

Nation's Canals May End Freight Jams

Could Handle Coal to Great Advantage Say Traffic Experts, Especially for New York and the East

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PERHAPS you have looked from a window of some swiftly moving express train out of New York city and have noticed the stagnant and weedy surface of an artificial waterway paralleling the lines of steel over which you were flying. You may have smiled at the modesty of the demands that ever could have been satisfied with such inadequate means.

If you are familiar with the New York Central and West Shore lines you have seen the Erie Canal in operation—a blunt nosed, unwieldy canalboat drawn at the end of a long rope at a snail's pace by a pair of mules.

The Old Canals.

Antiquated and cumbersome as these canals now seem to modern eyes, there was a time when they supplied the chief means of travel and freight traffic. There was a network of them in the older Eastern sections of the country. The Connecticut, the Hudson, the Delaware, the Susquehanna, the Potomac, the Ohio and other rivers were great highways of commerce when the republic was young. These streams in course of time were connected by a network of canals. The construction of the waterways was due largely to the vision of George Washington and other founders of the nation.

To the Erie Canal, which connected the Hudson River with the Great Lakes, and to the Champlain Canal, which joined the Hudson to Lake Champlain and the St. Lawrence River, the city of New York owes its greatness. The vast commerce that was brought to the unequalled harbor of the port of New York along these waterways formed the foundation upon which the municipality, now the greatest city in the world, was based.

A Network of Waterways.

The Erie Canal was joined in its western reaches by north and south canals which connected it with the "Finger Lakes," extending its radius almost to the Pennsylvania border and the coal fields of that State. In a similar manner canals were built from the Hudson westward to the Delaware and from the Delaware to the Susquehanna, traversing the anthracite fields.

New Jersey was gridironed with artificial waterways extending from the Atlantic to the Delaware River and to Delaware Bay. Further south the Chesapeake and Ohio Canal, which joined the Potomac with the Ohio and furnished the national capital with the products of the West Virginia coal fields, and other waterways were built.

When the miracle of locomotion by steam was wrought and fifty miles an hour was substituted for three miles an hour the canals fell into disuse. Some of them, especially the privately owned canals, were transformed into railroads, their levels furnishing a convenient location for tracks. Until recently they were almost forgotten, or remembered at most as curious relics of a bygone age. The names of them have been preserved in the names of railroad lines, such as the Delaware and Hudson, which took the place of the old Delaware and Hudson Canal, the Morris and Essex in New Jersey and the Baltimore and Ohio.

Relations With Railroads.

At first the railroads regarded the canals as dangerous rivals, but as the former were gradually perfected with huge locomotives, cars that could be automatically loaded and unloaded and terminal facilities furnished with ingenious appliances this competition was gradually disregarded until the fear of the railroads that the canals might cut into their incomes virtually disappeared. This period of indifference, which continued for nearly half a century, was the period during which the canal prisons were permitted to fill up with logs and earth, when their locks were allowed to fall into decay and their banks to break down.

The marvellous story of the relations between the railroads and the canals, involving as it does the wonderful achieve-



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ments of inventive genius and of constructive enterprise and the stupendous growth of the nation's commerce, has now entered upon a new chapter which is no less marvellous than those which have gone before. The railroads, which had grown so strong that they had ceased to trouble themselves about the canals, have suddenly broken down under the task imposed upon them and the country is thinking once more of the canal system of a century ago as a means for moving the fuel that it needs to keep it warm and the food that it requires to keep it alive.

The United States is passing through a stage of experience that long ago was met by the older countries of Europe. England's canals are a feature of her commercial life. To what extent France, Belgium, Holland and Germany depend upon them has doubtless been noticed by all who have read the war news from day to day, in which canals are mentioned almost as often as the rivers which they connect.

The Erie Canal, which was built by the State of New York and not by private enterprise, is one of the most important and successful canal systems in the world. Before tolls were abolished it had more than paid its cost of construction and operation. Along its banks the two great railroad systems of the New York Central and the West Shore were built. It has profoundly influenced railroad rates throughout the United States.

Forced Cut in Rates.

The New York Central Railroad was compelled to establish rates which would bring it traffic despite the competition of the canal rates. The other railroads had to accept the Central's schedule, having been taught to do so by disastrous rate wars which carried ruin among them until they finally came to the conclusion that it would be wiser to work in harmony than at cross purposes. The Erie Canal, therefore, was practically the only effective regulator of railroad rates before the recent establishment of regulatory national and State commissions.

At one time there was serious question of abandoning the Erie Canal entirely. This was twenty-five years or so ago. The business men of New York and Buffalo, who realized that the prosperity of these two great cities was due to the commerce brought to them originally by the canal, succeeded in preventing this mistake. Instead of abandonment a policy of improvement was decided upon.

The small beginning made during the administration of Gov. Black ended in disaster, but while Benjamin B. Odell was Governor a comprehensive scheme was

adopted which is just being brought to completion at a cost to the State of New York of about \$150,000,000. The great Barge Canal, capable of carrying 10,000,000 tons of freight in a season, will be opened about the middle of May.

