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ANNUAL REPORT OF THE
GOVERNOR OF THE
PANAMA CANAL, 1924



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ANNUAL REPORT
OF THE
GOVERNOR OF
THE PANAMA CANAL

FOR THE
FISCAL YEAR
ENDED JUNE 30
1924



WASHINGTON
GOVERNMENT PRINTING OFFICE
1924

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REPORTS OF HEADS OF DEPARTMENTS AND DIVISIONS

Reports for the fiscal year 1924 have been made as follows and may be consulted at the Washington office of The Panama Canal or at the office of the Governor, Balboa Heights, Canal Zone:

Engineer of maintenance:

- Assistant engineer of maintenance, report of.
- Pacific locks, report of superintendent.
- Atlantic locks, report of superintendent.
- Electrical division, report of electrical engineer.
- Municipal engineering division, report of municipal engineer.
- Dredging division, report of superintendent.
- Office engineer.
- Meteorology and hydrography, report of chief hydrographer.
- Surveys, report of assistant engineer.
- Gatun dam and backfills, report of general foreman.

Marine division, report of superintendent.

Mechanical division, report of superintendent.

Supply department, report of chief quartermaster.

Executive department, report of executive secretary:

- Division of civil affairs, report of chief of division.
- Police and fire division, report of chief of division.
- Division of schools, report of superintendent of schools.
- Bureau of clubs and playgrounds, report of general secretary.

District attorney, report of.

Accounting department, report of the auditor.

Land agent, The Panama Canal and Panama Railroad Co., report of.

Purchasing department, report of the general purchasing officer and chief of Washington office.



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ANNUAL REPORT

OF THE

GOVERNOR OF THE PANAMA CANAL

THE PANAMA CANAL,
September 16, 1924.

The honorable the SECRETARY OF WAR,
Washington, D. C.

SIR: I submit herewith a report covering the operation of The Panama Canal during the fiscal year ended June 30, 1924.

Respectfully,

JAY J. MORROW,
Governor, The Panama Canal.

INTRODUCTION

NET REVENUE OF THE CANAL AND ITS AUXILIARIES

For the fiscal year 1924 the net income from tolls and other miscellaneous receipts grouped under the head of "transit revenue" was \$16,307,948.50, as compared with \$10,001,066.50 in 1923 and \$3,466,574.69 in 1922. The net profits on auxiliary business operations conducted directly by The Panama Canal, of which the most important are the mechanical shops, material storehouses and fuel oil plants, totaled \$901,624.12, as compared with \$1,140,642.50 in 1923, while those conducted by the Panama Railroad Co., exclusive of the Panama Railroad Steamship Line, but including commissaries, docks, coaling plants, and cattle industry, showed a profit of \$1,044,887.04, as compared with \$922,171.74 in 1923. The total net revenue of the year from all sources, exclusive of the Panama Railroad Steamship Line, was \$18,254,459.66.

In tabulated form the financial results of the operation of the canal and its auxiliaries on the Isthmus were:

	1924	1923
Net transit revenue.....	\$16,307,948.50	\$10,001,066.50
Net revenue on Panama Canal business operations.....	901,624.12	1,140,642.50
Total net revenue, Panama Canal.....	17,209,572.62	11,141,709.00
Net revenue on Panama Railroad business operations.....	1,044,887.04	922,171.74
Combined net revenue.....	18,254,459.66	12,063,880.74

SERVICE RENDERED BY THE CANAL TO SHIPPING

In terms of service to shipping the main items in the record for the fiscal year 1924, compared with 1923, were as follows:

	1924	1923
Transits of the canal by ships paying tolls.....	5,230	3,967
Free transits.....	420	388
Calls at canal ports by ships not transiting the canal.....	739	838
Cargo handled at ports (tons).....	933,092	837,271
Coal sales and issues (tons).....	222,734	224,464
Coal, number of ships served other than Panama Canal.....	722	773
Fuel oil pumped (barrels).....	13,790,823	10,429,517
Fuel oil, number of ships served other than Panama Canal.....	2,177	1,487
Ships repaired, other than Panama Canal equipment.....	510	692
Ships drydocked other than Panama Canal equipment.....	85	74
Provisions sold to ships (commissary sales).....	\$801,856.30	\$681,635.47
Chandlery sold to ships (storehouse sales).....	85,340.42	99,582.27

SECTION I

CANAL OPERATION AND TRADE VIA PANAMA

TRAFFIC IN 1924

The fiscal year 1924 has been by far the most prosperous in the history of The Panama Canal. The number of ships in transit, exclusive of public vessels of the United States and others exempt from the payment of tolls, was 5,230, their aggregate net tonnage was 26,148,878, and the tolls collected totaled \$24,290,963.54. The latter figure exceeds by 38.7 per cent the tolls for the fiscal year 1923. The gradual increase of traffic since the canal was opened to navigation in August, 1914, is shown in the table below.

Fiscal year ending June 30	Number of transits	Panama Canal net tonnage	Tolls	Tons of cargo
1915 ¹	1,075	3,792,572	\$4,367,550.19	4,888,454
1916 ²	758	2,396,162	2,408,089.62	3,094,114
1917.....	1,863	5,798,557	5,627,463.05	7,058,563
1918.....	2,069	6,574,073	6,438,853.15	7,532,031
1919.....	2,024	6,124,990	6,172,828.59	6,916,621
1920.....	2,478	8,546,044	8,513,933.15	9,374,499
1921.....	2,892	11,415,876	11,276,889.91	11,599,214
1922.....	2,736	11,417,459	11,197,832.41	10,884,910
1923.....	3,967	18,605,786	17,508,414.85	19,567,875
1924.....	5,230	26,148,878	24,290,963.54	26,994,710
Total.....	25,032	100,820,397	97,802,818.46	107,910,991

¹ Canal opened to traffic Aug. 15, 1914.

² Canal closed to traffic approximately 7 months of fiscal year by slides.

The high figures for the fiscal year 1924 were due in part to heavy oil shipments from California. These began in September, 1922, and reached their peak one year later, in September, 1923, when 909,879 tons of California crude oil passed through the canal. Declining gradually from that date, these cargoes in June, 1924, totaled only 453,945 tons, and a further shrinkage is expected. Owing to the loss of this oil business it is possible that the record of 1924 will not be equalled in 1925, but there is a constant growth in other directions which tends to make good the loss in oil. Excluding California oil altogether, the cargo in transit through The Panama Canal in 1923 was 15,878,826 tons, and in 1924 it was 18,493,700 tons, an increase of 16.4 per cent.

The heaviest traffic of the year and in the history of the canal was in December, 1923, when the vessels in transit averaged 16.3 a day,

and the lightest was in June, 1924, with an average of 12.6 transits a day. The traffic statistics for each of the 12 months of the fiscal year are shown in the table below.

