

HOWARD ELLIOTT ON CONGESTION IN NEW ENGLAND

Howard Elliott, chairman of the New York, New Haven & Hartford has addressed the following letter to the Interstate Commerce Commission, the Public Utilities Commission of Connecticut, the Public Service Commission of Massachusetts, the Public Service Commissions of New York, and the Public Utilities Commission of Rhode Island:

"I desire to submit to you on behalf of the New Haven company and its allied lines a statement about present conditions due to congestion of business on its own lines, congestion in and around New York harbor, and on many of its connecting lines, conditions which have been made much worse by the great storm of December 13-14, which seriously reduced the ability of the railroads to give a maximum amount of service with the facilities at hand;—and by the storm of December 26, which did much damage and destroyed and retarded the work of restoring wire communication by telegraph and telephone, and of clearing the road of delayed freight. Prior to the great storm of December 13-14, the New Haven road, with facilities that in many places are wholly inadequate, had been doing the largest volume of business in its history, and has been performing a task in handling that business which is taxing its physical facilities. The volume of business may be evidenced by the following figures showing the number of cars of freight loaded locally on New Haven rails and the number of loaded cars received from connections for the first eight days of a number of months in 1915 as compared with the same eight days in the same months in 1914 and 1913:

	1915	1914	1913
August	40,824	40,932	42,829
September	42,484	39,626	39,487
October	47,361	43,360	44,673
November	47,766	39,176	45,621
December	50,677	37,748	44,193

"The New Haven road has on its rails to-day nearly 46,000 freight cars, which is about 8,000 cars more than it had a year ago, and 12,000 more than in December, 1913. The result is that its tracks, terminals and other facilities are congested at many places. There are more than 12,000 loaded cars awaiting the discharge of their freight, but the owners of the freight are having some of the same difficulty that the New Haven is having because their own facilities are inadequate in places and cars are not released promptly. To-day, on account of storms and congestion, connecting lines have more than 8,000 loads for delivery, mostly at New York and via the Poughkeepsie bridge, as soon as this company can handle them.

"It is interesting to note that the New Haven, with 4,535 miles of track, including main line running tracks, side tracks and yards, had, during the first eight days of December, 50,677 new loads, while the C. B. & Q. system, extending through ten states, with 12,869 miles of trackage, during the same week had 48,230 cars. These figures indicate how large the New England freight business is. In addition, the passenger train service is much heavier than on a railroad like the C. B. & Q., and makes the problem of furnishing transportation in sufficient quantity and of satisfactory quality under the present unusual and congested conditions that much more difficult.

"For reasons that need not be outlined in this letter, the New Haven has not been able to add materially to its facilities during the last few years, particularly during the last two, when the company has been going through a period of depression, investigation, readjustment and reconstruction of its financial and corporate status. Improvements have been authorized, not including equipment, which are being made as rapidly as men, material and weather will permit, that will cost nearly \$5,000,000. In addition to this, very large sums should be spent, if money can be obtained for additions to tracks, bridges, terminals, engine

year ago there were 4,800 freight cars in bad order and now there are less than 1,600—a marked improvement, and a number not far from the minimum that may be expected with 46,000 cars on the road. The company has placed orders for 33 powerful freight locomotives to be delivered in January and February, and 500 coal cars which are promised in March, costing about \$1,500,000.

"The company has tried to relieve its rail lines just so far as it could by diverting business to its boat lines, but here again it has not been able to add to its facilities because of the uncertainty surrounding the future of the boat lines. The company considered very seriously placing an order nearly a year ago for two additional freight steamers to run on Long Island Sound, but did not feel that it had the right to borrow the large sum of money necessary, considering the fact that within a comparatively short time the company might be ordered, under the Panama Canal act, to dispose of all of its water lines. The relief, therefore, given by the boats is not as great as the company would like.