Meanwhile the breakdown of the railroads has become so complete that they cannot move the necessities of life, such as the huge crops of potatoes and corn, a considerable portion of which has rotted or frozen because the railroads could not bring it to market. All the Eastern seaboard has been compelled to shiver during the most severe winter within the memory of the present generation because the railroads could not bring coal to keep it warm. The war operations in Europe have been seriously hampered because the railroads could not furnish coal for the ships or cargoes of food for the ships to carry to our allies. Many industries have been seriously hampered and all are suffering.

Under Federal Control.

So desperate did the situation at last become that the Federal Government was forced to take control of the railroads in the hope that by unity of operation the trouble might be cured. While the situation has been slightly improved, it has become evident to everybody that the experiment of Government operation, while it may make the railroads more efficient, cannot enable them fully to meet both the needs of the war and of the business community.

Business men of the city of New York, as represented by the Merchants Association, the Chamber of Commerce and other similar organizations, are demanding that the Erie Canal be equipped with boats for traffic and that any other canal systems that can be used be repaired and put into navigable condition again.

In response to this demand Secretary McAdoo, Director-General of Railroads, has named a committee of three members to investigate the inland and coastwise waterways of the country with a view to ascertaining whether it would be useful for the Government to advance funds to equip them with terminals and boats in order that they may help the transportation situation. The committee consists of Gen. W. M. Black, Chief of Engineers, United States Army; Walter S. Dickey of Kansas City and G. A. Tomlinson of Duluth, which city may be regarded as the extreme Western terminus of the Erie Canal system.

It is announced that the committee will consider first the Chesapeake and Ohio Canal, which might be made to bring coal to Washington, and will then examine

Cost Far Less by Water, and Transit Time, Too, Is Cut Because of Present Railroad Congestion

the Hennepin, the Delaware and Hudson Canal, the New York State Barge Canal, the Chesapeake and Delaware Canal and the Delaware and Raritan Canal.

Director McAdoo has authority to take charge of the canals as a part of the transportation system, and many railroad men formerly jealous of canal competition are now urging that the transportation system of the country at large can be strengthened to a greater extent by providing boats for navigation on the rivers and artificial waterways than by investments in new rolling stock for the railroads.

Canals as Coal Carriers.

The resumption of traffic on the canals, lakes and other waterways of the country would relieve the railroads of a material part of the burden that they are now being called upon to carry. Under present conditions movement of freight by water is scarcely, if at all, slower than by rail, and the heavier commodities, such as metal ores, coal, stone, lumber, sand and gravel, cement, steel and iron and the like, are well suited for movement by water.

Gen. W. W. Wotherspoon, State Superintendent of Public Works, has examined into the possibilities of the Erie Canal system as a coal carrier. He believes that the Barge Canal is capable of transporting a large portion of the anthracite and bituminous coal consumed in the State of New York.

Dr. Harry A. Garfield, Federal Fuel Administrator, says that there were 20,000,000 tons of coal at the mines that could not be distributed because the railroads could not carry it. All coal is now distributed by one of three methods: It is sent to its destination by rail, or it is sent by rail to the sea and thence by boat to coast ports, or it is sent by rail to the Great Lakes and transported in lake vessels.

The Barge Canal.

The only States which send coal to New York besides Pennsylvania are Maryland, Ohio and West Virginia. Most of the New York coal comes from Pennsylvania and New York is the largest purchaser of Pennsylvania coal after Pennsylvania herself. In 1915 14,000,000 tons of the 157,555,137 tons of bituminous coal mined in Pennsylvania was shipped into New York, and 20,000,000 tons of the 88,995,061 tons of anthracite. This was moved entirely by rail.

When the Barge Canal is opened there will be a connection about half way between Syracuse and Rochester with the Cayuga and Seneca canals, which extend southward through Cayuga and Seneca lakes to Ithaca and Watkins. A rail haul of thirty miles will bring coal to these points from the Pennsylvania border.

The railroads which move the 20,000,000 tons of anthracite coal that New York State consumes every year are the Lehigh Valley, which moves 6,340,000 tons; the Delaware, Lackawanna and Western, which moves 4,800,000 tons; the Delaware and Hudson, which moves 4,600,000 tons; the Erie, which moves 3,800,000 tons, and the New York, Ontario and Western, which moves about 1,000,000 tons.

18,000 Cars a Month Saved.

Gen. Wotherspoon estimates that the average monthly movement of bituminous coal into New York State over the Pennsylvania and the New York Central is 817,750 tons, which, with an average loading of fifty tons per car, would require 16,355 cars per month. As each car consumes on an average thirty days for a round trip these 16,355 coal cars must be kept constantly in service.

The utilization of the Erie Canal route through Ithaca and Watkins would relieve 5,900 cars a month for other traffic. A similar handling of anthracite coal would release 13,000 more cars a month for other traffic. This would make a total saving through the use of the canal of 18,000 cars a month.

Reckoned in another way the substitu-

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