Month	Number of ships	United States equivalent net tonnage	Panama Canal net tonnage	Tolls	Cargo
1923					
July.....	474	1,856,501	2,310,027	\$2,124,830.02	2,337,784
August.....	454	1,799,173	2,232,590	2,050,656.97	2,168,750
September.....	413	1,645,379	2,044,552	1,902,453.61	2,168,703
October.....	427	1,724,995	2,139,475	1,988,607.69	2,127,567
November.....	436	1,774,350	2,193,865	2,058,188.61	2,218,295
December.....	506	2,027,753	2,516,491	2,335,729.81	2,494,634
1924					
January.....	476	1,921,539	2,400,040	2,216,855.01	2,427,332
February.....	418	1,680,768	2,108,879	1,964,155.59	2,243,616
March.....	429	1,712,044	2,136,079	1,997,138.83	2,272,472
April.....	403	1,634,644	2,053,171	1,903,761.27	2,158,721
May.....	417	1,660,246	2,085,670	1,955,764.91	2,353,986
June.....	377	1,519,841	1,928,039	1,792,821.22	2,022,850
Fiscal year 1924.....	5,230	20,957,233	26,148,878	24,290,963.54	26,994,710

The tanker traffic, including tankers engaged in carrying oil from Peru to the Atlantic and from Mexico to the Pacific, as well as those in the California trade, is shown in the first of the two tables below in comparison with the general traffic. The second of the two tables shows the tonnage of oil shipped through the canal in tankers from California, Mexico, and Peru.

	Proportion of tankers to total traffic					
	Total commercial transits			Average daily transits		
	Tankers	General	Total	Tankers	General	Total
July.....	171	303	474	5.5	9.8	15.3
August.....	173	281	454	5.6	9.0	14.6
September.....	159	254	413	5.3	8.4	13.7
October.....	154	273	427	5.0	8.8	13.8
November.....	145	291	436	4.8	9.7	14.5
December.....	164	342	506	5.3	11.0	16.3
January.....	142	334	476	4.6	10.8	15.4
February.....	120	298	418	4.3	10.2	14.5
March.....	132	297	429	4.2	9.6	13.8
April.....	118	285	403	3.9	9.5	13.4
May.....	121	296	417	3.9	9.5	13.4
June.....	105	272	377	3.5	9.1	12.6
Fiscal year 1924.....	1,704	3,526	5,230	4.6	9.6	14.2
Fiscal year 1923.....	913	3,054	3,967	2.5	8.3	10.8

	Panama Canal net tonnage			Tolls		
	Tankers	General	Total	Tankers	General	Total
Fiscal year 1924.....	10,212,047	15,936,831	26,148,878	\$9,071,835.65	\$15,219,127.89	\$24,290,963.54
Fiscal year 1923.....	5,374,384	13,231,402	18,605,786	4,769,324.63	12,738,874.94	17,508,199.57

Tanker cargoes.¹

	Californian		Peruvian, crude	Mexican, crude	Total
	Crude	Refined			
July.....	791,236	80,874	41,281	9,607	922,998
August.....	849,308	13,820	23,392	27,529	914,049
September.....	909,879	38,208	34,269	19,546	1,001,902
October.....	780,882	23,112	-----	28,130	832,124
November.....	833,555	53,156	22,695	24,247	933,653
December.....	804,347	85,315	25,367	46,257	961,286
January.....	732,021	78,120	9,446	9,800	829,387
February.....	643,318	58,536	-----	19,133	720,987
March.....	707,636	52,881	29,550	19,319	809,386
April.....	412,592	103,347	42,400	19,169	577,508
May.....	582,291	114,691	85,479	16,939	799,400
June.....	453,945	80,528	57,633	18,100	610,206
Fiscal year 1924.....	8,501,010	782,588	371,512	257,776	9,912,886
Fiscal year 1923.....	3,689,049	249,840	239,751	261,877	4,440,517

¹ This table shows the important oil shipments in tank steamers through the canal, but it is complete only for the headings shown. Occasional shipments of refined oil from Peru and other tanker cargoes of miscellaneous origin are not included.

NATIONALITY OF VESSELS

There were 21 flags represented in the traffic through the canal. In terms of cargo carried the United States came first, with 61.7 per cent of the total; the British Empire second, with 22.4 per cent; and Japan third, with 3.5 per cent. Germany moved up into fourth place, with 2.7 per cent; and Norway was fifth with 2 per cent. The corresponding figures for the fiscal year 1923 were: United States, 56.5 per cent; British Empire, 25.2 per cent; Japan, 4.8 per cent; Germany, 1.6 per cent, and Norway, 3.6 per cent. The British Empire, Chile, Denmark, France, Germany, Holland, Italy, and Sweden show absolute gains in cargo tonnage, while the figures for Japan, Norway, and Peru are below those for 1923. The Argentine, Belgian, and Costa Rican flags, which appear on the 1923 list, were not seen at the canal in 1924. On the other hand, the flags of the Free City of Danzig, Ecuador, Finland, and Yugoslavia appear in 1924 but not in 1923.

The complete figures for 1924 appear in the table below:

Nationality	Number of ships	United States equivalent net tonnage	Panama Canal net tonnage	Tolls	Cargo
British.....	1,265	4,891,576	6,097,611	\$5,814,983.83	6,051,842
Chilean.....	47	125,790	176,472	157,035.25	107,147
Colombian.....	22	5,701	5,767	6,612.11	5,897
Danish.....	65	193,437	245,929	220,205.17	317,274
Danzig.....	11	65,303	88,276	72,498.00	54,764
Dutch.....	102	412,431	551,761	489,807.74	573,929
Ecuadorian.....	1	36	36	27.00	-----
Finnish.....	3	4,782	4,798	5,757.60	7,500
French.....	83	337,543	386,640	428,571.60	407,249
German.....	150	483,992	660,156	604,085.65	737,103
Greek.....	1	3,167	4,038	3,958.75	6,562
Italian.....	43	140,334	164,448	170,565.90	125,156
Japanese.....	171	702,812	815,468	844,976.31	935,245
Mexican.....	1	163	192	138.24	-----
Norwegian.....	136	446,682	546,633	496,876.96	539,101
Panamanian.....	21	33,571	43,056	40,804.19	35,719
Peruvian.....	70	102,664	189,046	127,183.38	102,136
Spanish.....	45	137,240	172,572	160,336.90	67,903
Swedish.....	39	107,677	161,993	130,935.00	220,517
United States.....	2,947	12,743,711	15,806,899	14,483,327.71	16,654,435
Yugo-Slav.....	7	18,621	27,087	23,276.25	45,231
Total.....	5,230	20,957,233	26,148,878	24,290,963.54	26,994,710

FREE TRANSIT OF PUBLIC VESSELS AND VESSELS FOR REPAIRS

The transit statistics in the preceding sections do not include naval vessels and other public vessels of the United States (or of Panama and Colombia), which pay no tolls. These numbered 418, as against 388 in 1923. One vessel was sent through The Panama Canal to the Balboa shops for repairs and subsequently returned to the Atlantic, exempt from tolls in each case, making two additional transits which are also omitted from the statistics of commercial traffic. Including this noncommercial traffic, the total number of transits was 5,650.

