

DISCUSSION ON PAPER.

Hugh Valance, architect of the Grand Trunk, was asked by the chairman to open the discussion. Mr. Valance expressed his appreciation of the paper, especially that part dealing with design of buildings. He stated that in the early days the passenger station looked just like a station and nothing else—all stations were more or less alike. In those days an endeavor was made to work on models from France. The great difficulty is to get a proper expression on the umbrella form of train shed. He said that in architecture it was not so much a case of exact science but of your own choice in problems of design. What would be perfectly correct for him might not suit some other architect. If a man asked an architect to build a house, he could build it; but unless the architect was told his various tastes and requirements the house would be the expression of the architect's taste and not the owner's ideas at all. This holds true right through architectural work as compared to that of the engineer. Mr. Valance told of many engineering structures which with a little architectural treatment would have been very impressive. He spoke particularly about elevators, which are usually blots on the landscape. He explained that he intended no criticism for the engineer, as elevators were engineering problems and were handled from that point of view without regard to appearance.

Regarding terminals he said the question of the length of concourse was an important one. In the South Terminal at Boston, one has to pass 28 tracks sometimes before reaching his train. He thought the remarks in connection with two levels were quite to the point.

H. R. Safford, chief engineer of the Grand Trunk Railway, favorably criticized the paper. He said that for a great many years the public had not been regarded as having anything to do with the design of passenger terminals, but the question had been one for the railroads themselves. It took a long time for the railroads to understand that the public did express their views in this respect. However, he said that he could not see why the public should have anything to say beyond questions regarding their personal comfort while in the station. A passenger station is a non-productive and almost unprofitable investment in a broad sense, although sometimes, owing to competition, a structure of architectural beauty is necessary. Mr. Safford quoted some interesting figures in connection with the increase in traffic and use of terminals. He said that in the Illinois Central station in Chicago traffic had increased 200% in 20 years; Grand Central station, New York, 70% in 10 years, and the Union Station at Toronto, 110% in 25 years. The question the financiers of the railroads have to face is for how long a period of time will the structure they are about to build suit the traffic.

Mr. Safford stated that many advantages were to be had by building high platforms, chief of which is the reduction of liability to personal injury. The only disadvantage is that it is difficult to couple trains, but this will very probably be overcome.

Charles Parker, chief signal engineer of the Grand Trunk, then entered the discussion with some remarks on signal systems.

William McNab, in some remarks as to the architectural features of the paper, said that better stations would be possible if the public would share in the expense of building them. The stations should be feature points of a city. What is wanted in large terminal stations today may be summed up in two features: first of all, the operative features, and next, comfort to passengers. The Pennsylvania station in New York was a sample of ex-

travagant concourse area. It took five or six minutes' walk from the Avenue to the train. He stated that baggage arrangements were better than they had been, but were still capable of improvement.

S. B. Brown suggested that it would be a good thing if a paper on freight terminals and a general paper on the terminal situation were read. It would be of great interest to the members.

A vote of thanks was tendered Mr. Busfield for his most interesting paper.

LIABILITY OF MILITARY RAILROADS

It has recently been decided in France that railroads, though operated under military authority, may be held liable before civil courts for loss and damage claims and for injuries to passengers. So states Walter S. Hiatt, the special European correspondent of *Railway Age Gazette*.

This decision was given in a test case brought against the Paris, Lyons & Mediterranean. One of its auto-trucks struck a street car and slightly injured a woman passenger. She sued the railroad, which denied its liability on the ground that the act was one of an employee who was mobilized as a soldier, and further, because the railroad itself was being operated under military authority. Various chambers of commerce, whose members had been unable to obtain satisfaction regarding complaints concerning non-delivery of freight, were also interested in any decision as to the railway's responsibility.

The minister of public works, who supervises the conduct of the railroads in times of peace, had issued various rulings regarding the precedence of military freights over civil freights, which at the same time sought to secure prompt handling for the latter, but he had not been able to establish the question of responsibility where shippers had a grievance.

Finally, the minister of war has settled the whole question by stating that the various rulings giving precedence to military transports would in no wise alter the common law rights of shippers or injured persons to sue the railroads through the usual channels of the civil courts in contradistinction to the military courts established in various parts of France for the purpose of hearing cases affecting the public safety.

On the other hand, the ruling has also been made that railroads are not obliged to permit soldiers detailed to munitions factories and other such work to travel at the one-quarter fares established for soldiers both in times of war and peace. Many thousands of soldiers, competent as mechanics, have been withdrawn from active military duty to work in the various government or private factories turning out munitions of war. The railroads charged these men full fares and were fairly deluged by complaints. In every railroad station, and at many street car stations in France, a complaint book is maintained by law for the benefit of the public, response to any complaint being required within one month. These soldiers detailed to civil duties seem to have made complaints through this means almost to a man. The dispute was settled in favor of the railroads on the ground that the men were being paid, in addition to the pay of five cents a day as soldiers, the full wages of the shops in which they were employed.

An underfeed stoker is able to smokelessly burn even high-volatile coals, because when the volatile is distilled, it must pass through the hottest part of the fuel bed before getting out into the furnace. Besides a sufficiently high temperature, the only other chief requirement for the proper burning of the volatile is time, just as it takes time for a cake of ice to melt at summer heat.