"There comes a time when the volume of business that is being done by a man, a steel mill, a hotel, or a railroad is more than the physical ability of the man or the enterprise to carry on successfully, and in such cases the part of prudence is to state the case frankly to customers and patrons and to explain why there is delay in furnishing goods, accommodation or service. It looks to-day as if for the time being the New Haven road can do no more than it is doing, and that it may have to withdraw temporarily from some kinds of business.

"The management of the New Haven earnestly hopes that the result of the efforts now being made on its own road and on its connecting lines will permit the present large volume of business to continue and that it will be necessary to put out so-called "embargoes" and curtail service for only limited periods of time, but it feels that it should state to you the situation that is confronting it at the present time—a condition brought about by causes that are beyond its control. The management will be glad to receive any suggestions from you who represent both the public and the railroads as to steps that can be taken."

FORMAL OPENING OF THE ST. PAUL ELECTRIFICATION

The first engine division of the electrification section of the Chicago, Milwaukee & St. Paul, consisting of 112 miles and extending from Three Forks to Deer Lodge, was completed by the end of November, 1915. On November 30 the trolley system was energized and on December 1 a train consisting of an electric locomotive and a few business cars was run over the line. During the following week various test runs were made and finally on December 8 an exhibition run was made for the president of the railway, directors and others. This run consisted in hauling over the division a 3,000-ton train, handled by a single electric locomotive on grades under one per cent, and by two electric locomotives on grades over one per cent. The grade through Janney, where the president's party was assembled, is 1.66 per cent.

The electric train was hauled over the grade quietly and easily, and passed the party running at the rate of about 15 to 16 miles an hour. Following behind this train came another of 2,000 tons hauled by two of the company's type "L" steam locomotives with the help of one Mallet pusher. In spite of the fact that this train was only two-thirds as heavy as the first, the three steam locomotives had difficulty in going past the party at the rate of about 10 miles an hour.

It has developed that the 282-ton electric locomotive used by the St. Paul can handle considerably more tonnage than the builders guaranteed, and also that its system of regenerative braking has proved exceptionally successful. In this connection

...ing the weight of the locomotive) from Kocker to the Anaconda yards without the use of air brakes, except to stop at Summit and Anaconda. The regenerative control was used to stop the train on the one per cent down grades and during this time as much as 880 amperes, or approximately 2,100 k.w. (at 200 volts), were returned to the trolley. To determine definitely what could be done with this method of braking the train was allowed to reach a speed of 25 m.p.h. on the one per cent down grades. When the electric brakes were cut in the speed was reduced to 7 m.p.h. The reduction in speed was accomplished without any perceptible jar to the train with all the braking effort concentrated at the locomotive; the slack between cars was bunched, therefore eliminating all danger of a "break-apart" from that cause. The tests of this type of electric braking on the Butte, Anaconda & Pacific showed that a train going down grade can return 21 per cent of the electrical energy required to move the same train up the same grade at the same speed.

In cases where an electric locomotive is used as a pusher a run-around track is provided at the top of the grade to enable the pusher to go to the head-end of the train so that it can assist with the electric braking on the down grades without taking the slack out of the train.

All tests of the new electrification have been particularly successful and on December 9 the first passenger train, the St. Paul's crack transcontinental "Olympian" was taken from Butte to Piedmont by an electric locomotive.

SOME PROBLEMS AND PRINCIPLES OF GOVERNMENT REGULATION OF RAILROADS*

By Emory R. Johnson

Professor of Transportation and Commerce, University of Pennsylvania

Different policies as regards the ownership and operation of railroads characterize the relation of the government to the railroads in the countries composing the Pan-American Union. In the United States, Uruguay, Paraguay, Bolivia and the Guianas, the policy of complete corporate ownership prevails; in Mexico and Brazil nearly all the railroads are government lines; in Peru, the major share of the railroads belong to the state; in Chile, railroad ownership is about equally divided between the government and the corporations; while in the West Indian and Central American countries and in Colombia, Venezuela and Argentina, the governments own only a small share of the total rail mileage. There are corporation-owned railroads in all countries of the Pan-American Union; and, consequently, each country must concern itself with the government regulation of railroad charges.