TRADE ROUTES AND CARGO

An examination of the tables below, in which the traffic is segregated by trade routes, will show that the United States intercoastal trade furnished an even 50 per cent of all cargo passing through the canal during the fiscal year 1924, and that four other major trades accounted for 35.5 per cent additional. These were the trades between Europe and the Pacific coast of North America (United States and Canada), 11.5 per cent; between the east coast of the United States and the west coast of South America, 10 per cent; between Europe and South America, 7.4 per cent; and between the United States and the Far East, 6.6 per cent. Various minor trades contributed the balance of the cargo, amounting to 14.5 per cent of the whole.

All of the major trades show an increase over 1923, with the single exception of the trade between the United States and the Far East, in which there was a slight decline.

The cargo moving in the United States intercoastal trade increased from 8,068,553 tons to 13,527,378 tons, or 60.7 per cent. In the trade between Europe and the Pacific coast of North America there was an increase from 2,511,791 tons to 3,113,036 tons, or 23.9 per cent. In the trade between the east coast of the United States and the west coast of South America the increase was from 2,054,523 tons to 2,702,629 tons, or 31.5 per cent. In the trade between Europe and South America the 1923 cargo tonnage was 1,749,986, and in 1924 it was 2,005,857, an increase of 14.6 per cent. In the combined minor trade routes there was an increase from 3,273,737 tons to 3,847,532 tons, or 17.5 per cent. The only decline, as previously noted, was in the trade between the United States and the Far East, where 1,798,278 tons were handled in 1924, as compared with 1,909,285 tons in 1923, a loss of 5.8 per cent.

Of the total westbound cargo 69.6 per cent was shipped from United States ports and 42.6 per cent was consigned to United States ports. Of the total eastbound cargo 67.9 per cent was shipped from United States ports and 72.2 per cent consigned to United States ports.

Commercial traffic through The Panama Canal during the fiscal year 1924, classified by leading trade routes

	Number of ships	Panama Canal net tonnage	Tons of cargo	Percentage of total cargo
United States intercoastal:				
Atlantic to Pacific.....	1, 160	6, 435, 363	2, 719, 240	10.0
Pacific to Atlantic.....	1, 178	6, 613, 194	10, 868, 138	40.0
Total.....	2, 338	13, 048, 557	13, 527, 378	50.0
Between east coast of United States and west coast of Canada:				
Atlantic to Pacific.....	43	205, 307	130, 364	.4
Pacific to Atlantic.....	56	277, 811	356, 223	1.3
Total.....	99	483, 118	486, 587	1.7
Between east coast of United States and Far East:				
Atlantic to Pacific.....	221	1, 201, 568	1, 504, 275	5.5
Pacific to Atlantic.....	50	294, 551	291, 003	1.1
Total.....	271	1, 496, 119	1, 798, 278	6.6
Between east coast of United States and west coast of South America:				
Atlantic to Pacific.....	243	1, 013, 646	373, 348	1.4
Pacific to Atlantic.....	290	1, 264, 749	2, 329, 281	8.6
Total.....	533	2, 278, 395	2, 702, 629	10.0
Between Europe and west coast of South America:				
Atlantic to Pacific.....	213	951, 084	627, 356	2.3
Pacific to Atlantic.....	227	1, 022, 248	1, 378, 501	5.1
Total.....	440	1, 973, 332	2, 005, 857	7.4
Between west coast of United States and Europe:				
Atlantic to Pacific.....	195	943, 214	427, 992	1.6
Pacific to Atlantic.....	157	782, 940	1, 231, 230	4.5
Total.....	352	1, 726, 154	1, 659, 222	6.1
Between west coast of Canada and Europe:				
Atlantic to Pacific.....	85	439, 542	242, 279	.9
Pacific to Atlantic.....	155	761, 289	1, 211, 535	4.5
Total.....	240	1, 200, 831	1, 453, 814	5.4
Between east coast of United States and Australasia:				
Atlantic to Pacific.....	113	574, 661	587, 481	2.1
Pacific to Atlantic.....	25	115, 170	47, 777	.2
Total.....	138	689, 831	635, 258	2.3
Between Europe and Australasia:				
Atlantic to Pacific.....	84	593, 893	509, 477	1.8
Pacific to Atlantic.....	56	373, 033	304, 370	1.1
Total.....	140	966, 926	813, 847	2.9
Between east coast of Mexico and west coast of South America:				
Atlantic to Pacific.....	26	128, 139	250, 448	.9
Pacific to Atlantic.....	19	91, 506	7, 758	.0
Total.....	45	219, 645	258, 206	0.9
Between Cristobal, Canal Zone, and west coast of United States:				
Atlantic to Pacific.....	26	59, 011	29, 061	.1
Pacific to Atlantic.....	25	62, 556	53, 924	.2
Total.....	51	121, 567	82, 985	.3
Between Cristobal, Canal Zone, and west coast of South America:				
Atlantic to Pacific.....	55	72, 331	16, 669	.0
Pacific to Atlantic.....	74	126, 504	99, 277	.4
Total.....	129	198, 838	115, 946	.4

Commercial traffic through The Panama Canal during the fiscal year 1924, classified by leading trade routes—Continued

	Number of ships	Panama Canal net tonnage	Tons of cargo	Percentage of total cargo
Between Cristobal, Canal Zone, and west coast of Central America:				
Atlantic to Pacific.....	30	19,034	22,854	0.1
Pacific to Atlantic.....	32	28,925	25,618	.1
Total.....	62	47,959	48,472	.2
Miscellaneous routes and sailings:				
Atlantic to Pacific.....	246	1,031,250	419,256	1.5
Pacific to Atlantic.....	146	666,353	986,975	3.7
Total.....	392	1,697,603	1,406,231	5.2
Total Atlantic to Pacific.....	2,740	13,668,049	7,860,100	29.0
Total Pacific to Atlantic.....	2,490	12,480,829	19,134,610	71.0
Total commercial traffic.....	5,230	26,148,878	26,994,710	100.0

PRINCIPAL COMMODITIES

The commodity statistics of The Panama Canal are not compiled from complete manifests but from summary cargo declarations submitted by the masters of vessels in transit. They are not precise except for items like crude oil, wheat, nitrate, and lumber, which are commonly carried in bulk. There is a natural tendency to lump any small miscellaneous shipments under the head of "General cargo." Subject to errors arising from this source, the following table shows the principal commodities shipped through the canal during the fiscal year 1924:

FROM ATLANTIC TO PACIFIC

	Tons		Tons
Manufactures of iron and steel.....	¹ 1,691,712	Lubricating oil.....	¹ 110,835
Refined petroleum.....	648,750	Automobiles.....	¹ 110,351
Crude petroleum.....	¹ 319,552	Cotton.....	100,925
Cement.....	¹ 303,724	Iron.....	94,746
Railroad materials.....	¹ 192,537	Paper.....	¹ 90,885
Tin.....	¹ 191,733	Coke.....	90,447
Coal.....	¹ 191,488	Textiles.....	¹ 90,207
Machinery.....	¹ 181,112	Ammonia.....	¹ 79,813
Sulphur.....	¹ 146,712	Tobacco.....	¹ 71,550

FROM PACIFIC TO ATLANTIC

	Tons		Tons
Crude petroleum.....	¹ 8,872,540	Food products in cold storage ²	¹ 142,830
Lumber.....	¹ 1,824,438	Dried fruit.....	¹ 103,469
Nitrates.....	¹ 1,744,580	Coffee.....	¹ 102,451
Wheat.....	¹ 1,352,388	Copper ore.....	85,947
Iron ore.....	¹ 888,198	Wool.....	¹ 84,696
Refined petroleum.....	¹ 799,234	Rice.....	74,470
Copper.....	286,782	Beans.....	60,030
Sugar.....	270,688	Cotton.....	¹ 54,253
Barley.....	266,859	Skins and hides.....	¹ 51,595
Canned fruit.....	229,691	Copra.....	51,115
Canned fish.....	151,201		

¹ Indicates increase over 1923.

