been favored on account of the fuller utilization of the right of way and also in a number of instances because of the necessity for driving pile trestles for adjacent industry tracks directly over the wall.

THE PANAMA RAILROAD STEAMSHIP LINE

In the review of the annual report of the Panama Railroad Company given in the editorial columns of this paper in the issue of February 26, something was said relative to the earnings of the company's steamship line. The following comments taken from a letter written to Senator Root in connection with the debate on the Ship Purchase Bill by Edgar F. Luckenbach, a prominent ship owner, will perhaps also be of interest. The letter points out that the annual reports of the Panama Railroad Company for 1911, 1912, 1913 and 1914 give the following earnings for the steamship line:

Year	Profit	Year	Profit
1911	*$77,187.97	1913	$221,489.92
1912	†305,742.85	1914	314,296.36
		Total	$612,974.25

*1912 report. †Loss.

"The steamship company owns the steamers Allianca, with a book value of $518,865.87, and the Advance, book value $221,186.30, or a total of $740,052.17. They also operate the steamers Ancon, Cristobal, Panama and Colon, which are worth about $600,000 each.

"These last four named vessels are loaned to the Panama Steamship Company by the Panama Canal Commission free of charter hire, insurance, depreciation or interest charges, and no one could operate these vessels unless they paid at least the following charges (investment of $2,400,000 for four years): Interest at 6 per cent, $576,000; insurance at 6 per cent, $576,000; depreciation at 6 per cent (which is the rate allowed by the Panama Steamship Company on other vessel property they own), $576,000; insurance on freight moneys, $22,439.28, and insurance against loss and damage to cargo (known as protection and indemnity), $6,000, making a total of $1,756,439.28.

"You will find in the annual report for 1914, page 47, no insurance charges are made on the steamers Allianca and Advance, which are valued at $740,052.17. Added to above: Hull insurance at 6 per cent, $177,612.52; cargo insurance, $2,000; interest at 6 per cent, $177,612.52; total $2,113,664.32.

"If any one else were operating these vessels to protect themselves properly they would have to pay the above enumerated charges, showing a loss for four years of $1,806,432.92.

"Ordinarily the above named steamers would be worth, on time charter basis, about $10,000 per month. (If I could get them today I would be willing to pay $20,000 per month.) Figured on the basis of $10,000 per month for each steamer for four years, the loss would be much larger than the figures given above, or on this basis the loss would be $1,920,000."

FLASH LIGHT SIGNALS ON THE BOSTON & MAINE

The Boston & Maine, which has used flashing acetylene lamps on signals experimentally for nearly two years, now has these lamps in use on about ten miles of its line, from Parkway Bridge, Mass., to Reading Highlands, on the Portland division. This is a double track line and there are thirty-six block sections, a home and a distant arm on each post. Both arms have the flash lights, and they flash from 58 to 62 times a minute. The signals at interlockings have ordinary steady lights, so that enginemen are able quickly to distinguish automatic from non-automatic signals.

The flash lights are furnished by the Commercial Acetylene Railway Light & Signal Company, New York City. By an automatic regulator in the pipe supplying gas to the lamp, the gas is made to flow only one-tenth of the time, making each lamp glow, for example, one-tenth of a second and then remaining dark nine-tenths of a second.

The night signals on the Boston & Maine show white for proceed, red for stop and green for caution.

Steady acetylene lamps have been used on several hundred block signals on the Boston & Maine for several years past.

The Norfolk & Western has had one of the flash lights in use on an automatic signal for the past eight months and reports the lamp as not only very reliable, but as costing much less than an oil lamp for the same service. On both this road and the Boston & Maine the enginemen are reported as much pleased with the flash light.

THE LOUISVILLE & NASHVILLE INVESTIGATION

The Interstate Commerce Commission on February 25 sent to the Senate its report on the investigation of the finances, rates and practices of the Louisville & Nashville. This investigation, authorized last spring by a resolution introduced by Senator Lea, of Tennessee, was directed mainly to discover whether the Louisville & Nashville, through control of the Nashville, Chattanooga & St. Louis and smaller lines, had restrained competition in the territory served by those roads, whether the control of the Louisville & Nashville by the Atlantic Coast Line, operated to the same end, and what amounts of money the Louisville & Nashville has contributed to political activities and other efforts to fight competition.

The report says that the Louisville & Nashville acquired competing lines and for years carried on an elaborate political and publicity campaign to eliminate competition and influence public opinion at enormous expense. The commission, however, qualifies its general charges of extravagance and of wrongful expenditures by the statement that the road had to meet much strong competition.

The commission from its investigation concludes that at least $16,000,000 shown in the Louisville & Nashville's cost of road accounts covers items which should not be charged to them. These charges are as follows:

Charges Included in Cost of Road Accounts but Not Expended for Actual Construction

Discount on stock		$1,440,018
Other expenses in connection with the sale of stock		32,671
Discount on bonds		2,192,143
Other expenses in connection with the sale of bonds		8,538
Interest and dividends		1,917,535
Amounts credited to profit and loss:		
For reasons not stated	$2,640,000	
To provide a surplus in order that a stock dividend of 100 per cent might be paid	6,300,000	
To raise book value of stock above the actual cost of acquirement	1,422,784	
To adjust difference between advances made for construction and par value of bonds received in settlement therefor	78,448	
		10,441,232
		$16,032,137

The commission says: "The above statement is illustrative of the character of charges which the carrier has included in its cost of road account. A full examination of the carrier's accounts might disclose conditions under which some of the above amounts could properly be charged to cost of road account, but it is also possible that other improper items would be found which would greatly augment the amount shown."

The Louisville & Nashville now owns 71.77 per cent of the capital stock of the Nashville, Chattanooga & St. Louis, and it appears that this control was obtained primarily for the purpose of restraining competition. This opinion is thought to be borne out by statements taken from the annual reports of the Nashville, Chattanooga & St. Louis for 1872 and 1880, respectively. It is also thought that the geographical relations of the two systems are such that were they separately controlled competition between them would be the inevitable result. The two roads further have made traffic agreements which result in restraining competition.

The Louisville & Nashville, chiefly since 1880, has acquired a controlling interest in over 100 other railroads. While one of the purposes of the Louisville & Nashville has obviously been to