing the locks and flags to allow the tracks to be switched or other work to be placed arrives, the greatest possible care should be taken to warn everybody along the repair tracks of the move contemplated, and equal care must be given to the relocking and placing of flags when switching is done.

On our road, we do this by whistling and by personal warning to each employee before the engine is allowed to come onto the track. Any violation of the blue flag rule is severely dealt with, and yet with all our precautions, we have had one fatal injury in the car repair yards during the present year.

It has been my experience that men are very seldom injured on any job where the danger is apparent, that is on work that is inherently dangerous. Injuries and hurts generally occur on jobs where one would think, at first glance, no danger was present. It stands to reason that if every employee had someone standing over him to warn him of the hidden dangers in the work he was doing, no injury would occur. But this method of preventing accidents is of course impossible.

Substitution for such a procedure was built up to a certain extent in the mind of one employee by the association of ideas. For instance, if a man would associate safety with his hands, and every time he noticed his hands, think of safety, or every time he thinks of safety, look at his hands, in a short time, such a workman whose work is done by his hands, would so establish this thought in his mind that as soon as he started to work and his hands came into view he would naturally look around to see what hidden dangers there may be in the vicinity of the job he is starting, and in a very short time this process of thought would become mechanical, the same as driving an automobile or any other physical effort in which we engage that is somewhat complicated, and in which the movements are done subconsciously when perfected.

Falls of Persons and Objects

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The speaker said in part: Of the thousands of men injured on American Railroads, every third man has received his injuries in connection with a fall or falling object. Some of the conditions which lead to injuries from falls and falling objects are as follows:

Poor condition of floors, platforms and walks; aisles not kept open; material carelessly piled; poor ladders and scaffolds; poor lighting; material falling from cranes, cars, engines, trucks, skids, etc.; window glass becoming loosened by vibration of cranes, steam hammers, etc.; poorly maintained counter shafts, line shafts, pulleys and belts; poor tires on trucks; oil and grease on floor, platforms, cranes, etc.; failure of cables or brakes on traveling cranes; material leaning against walls; flying rivet heads and chips; coal falling from tanks; insecure footing and hand holds; stepping over loose material; slipping on rails; ladders slipping; getting on and off moving locomotives; cars, trucks, turn tables, etc.; throwing material from cars, engines; loose clothing, greasy gloves.

A modern railroad shop is a busy place. Exposure to possible injury menaces the workman from all sides and from above and below. The traffic density through the main aisles of the shop often equal that of the main streets of our towns. We do not have the service of traffic lights or officers to direct it.

In our shops we mark the aisles with white lines and strive to keep them open at all times, the power trucks move in prescribed directions and as far as possible follow regular routes. All material is moved on skids or tote boxes to eliminate excess handling. Skids are carefully loaded under the supervision of foremen to minimize the danger of parts falling or jarring off.

Each department has available a hand lift truck with which to move the skids in

or out of the department without waiting for a power truck, which leaves no alibi for having the department cluttered up with material on which no work is being done. Each power truck driver tries out his brakes and horn at the beginning of the day's work. Trucks are inspected, greased and oiled at regular intervals and all necessary repairs promptly made. Where the load overhangs the body of the truck a workman precedes the truck to clear the way.

Electric traveling cranes are carefully inspected and repaired each thirty days by a competent machinist and electrician who give special attention to brakes, cables, limit switches, hand rails, etc. A record is kept of these inspections to fix responsibility for any oversight. Each crane operator tries his brakes, horn and limit switch at the beginning of his trick.

Crane operator will not move crane or hoist load except by signal from the floor nor will he move any load if the hitch does not appear safe to him. Endless rope slings are used for moving light material with smooth surfaces to prevent slipping; endless steel cables and load chains are used for handling heavy material. Special slings are provided for handling bundles of flues or units, which wrap entirely around the bundle to prevent dropping any part of the load. All chains used for lifting are annealed each month; the length of chains adjusted and hooks reshaped if necessary. A record is kept of this inspection. The floor space under cranes is illuminated by flood lights, high overhead. Each crane has a spot light for use of the operator.

Line shafts, countershafts and overhead belts are rapidly being eliminated by installation of individual motor-driven machines. That portion which remains in shop is inspected daily. All ladders are equipped with safety spikes. All hose and handle tools are repaired under supervision of the tool room and are inspected when issued.

To assist in checking on all these conditions and the enforcement of safety rules, we have a group of our Safe Practice Committee make a weekly inspection of the entire property and render a written report of all physical defects and all violations of rules. This committee has authority to remove from service at once any defective equipment found, also to stop any unsafe practices they observe. They dismiss from their minds everything except safety and concentrating on the one object, they accomplish much that might otherwise be overlooked. We also have a committee of supervisors who make a weekly inspection of all departments, whose duty it is to observe and report on housekeeping conditions and place two prominent signs, one reading "Dirtiest Department in the Shop" and one "Cleanest Department in the Shop." The unwelcome sign never remains in the same department a second week.

With all our precautions, we still have injuries due to falls and falling objects. I have yet to investigate a case that was not primarily due to carelessness or thoughtlessness, not always carelessness on the part of the victim but carelessness on somebody else's part. In my opinion three things are essential to safety:

1. A safe place in which to work.
2. Safe tools and equipment.
3. Intelligent and alert workmen.

There is no place in industry for the careless workman. He is and should be eliminated. The employee who is injured through carelessness is a marked man and had better watch his step. We do not however believe in discipline as punishment for violation of safety rules. Discipline as education is a valuable weapon. Most men will react favorably to a frank discussion of their faults.

We of the Safe Practice Committee try to study each man who is injured or who violates the safety rules through carelessness to determine why he failed to think, what occupied his mind to the exclusion of his own welfare, how to wake him up, and consider all methods fair that attain results. If the offender is an old man, we remind him that an accident might end his career of usefulness to his employer, that his advanced age would automatically keep him out of further employment elsewhere. The fear of a dependent old age haunts every working man beyond fifty years. The middle aged offender is reminded that his carelessness might seriously interfere with his ambitious plans for the education of his children.