² Does not include fruit.

Each of the first 10 items on the list of westbound cargo, with the exception of refined petroleum, shows an increase over 1923. Relatively this increase was greatest in the case of cement, where it amounted to 167 per cent, and automobiles, 114.3 per cent. Manufactures of iron and steel increased 12.7 per cent, crude petroleum 12.1 per cent, railroad materials 11 per cent, tin 32.9 per cent, coal 4.7 per cent, machinery 56.1 per cent, sulphur 25.3 per cent, lubricating oil 12.8 per cent, paper 1.4 per cent, textiles 22 per cent, ammonia 5 per cent, tobacco 81 per cent.

Refined petroleum westbound shows a decrease of 1.4 per cent, cotton 17.7 per cent, iron 16.5 per cent, and coke 7.2 per cent.

Among the items of eastbound cargo the greatest relative increase over the previous year is shown by refined petroleum with 174.1 per cent, crude petroleum 125.5 per cent, wheat 65.6 per cent, and iron ore 65.4 per cent. The other items which show an increase are lumber 18.5 per cent, nitrate 4.8 per cent, food products in cold storage 34.6 per cent, dried fruit 14.7 per cent, coffee 25.4 per cent, wool 24.3 per cent, cotton 5.1 per cent, and skins and hides 11.3 per cent.

The following eastbound items show a decrease: Copper 3.3 per cent, sugar 9.3 per cent, barley 29.6 per cent, canned fruit 18.6 per cent, canned fish 10.4 per cent, copper ore 10.8 per cent, rice 10.8 per cent, beans 29.2 per cent, and copra 28.5 per cent.

MOTOR SHIPS

The number of motor ships trading through The Panama Canal shows a further increase, but these vessels still contribute less than 4 per cent of the total traffic. Transits by motor ships in 1924 numbered 203, as compared with 121 in 1923 and 77 in 1922.

DETAILS OF THE TRADE

Further details of the trade through the canal will be found in the following tables in Section V of this report:

Table 59: Summary of commercial traffic, 1915-1924.

Table 60: Commercial traffic by nationality, 1915-1924.

Tables 61-A and 61-B: Origin and destination of cargo, 1924.

Tables 62-A and 62-B: Commercial traffic by nationality, ships, tonnage, and cargo, 1915-1924.

Table 63: Commercial traffic by nationality, ships, tonnage, tolls, and cargo, 1915-1924.

THE DUAL MEASUREMENT SYSTEM

Efforts were renewed to secure legislation to abolish the dual system of measuring vessels for the assessment of tolls, which has been the source of endless annoyance and confusion for the past 10 years.

Bills were introduced in both the Senate and the House of Representatives (S. 2400 and H. R. 7762, 68th Cong., 1st sess.) which would make the Panama Canal rules the sole basis of measurement. The House bill was reported from the Committee on Interstate and Foreign Commerce on April 25, 1924, with an explanatory statement by Mr. Hoch (H. Rept. No. 573, 68th Cong., 1st sess.), in which the argument for the desired change is very forcibly and lucidly summarized. No further action on the bill was taken before the adjournment of Congress, but it is hoped that it may be enacted into law at the next session.

LOCKAGES AND LOCK MAINTENANCE

There were only minor alterations in the schedule for the dispatch of vessels through the canal. At the Gatun Locks three operating shifts were retained, covering the hours from 7 a. m. to 11 p. m., the second shift overlapping with the first and third during the hours of heaviest traffic. At the Pacific Locks there was an extension of working hours; the Pedro Miguel Lock is now operated with two overlapping shifts from 7.30 a. m. to 8 p. m., and the Miraflores Locks with three overlapping shifts from 6.50 a. m. to 10.20 p. m.

The average number of lockages per diem was 14.3 at Gatun, 15.2 at Pedro Miguel, and 15.1 at Miraflores. The total number of lockages at all locks was 16,352, as compared with 12,551 in 1923, an increase of 30 per cent.

To handle the increased business the organization was increased by 2 senior general operators, 1 control-house operator, and 5 locomotive operators at Gatun, and by 2 senior general operators, 4 general operators, 2 control-house operators, and 5 locomotive operators at the Pacific Locks.

There were no serious delays to shipping due to the faulty operation or failure of equipment and no accidents of any moment to vessels in the locks.

On December 6, 1923, the steamship *August* ran into a fender chain when tying up at the Miraflores Locks. There is record of two similar accidents. In all three cases the chain functioned properly and prevented a collision with the miter gate without injury to the vessel.

Both chambers at Pedro Miguel and Miraflores were available for use during the entire year. At Gatun, owing to the triennial overhaul of the valves, gates, bulkheads, and other under-water parts, one chamber or the other was unwatered and out of commission for 41 days. The overhaul was started on February 4, and completed on March 25, 1924. Work was carried on with three 8-hour shifts, seven days a week, using the maximum number of men that could be employed to advantage. The necessary extra force, tools, material,

and spare parts having been previously arranged for, and with no serious delays, the overhaul, including the change-over from west chamber to east, was completed in 45 days, 9½ hours. There were 48 men brought down from the United States for this temporary job, in addition to those that could be recruited locally or transferred from other divisions. The majority of them arrived on February 2 and returned on the boat sailing March 19.

The Pacific Fleet, consisting of 65 vessels, including 9 battleships, was locked through the canal northbound on January 16, 17, and 18, and 36 commercial vessels were handled on the same dates, making a total of 118 vessels in three days. Returning from maneuvers in the Atlantic, the fleet again passed through the canal, southbound, in April. From April 4 to April 8, inclusive, 66 naval vessels completed the transit, together with one other Government vessel and 78 commercial vessels, or a total of 145 vessels in five days.

To pass the fleet and a normal volume of commercial traffic at the same time necessitated some overtime at the locks and in the marine division; with the present organization it was equivalent to a peak load, but well within the canal's maximum capacity both as to personnel and equipment.