The concrete problems connected with railway regulation necessarily vary with different countries. The purpose and the necessity therefor may be fundamentally the same, but the laws to be enacted and the administrative agencies to be created to make regulation effective not only in preventing harmful practices, but also in securing more adequate and efficient railroad facilities will be influenced by the physical, economic and political conditions characteristic of the several countries. No argument is required to prove the need of adapting railroad regulation to the special conditions peculiar to each country, or of legislating in the United States, Brazil and elsewhere with regard to the particular transportation problems of each country. The purpose of this paper is not to consider the provisions of the legislation that any particular country should enact; the object is rather to state some problems common to railroad regulation and some general principles that should control legislative and executive action.

As I have stated elsewhere,† the essence of the problem of government regulation of railroads owned and controlled by

*From a paper presented at the Pan-American Scientific Congress, Section IX, at Washington, D. C., on January 3, 1915.

†See *American Railway Transportation*, ch. xxix, and *Elements of Transportation*, ch. xviii.

corporations consists of harmonizing, as far as possible, the interests of private corporations of a quasi-public character, engaged for profit in the performance of a service of a public nature, with the interests of the individuals, the localities and the general public served by carriers. The aim sought by the carriers is an increasing business at rates that will yield as large profits as can be obtained without interfering with the growth of traffic; the interests of the public served by the railroads require that the service shall be progressively efficient, that the charges shall be as stable as general business conditions warrant, and shall be neither unreasonably high nor unjustly discriminatory as between persons, places or kinds of traffic.

Such a problem as this must necessarily be a permanent one, because it involves the determination and enforcement of equity. Equity being a matter of relationship varies with changes in the things compared. What is equitable today may not be so tomorrow. A rate that was reasonable five years ago may be unjust at the present time, and a service formerly adequate may have become quite unsatisfactory. Some problems of government can be disposed of by legislation; other problems have to be faced day by day, year in and year out. Railway regulation is a problem that comes within the latter category.

The carriers and the public alike recognize transportation to be a service of a public nature that must needs be so performed as to afford, in as great a degree as possible, justice and fairness of opportunity as between persons and as among places. From whatever angle the long-contested question of the government control of railroads may be viewed by men of different environment and training, all fair-minded men agree as to the necessity of such governmental authority over rail carriers as may be required to minimize unreasonable discriminations in services and charges. Differences of opinion arise, if at all, not as to the necessity for governmental regulation of railroads, but as to the limits that should be placed upon public control.

To succeed in any reform it is necessary not only to proceed by right methods in the right direction, but also to know what limits to give to the movement. It is possibly more harmful to proceed too far than to stop short of the proper goal. These generalizations apply to the government regulation of railroads, as indeed to all legislation intended to better economic and social conditions.

In considering the limitations that should be placed upon railroad regulation, the fact should be kept in mind that, while the occasion that prompts legislation is the elimination and prevention of abuses, the main object of regulation is the attainment of positive, not negative results. As a result of the government's relation to the carriers, the public should be served with better transportation facilities. Regulation should not only prevent the carriers from doing wrong, it should also formulate standards of right conduct, and secure for the public adequate transportation facilities so managed and operated as to render efficient services.

The primary need of the public is for adequate transportation facilities, for a transportation system that develops with the growth of the country, and so completely serves all parts of the country as to permit each section of the national territory to use its natural resources and to employ the skill and energies of its population in profitable production.

The healthy development of railroad transportation facilities, when they are provided by corporations, is conditioned upon the railroad business being an attractive investment for the owners of private capital, and upon the railroad service being one that appeals to men of executive ability. A policy of government inspection, regulation and control that made it difficult for railroad companies to secure capital under favorable conditions, or that caused men ambitious of large success in life to turn to other pursuits than the managing of railroads could not fail, in the long run, to be contrary to the best interests of the public.

In the management of railroads operated by a large number of corporations, co-operation both among connecting and among parallel and rival lines is necessary. Shippers, consignees and