

tions from the west coast which passed through the canal. The 31 laden vessels which made the transit on their way to the west coast carried 128,922 tons of cargo. This was mainly machinery, structural material, clothing, and a great variety of general merchandise.

Shipments from the Atlantic coast of the United States to the Far East included 87,857 tons of refined petroleum and other petroleum products, 38,239 tons of raw cotton, and 162,686 tons of a great variety of manufactured goods, of which machinery, structural steel, railroad material, and textiles have been considerable items. About half of these vessels cleared for Australia and New Zealand, the rest for Japan, China, and Vladivostok. The trade to Vladivostok has been unexpectedly heavy.

During the first six months only two vessels returned through the canal directly from the Far East. Most of the vessels which go out over this route load in the Far East for ports in Europe or return first to the Pacific coast of North America, discharging cargo there and re-loading. The cargo coming through the canal from the Far East has included Chinese groceries, matting, antimony, vegetable oils, curios, rattan, bamboo, silk, tallow, tea, wool, etc.

The routes just described were used by all but 13 of the vessels passing through the canal during its first half year. The 13 miscellaneous vessels not to be classified with the principal routes included 4 vessels of a whaling fleet, on the way from Magdalena Bay to Norway; several stray vessels in the Central American coasting trade, and several vessels carrying coal to undeclared destinations.

The half dozen leading commodities shipped through the canal during the first half year were, in order of their tonnage, grain, nitrates, coal, refined petroleum products, lumber, and cotton. These six commodities together amounted to approximately one-third of all goods shipped through the canal.

Grain shipments amounted to 303,124 tons, of which all but 13,733 tons were shipped from the west coast of the United States and Canada. Of the other 13,733 tons, 6,200 tons were barley shipped from Valparaíso to Great Britain and 7,533 tons were wheat shipped from St. Johns, New Brunswick, to New Zealand.

The grain shipments from the west coast of North America consisted of 155,246 tons of wheat (5,744,000 bushels) and 134,145 tons of barley (6,170,000 bushels), a total of approximately 11,914,000 bushels.

Nitrates shipped from the west coast of South America to various ports in the United States and Europe amounted to 204,441 tons.

Coal, all moving to the Pacific, amounted to 151,745 tons. Of this quantity, 83,081 tons were shipped from the Atlantic seaboard of the United States and 68,664 tons from the United Kingdom.

Refined petroleum and other products amounted to 102,456 tons, of which 87,857 tons were shipped from the Atlantic seaboard of the United States to China, Japan, and Korea, and 14,599 tons were shipped from Talara, Peru, to Great Britain.

Shipments of lumber amounted to 56,078 tons. All but 600 tons (shipped from Gulfport to Panama City) were from the west coast of North America. Of the 55,478 tons shipped from the west coast all were shipped from ports of the United States except 6,891 tons from Nanaimo, British Columbia.

Raw cotton shipments amounted to 38,239 tons en route from the Atlantic seaboard of the United States to the Far East. Over 70 per cent. of the cotton passing through the canal was consigned to Japan.

The total cargo handled through the canal in its first half year was 2,367,244 tons. In the month and a half after February 15 nearly 1,000,000 tons more of cargo went through the canal, and the total up to April 1 was 3,246,019 tons. Its proportionate distribution over the principal routes is about the same, as shown in the following tabulation:—

	Ves-	Ton-	Total
	sels.	nage.	tonnage.
United States coastwise, eastbound..	137	650,921	
United States coastwise, westbound..	132	616,872	
			1,267,793
North Pacific coast to Europe.....	88	620,988	
Europe to North Pacific coast.....	21	68,043	
			689,031
South and Central America to United States and Europe	108	593,812	
United States and Europe to South and Central America	53	190,330	
			784,142
Atlantic coast to Far East	62	373,097	
Far East to Atlantic coast	6	45,100	
			418,197
Miscellaneous routings	16	86,856
Vessels without cargo	56
Grand total	679	3,246,019

Up to April 1, 1915, the canal had been in operation seven and a half months. Through that period the movement of cargo averaged 432,802 tons a month, which is at the rate of over 5,000,000 tons a year.

An expression of this quantity in terms of railway traffic is illuminating. During the fiscal year ending June 30, 1914, the Panama Railroad handled 643,178 tons of through freight between the seaboard of the Isthmus. During that year the railroad was supposed to be handling more freight per mile of track than any other railroad in the world. It will be noted that the through traffic of the Panama Railroad that year was within 9,000 tons of the amount carried through the canal during the month of March, 1915 (which was 635,057 tons); in other words, that the canal has handled in a month almost as much as the railroad did during a year.

The trains of the Panama Railroad engaged in hauling through freight were made up of from 18 to 20 loaded cars, carrying in the aggregate about 350 tons. To handle 5,000,000 tons of cargo across the Isthmus in a year by rail would require the operation of 39 trains a day. It would mean dispatching a train each way every hour and a quarter, and trains passing a given point about every 40 minutes through every hour of the year. The 14,285 trains necessary for handling this traffic would have, at 800 feet each, an aggregate length of over 2,142 miles, greater than the distance from New York to Colon. In a single train the cars would reach from New York to Chicago and back, or from New York to Chicago and then down to New Orleans, and leave several hundred miles of train to spare.

During the month of March, 1915, the laden vessels going through the canal had an average of 5,040 tons of cargo. Thus the vessels contained, on an average, over 14 trainloads of goods each.

A cargo of Douglas fir has been shipped from British Columbia to Hudson Bay, via the Panama Canal. The timber is to be used in the construction of piers and docks at Port Nelson. A further consignment of lumber is on the way to the Polson Iron Works, Toronto, to be made into masts for a dredge which is being built for use at Port Nelson. Hitherto the lumber used at Hudson Bay has been southern pine from the United States.