Lockages during the year are summarized in the following table:

Month	Gatun		Pedro Miguel		Miraflores		Total	
	Lock-ages	Vessels	Lock-ages	Vessels	Lock-ages	Vessels	Lock-ages	Vessels
1923								
July.....	452	524	495	550	489	519	1,436	1,623
August.....	441	527	473	533	468	533	1,382	1,593
September.....	414	485	440	487	437	492	1,291	1,464
October.....	423	516	452	501	446	494	1,321	1,511
November.....	447	511	461	502	456	493	1,364	1,506
December.....	497	582	543	597	536	583	1,576	1,762
1924								
January.....	511	617	536	634	529	638	1,576	1,889
February.....	428	491	446	507	442	507	1,316	1,508
March.....	430	500	444	505	442	506	1,316	1,511
April.....	425	534	442	544	441	550	1,308	1,628
May.....	416	503	444	510	441	505	1,301	1,518
June.....	376	412	396	427	393	427	1,165	1,266
Fiscal year 1924..	5,260	6,205	5,572	6,297	5,520	6,277	16,352	18,779
Fiscal year 1923.....	4,011	4,638	4,267	5,017	4,273	4,960	12,551	14,615

POWER FOR CANAL OPERATION

The power system, based on a hydroelectric plant at Gatun and a reserve steam generating plant at Miraflores, was operated throughout the year with an average combined generator output of 4,688,472 kilowatt hours per month, as compared with 4,422,920 kilowatt hours per month in 1923. Distribution from substations averaged 3,982,224 kilowatt hours per month in 1924, and 3,796,750 kilowatt hours per

month in 1923. These figures show a transmission and distribution loss of 14.5 per cent in 1924, as against a loss of 14.15 per cent in 1923.

The Miraflores station was maintained on the basis of stand-by service and was required to carry load on 44 occasions. From January 1 to March 10 it carried the major portion of the load on the power system, thus relieving the hydroelectric station at Gatun and conserving the water in Gatun Lake against a possible dry season shortage. The plant was improved by the installation of an electric-steam boiler, which is used during periods of ample water at the Gatun hydroelectric station. It produced sufficient steam to keep one 1,500-kilowatt steam turbine operating as a synchronous condenser for power factor correction, and at the same time was available to take the Pacific locks load immediately in case of interruption to service on the transmission line. This installation has also resulted in the saving of approximately 500 barrels of fuel oil a month. Study was completed and requisition prepared for the new generating equipment that is to be installed at Miraflores. It is expected that at least part of the new plant will be available during the 1926 dry season.

There were no interruptions to service at the Miraflores station and only two at Gatun, both of short duration. There were seven interruptions to service on the 44,000-volt transmission line of an aggregate duration of 11½ minutes.

The cost of power generated by the Gatun and Miraflores plants, including the cost of distribution, was \$0.0107 per kilowatt hour, as compared with \$0.0087 in 1923.

WATER SUPPLY

The following table shows the inflow of water into Gatun Lake from all sources, utilization and losses during the fiscal year:

	Per cent	Billion cubic feet
Run-off above Alhajuela.....	37.2	83.94
Yield from land area below Alhajuela.....	42.4	95.65
Direct rainfall on lake surface.....	20.4	46.05
Total.....	100.0	225.64
Evaporation from lake surface.....	8.1	18.24
Gatun Lake lockages.....	16.7	37.77
Hydroelectric power.....	16.8	37.82
Spillway waste.....	56.1	126.58
Diluting salinity of Miraflores Lake.....	.4	.82
Leakage and municipal water.....	.7	1.59
Increase in storage.....	1.2	2.82
	100.0	225.64

The dry season was of average duration, extending approximately from December 19, 1923, to April 19, 1924. As regards water supply, it was the fifth driest in the last 13 years. The discharge of the Chagres River at Alhajuela was 21 per cent below the dry season

average for 23 years, or 999 cubic feet per second against a mean of 1,262 cubic feet per second. Gatun Lake fell to elevation 83.6 feet above sea level on April 20, 1924, from which date the recovery of storage began.

Experiments were undertaken in the economical use of water, which indicated that approximately 2,250,000,000 cubic feet can be conserved monthly by substituting the Miraflores steam generating plant for the hydroelectric plant at Gatun, and that with the same volume of traffic as in December, 1923, approximately 1,000,000,000 cubic feet can be saved monthly at the locks by crossfilling, short chamber lockages and other like expedients. During a five months' dry season this total conservation of 3,250,000,000 cubic feet a month would amount to 16,250,000,000 cubic feet, or the equivalent of 3.5 feet of storage in Gatun Lake.

The survey of the Chagres Valley above Alhajucla, where it is proposed at some future date to build a dam for additional water storage, was completed in July, 1923. The area of the basin within the 260-foot contour line is 21.2 square miles, and the storage capacity of the proposed lake at elevation 240 will be 22,310,000,000 cubic feet. To forestall any further development of this land, which will ultimately be flooded, the entire basin below the 260-foot contour, together with a small tract below the dam site, was transferred from Panama to the United States as provided in Article II of the Hay-Bunau-Varilla treaty and incorporated with the Canal Zone, effective February 1, 1924. There are two small villages, El Vigia and San Juan, and various scattered huts and clearings within the area of the proposed lake. The number of inhabitants is estimated at 1,500. These people will remove to other sites, but they will not be evicted for the time being, and while they remain the necessary public services, including police and schools, will be maintained by the Government of the Canal Zone. Negotiations are now pending to extinguish all private claims to land and improvements within the area.

FLOOD OF OCTOBER, 1923

Heavy rains over the watershed of Gatun Lake October 21 and 22 caused a rate of run-off into the lake not previously attained since the opening of the canal, and brought about an interruption of traffic on October 23, when no ships were allowed to begin the transit of the canal between 6.30 a. m. and 3.30 p. m. The interruption was due in part to a strong current at Gamboa, where the waters of the Chagres River reach the canal channel, and in part to the use of the lock culverts to discharge excess water from the lake. Eleven gates of the spillway were opened, and when the flood was at its height the side wall culverts at Gatun and Pedro Miguel Locks were also opened.

In the afternoon of October 23 the 19 ships which had been delayed at the ends of the canal were taken through the first locks, and on October 24 they completed transit. Thirty-one ships made the transit on October 24.

The surface of Gatun Lake rose from an elevation of 86.10 feet above sea level on October 21 to a maximum of 87.48 in the early morning of October 23. This represents an increase in storage of 6,000,000,000 cubic feet. The discharge through spillway gates and lock culverts aggregated about 175,000 cubic feet per second. It is estimated that at the height of the flood the water was entering the lake at approximately 300,000 cubic feet per second, but as the heavy discharge had been begun well before this there was a margin of space sufficient to keep the final elevation within bounds.

The Chagres River reached an elevation of 117.4 feet at Alhajucla, exceeding its elevation at any time since 1909, when a flood record of 121 feet was set.

The situation was aggravated locally by small slides and washouts on the Panama Railroad, a break in the water main from the Chagres River supplying Panama City and the towns at the Pacific end of the Canal Zone, and a break in the transisthmian duct line which interrupted telephone, telegraph, and cable communication. It also became necessary to strengthen the Mindi Dike, built to prevent the flow of water from the spillway into the canal channel below Gatun.

During Wednesday, October 24, rains started again, and conditions in the afternoon became nearly as bad as on the previous day. Canal traffic was suspended at 5 p. m., and the side wall culverts at the Gatun and Pedro Miguel Locks were used again to spill water from the lake. In all, eight spillway gates and four culverts discharged all night. A ninth gate began discharging the next morning, continuing until 6.50 p. m. on the 25th.

While the Chagres River registered two of the greatest rises experienced since the flood of 1909, this flood was due primarily to heavy rainfall over the surface of the lake itself rather than to the run-off from the watershed. During the 48 hours ending at midnight on October 24, 27.9 inches had fallen at Gatun, 27.6 at Colon, and 26.1 at Monte Lirio. All rainfall records on the Atlantic side for the complete month of October were broken in only four days from October 22 to 25.

No damage was done at the locks, spillways, or hydroelectric plant. Temporary blocking of the strut openings at the Pedro Miguel Lock was necessary to prevent the flooding of the tunnels. In spite of the difficulties created, the passage of ships was delayed only nine hours at the height of the flood on October 23 and for a brief period late in the afternoon of October 24.

MAINTENANCE OF CHANNEL

To remove silt from the canal prism and the terminal harbors, deal with slides, and prosecute certain improvement projects, including the removal of La Pita Point in the Gaillard Cut, of the Gibraltar Shoal at the foot of Gold Hill, and of a point on the west bank south of the Miraflores Locks, the following dredging equipment was employed:

Of the three 15-yard dipper dredges, one was in commission for 10½ months, a second for 7 months, and the third for 6½ months. One 20-inch pipe-line suction dredge was in service during the entire year. After March 31, 1924, it worked in conjunction with a new relay pump barge, and these two pieces of equipment combined are expected to handle material through short lines, not exceeding 1,500 feet, to a height of 250 feet, or to a maximum distance of three miles, provided the lift does not exceed 20 feet. A second 20-inch pipe-line suction dredge was converted for use as a hydraulic grader and so used for 6¾ months. At the end of the year it was being reconverted for service as a dredge. The sea-going suction dredge *Culebra* was continued in service for 3½ months from the beginning of the fiscal year and then transferred to the United States Engineer office at San Francisco. One ladder dredge was held in reserve. A hydraulic grader was employed for 9 months on the La Pita Point improvement project. A drill boat was in service throughout the year. An air compressor installed on a barge was used for 12 months to supply compressed air for drilling at La Pita Point. A crane boat was in commission during the entire year and used for towing, rigging, and wrecking jobs and the excavation of sand. Each of the two 250-ton floating cranes was commissioned in alternate months, except when calls for extra service required that crews be placed on both of them. Five tug boats were employed, including 1 in reserve, and 13 launches, including 3 in reserve.

New equipment ordered but not delivered during the year included one Diesel driven three-fourths-yard drag-line excavator, three 1,000-yard dump scows, and one drill barge.

The following is a statement of all dredging during the fiscal year:

From the canal prism:	Cubic yards
Atlantic entrance.....	192, 400
Gaillard Cut—	
Maintenance.....	3, 194, 800
La Pita Point improvement project.....	499, 600
Pacific entrance.....	736, 100
Total.....	4, 622, 900
Auxiliary:	
Balboa inner harbor.....	479, 200
Pipe line crossing, Paraiso.....	1, 700
Total.....	480, 900
Grand total.....	5, 103, 800

Of the grand total, 2,980,300 cubic yards were classified as earth and 2,123,500 cubic yards as rock.

Of the improvement projects upon which dredging equipment was engaged, those at Miraflores and Gibraltar Shoal were completed, and at La Pita Point, where 1,041,200 cubic yards of material had been removed at the end of the year, there remained 165,000 cubic yards still to be excavated. Twelve new improvement projects were studied, and the dredging division was authorized to undertake them in the order of their importance as equipment and personnel became available and without increase of the present organization.

SLIDES

On the night of October 28 a slide occurred at Lirio Curve, between stations 1729 and 1740 on the west side of the canal. About 300,000 cubic yards of rock came into the prism, leaving a channel about 120 feet wide and 35 feet deep. A portion of the 95-foot berm moved out toward the canal center intact. The primary movement was checked to some extent by this rock berm, and later, as this material was removed by the dredges, the softer material again pushed out into the canal during November 21 and 22. This movement involved 250,000 cubic yards more, extending over a frontage of 800 feet. After this second slide the channel was more severely affected, being 100 feet wide with a depth of 34 feet. On December 15 another movement took place over the same area. At this time 100,000 cubic yards of material pushed into the canal. From the date of the first slide until December 5 traffic was handled daily without interruption, starting northbound ships at 2.10 p. m., with 10-minute intervals between them, and the southbound immediately after in the same manner, with the exception of two ships held over temporarily because of the narrow margin of safety between the draft and available channel in one case and bad handling qualities in the other. These ships were the *Bethore*, draft 33.6 feet, and the *San Nazario*, drawing 30.5 feet. By the 27th of November the channel had been so improved that the Steamship *Marore*, drawing 35.5 feet, which had just arrived, was passed by the slide. At that time it was as deeply laden a vessel as had ever passed through The Panama Canal. This slide became active again on January 4, 1924, at which time 125,000 cubic yards of material were carried into the canal. This movement, like the previous ones, affected the west side of the channel. From January to June the north shoulder of this slide, which had partially broken up during the period of greatest activity in October, 1923, slowly settled down. The movement was so gradual during that time that the dredges had no difficulty in removing the material periodically as it pushed out into the canal. This rock shoulder was all that separated the old Lirio slide on the

north and the new Lirio slide on the south. The entire section between stations 1717 and 1748 will henceforth be known as West Lirio slide. This also includes the old West Barge Repair slide. The amount of material removed from this slide area during the year amounted to 1,253,100 cubic yards.

Minor slide movements occurred at Cartagena, South Cucaracha, Cucaracha signal station, East Culebra, West Culebra, and East Lirio.

To prevent the further disintegration of the high banks through seepage various lagoons and swamps on either side of the Gaillard Cut were filled in, slopes were graded, and new drainage ditches cut. The year's work under this head included 5,230 linear feet of ditches, involving the removal of 11,897 cubic yards of material; 445,275 cubic yards of material placed in fills or moved in slope work; and 9,000 cubic yards of material handled in culvert construction. A pipe-line dredge, a hydraulic grader, and hand labor were used in this work.

AIDS TO NAVIGATION

The maintenance of lights previously installed in the canal and adjacent waters has been continued; two new buoys have been established, one in Balboa Harbor, the other at Trollope Rock, San Jose Bank; lighted spar beacons have been established, two each at Balboa, in the canal at Gamboa, and at the Atlantic entrance; one spar buoy has been placed at the Balboa Fleet Anchorage, two at the entrance to Coco Solo, and one at the anchorage in Cristobal Bay. Also, 27 new bank lights have been installed in the Gaillard Cut. The additional aids established in the canal afford an increased safety factor for the passage of ships. At Cape Mala and Bona Island in Panama Bay the pipe line from the gas tank houses to the base of the lights has been protected by the construction of reinforced concrete troughs, 800 feet being required at Cape Mala and 2,100 feet at Bona Island.

ACCIDENTS

Investigations were conducted and reports submitted by the board of local inspectors on 22 accidents to vessels in transit through the canal or using its terminal harbors. They are classified as follows: Collisions between ships, 6; grounded in the canal, 2; struck bank, 5; struck lock wall, 4; docking accidents, 3; miscellaneous, 2. The following is a brief description of the more serious of these accidents:

On August 8, 1923, at 7.40 p. m., the American steamer *Dorothy Luckenbach*, southbound through the canal, was obliged to go astern and drop anchor to avoid collision with the American steamer *Dean Emery*, also southbound, which had not previously been seen owing

to the fact that she was not showing a stern light as required by law. In maneuvering to break headway the *Dorothy Luckenbach* struck a Panama Canal oil barge moored at Paraiso and subsequently swung her stern into the bank, damaging the port propeller. Finally the master, having taken over the ship from the pilot, by heaving on his anchors, broke and dragged out of position a water main laid across the bottom of the canal at this point. The estimated damages were: *Dorothy Luckenbach*, \$1,100; oil barge, \$1,500; pipe line, \$10,000. Responsibility was shared by the *Dean Emery*, the *Dorothy Luckenbach*, and The Panama Canal. The Luckenbach Steamship Co. offered \$5,000 in settlement of The Panama Canal's claim for damages to its property, and this offer has been accepted.

On October 24, 1923, the American tanker *Agwistone*, northbound through the canal, grounded on the west bank of the Gamboa Reach. The Chagres River was then in high flood, discharging into the canal at Gamboa with a velocity of approximately 8 knots. This current carried the ship into the bank, but it was shown that the *Agwistone* does not properly answer her helm when loaded and was then overloaded, exceeding her designed fresh-water draft by $4\frac{1}{2}$ inches. The ship grounded on October 24 at 12.25 p. m., and was not refloated until 6.10 p. m. on October 25, after the transfer of 13,000 barrels of oil from her cargo to another tanker. After a survey at Cristobal the *Agwistone* proceeded on her voyage. The board of local inspectors ruled that The Panama Canal was not responsible for the grounding or liable for any damages or expenses in connection therewith.

On October 28, 1923, the American steamer *Abangarez*, while approaching the dock at Cristobal, collided with the United States submarine *O-5*, which sank. Three men of the submarine's crew were drowned, and two others went down in it, but were rescued 31 hours later when it was raised by the Panama Canal's floating crane *Ajax* and wrecking barge *No. 91*. The *O-5* was adjudged responsible for the collision.

On January 4, 1924, the American steamer *Colin H. Livingstone*, southbound through the canal, grounded near Mamei Point, and was pulled off the following morning after 120 tons had been taken out of her. The vessel then proceeded to Balboa, where a survey was held and temporary repairs made. The cost of permanent repairs was estimated at \$6,000. On January 7, after a total delay of 74 hours, the ship proceeded to sea. The accident was due to the jamming of the steering gear, and no responsibility attached to The Panama Canal.

On March 9, 1924, the Yugoslav steamer *Izglied*, southbound through the canal, had a link in the steering gear carried away while rounding Gold Hill to enter Cucaracha Reach. She then struck the west bank

of the canal twice and was badly damaged forward, the forepeak tank and No. 1 cargo hold being flooded, so that the bow sank to the bottom and rested in 34 feet of water. With the assistance of Panama Canal tugs the *Izged* was beached in the cove at the foot of East Culebra slide. On the following day she was raised by the salvage tug *Favorite* and towed to Balboa for partial discharge of cargo, dry docking, and repairs. The expense to the ship was estimated at \$40,000, in addition to which she was delayed 16 days. No responsibility attached to The Panama Canal.

Of the other accidents, none involved extensive damages or caused serious delay to the vessels concerned. The total number is small in proportion to the number of vessels using the canal or calling at its terminal ports.

SALVAGE OPERATIONS

At the beginning of the fiscal year the Panama Canal's salvage tug *Favorite* was assisting the American tanker *John D. Archbold*, owned by the Standard Oil Co. of New Jersey, which went ashore on Bona Island in Panama Bay on June 30, 1923. The *John D. Archbold* was pulled off the following day, and after transferring its cargo of crude oil to other tankers, proceeded to San Francisco for repairs. This case was mentioned in the annual report for 1923.

The *Favorite* engaged in two other major salvage operations during the year. On October 22, 1923, it was dispatched to the assistance of the United Fruit Co.'s steamer *San Gil*, aground on a reef north of Old Providence Island in the Caribbean. The flotation was a most difficult piece of work, but was accomplished on November 15, and after being made secure for the voyage the *San Gil* was towed by the *Favorite* to Mobile, arriving there on November 26, 1923.

Late in May, 1924, the *Favorite* went to the assistance of the German steamer *Sisak*, belonging to the Kosmos Line, which had gone ashore on the coast of Ecuador. On this job the *Favorite* cooperated with the British wrecking tug *Killerig* from Jamaica. The *Sisak* was not floated until July, and was then towed to Balboa for repairs, arriving there on July 14, 1924.

The assistance rendered by the *Favorite* in refloating the steamship *Izged*, beached in the canal on March 9, 1924, has been mentioned in the preceding section under the head of "Accidents."

Panama Canal tugs assisted in the salvage of the Cuyamel Fruit Co.'s steamer *Sagua*, ashore on Little Corn Island off the northern coast of Nicaragua in November, 1923, and of the Pacific Mail Steamship Co.'s steamer *Colombia*, ashore on Cano Island in the Pacific off the coast of Costa Rica in June, 1924. At the time of these two wrecks the *Favorite* was assisting the *San Gil* and the *Sisak* and could not therefore be used.

SECTION II

BUSINESS OPERATIONS

A detailed statement of the expenses (including depreciation), revenues, and profit or loss on the various subsidiary business operations of The Panama Canal will be found in Table No. 26 in Section V of this report. The total net profit on these operations was \$901,624.12. The Panama Railroad Co.'s business operations on the Isthmus yielded an additional net revenue of \$1,044,887.04. The results of the major business operations of both The Panama Canal and the Panama Railroad Co. are summarized in the following paragraphs.

REPAIRS TO VESSELS—MECHANICAL WORK

In general there has been a substantial and steady flow of work through the shops, well distributed except in the case of outside marine repairs. The total volume of work increased constantly, and the force employed grew from 298 gold and 675 silver men in July, 1923, to 380 gold and 789 silver men in June, 1924. The increased work came largely from The Panama Canal and other branches of the Government, and a considerable part represented additions and betterments which may not be repeated. The volume of repairs to commercial shipping continued meager. However, at the close of the fiscal year the outlook was good, and a sufficient volume and variety of work was on order to keep the force employed for a number of months. The total value of work done was \$2,951,791.25, as compared with \$2,290,226.05 in 1923. It was distributed in 1924 as follows:

Class	Amount	Percent- age of total
Marine.....	\$1,787,869.78	60.57
Railroad.....	488,324.86	16.54
Miscellaneous.....	374,498.57	12.69
Manufacture for stock.....	301,098.04	10.20
Total.....	2,951,791.25	100.00

Of the total work done during the year, \$1,097,250.48 was done for individuals and companies, including the Panama Railroad Steamship Line, \$1,106,576.84 for The Panama Canal, \$513,165.34 for the Panama Railroad Co. and \$234,798.59 for other departments of the United States Government.

Work for individuals and companies.—At the beginning of the fiscal year the work of reboiling and reconditioning the Steamship *Colon* for the Panama Railroad Steamship Line, as detailed in the last annual report, was about 50 per cent advanced. The completion of this work constituted the largest single job undertaken. With the ship lacking only the finishing touches she was sold to the Alaska Steamship Corporation. Satisfactory sea trials were run for the purchasers on January 16, 1924, and she left for San Francisco in the hands of her new owners on January 19. Gratifying reports of her steaming abilities were afterwards received.

Bottom repairs were made to the Steamship *Amsterdam*, extending generally over her entire length, necessary on account of grounding on Santo Domingo. About 120 plates were involved, some 20 being renewed, half the remainder removed, faired, and replaced, and the balance faired in place. Considerable damage to floors, intercostals and frames was involved, and the vertical keel was faired at two locations. The stern frame was removed and straightened, propeller shaft realigned, and considerable work was done in the engine room.

The steamship *Izqled*, which had run against the bank of the canal because of broken steering gear and had filled forward, was placed in the dry dock and repairs made to her bottom. Fifteen plates were renewed, 35 frames spliced, and considerable fairing of adjacent structure done.

For the steamship *Lancaster* the crank shafts were rebuilt, a new propeller shaft and propeller, sent from the United States, were machined and installed, and the main engine realigned and reconditioned. This vessel lost her propeller at sea and twisted all three cranks about their shafts. One section was replaced with a spare shaft, and for the other two new pieces of shaft were forged from 24-inch nickel steel and fitted to replace the damaged pieces in each section.

The steamship *Westwego* was docked, and damages from collision with the approach wall of locks were repaired. The stem was removed, straightened, and replaced, and damaged bow plates and frames renewed or faired as required.

Almost the entire bottom of the schooner *Irene S. Wilkinson* and of the motor ship *Atrato* were replanked and the decks of the former renewed. A new rudder post was fitted to the schooner *La Isla*.

New tail shafts were forged and installed on the steamship *Balboa* and the tugs *Gatun* and *Cocoli*. Shell repairs in wake of collision damages were effected on the steamships *The Lambs*, *Bedwell*, *Tulsa-gas*, *Hercules*, and *C. H. Livingston*. Considerable bulkhead repairs were made to the steamship *Gen. W. C. Gorgas*.

Turbine rotors of the steamship *Bethelridge* were removed from the ship and repaired. All boiler furnaces of the steamship *Colonne* were

jacked up and supporting rings fitted. An important electric welding job was satisfactorily performed on the wrecked 78-inch low pressure cylinder of the steamship *Gulf State*. Due to a bent rod the cylinder was split from top to bottom, in addition to having a transverse crack, one-third down from the top, extending over about one-third of the cylinder. The steamship *Manuel Calvo* was docked because of suspected trouble with the outboard coupling and the starboard shaft forward broken inside the coupling. The spare stern tube and propeller shafting was installed with a new propeller, and both couplings were repaired.

Work for the Navy and Army.—For the Navy there were dry docked the auxiliary vessels *Fulton*, *Camden*, *Cuyama*, *Sciota*, and *Quail*, the submarines *O-1*, *O-2*, *O-3*, *O-4*, *O-6*, *O-7*, *O-8*, *O-9*, *O-10*, *R-23*, *R-26*, and *R-27*, coal barges *291* and *472*, oil barge *11* and a battle target. The various local craft of the Army were periodically docked. The submarines listed were given their annual overhaul, involving in each case extensive repairs and renewals of hull and machinery and minor alterations. In addition to the vessels listed, work was performed for 29 other naval vessels and for several Army transports. Side plating of the U. S. S. *New Mexico* was renewed where damaged from collision with lock approach wall. The mechanical division assisted in the raising of the *O-5*, sunk in collision in Colon harbor, and in the rescue of the imprisoned members of her crew, building a cofferdam and closing a gap in her side, and diving for the rescue work. The drill boat *L-55*, thrown on the rocks in a storm, was rebuilt, and the harbor boat *Lieut. Ward Cheney* was remodeled for the Army.

Work for The Panama Canal.—The usual maintenance work on the floating equipment and rolling stock of The Panama Canal was kept up, and a varied miscellany of shop work was performed for all departments and divisions. The program of rehabilitating the battered and broken decks and stiffening the deck supports of dump scows was continued. Stern pontoons were fitted to the dredges *Gamboa* and *Paraiso*, in addition to the water-tight subdivisions fitted at the sides last year, and water-tight athwartship bulkheads were worked across the forward ends a few feet back from the shells. Permanent steel foundations were substituted for the wooden supports for the machinery of hydraulic grader *No. 3*. The floating caisson for exposing the lock and dry dock gates was overhauled. The tug *Engineer* was converted to oil burning and rehabilitated, and about one-third of the shell plating and frames of the tug *Bolivar* were renewed. A 35-foot pilot boat was build for the port captain at Cristobal, and a 45-foot pilot boat for the port captain at Balboa. Partial installation was made of boiler plants for the oil-handling plants at Mount Hope and Balboa. Four new towing locomotives were begun for the locks. A large quantity of spare parts was made for the overhaul of the locks

at Gatun, including the fabrication of 17 rising stem gate valves, measuring approximately 12 by 20 feet each.

Work for the Panama Railroad.—The cost of maintaining and repairing Panama Railroad equipment was \$480,237.76, as compared with \$425,721 in 1923, more work having been necessary. There were 17 heavy repair jobs on locomotives and 2,280 light repair jobs. On cars in active service heavy repairs totaled 186 and light repairs 1,065. Cars in reserve were also inspected and repaired.

Dry docks.—There was a total of 137 dry dockings during the year, 69 at Balboa and 68 at Cristobal. Of those at Balboa, 27 were of canal equipment and 42 of other vessels, and at Cristobal 25 of canal equipment and 43 of other vessels.

Plant.—New roofs were applied at a cost of \$65,000 to the foundry, forge shop, and sand house at Balboa to replace reinforced-cement tile roofing laid in 1913-14 that had deteriorated. It is expected that the boiler shop will have to be reroofed this coming dry season and the wood shop shortly thereafter. The Balboa machine shop facilities were improved by the purchase and installation of a 96-inch gear shaper. For several years past the pier shop at Cristobal has been inactive, and in order that the new machine tools installed there might be used, they were removed and reinstalled where needed at Balboa and Mount Hope, replacing in many cases tools purchased in early construction days and nearing the end of their usefulness. A sum of \$65,000 has been set aside for new roofing, and a sum of \$40,000 for plant betterment during the coming year, both from current earnings.

Financial.—The mechanical division earned net profits of \$171,-737.06, as compared with \$100,184.33 in 1923. Reserves were increased \$81,434, and, as mentioned above, \$105,000 was set aside for the replacement of shop roofs and plant betterment. The reserve for normal repairs to buildings and machinery, however, shows a net deficit of \$3,646.89.

COAL

The sales of coal from the plants operated by the Panama Railroad Co. at Cristobal and Balboa were approximately the same as in 1923, totaling 222,734 long tons for the year, which is below the minimum required for economical operation. The plants, nevertheless, showed a profit of \$161,500, as against a loss of \$12,000 in 1923. Apart from questions of price, the use of oil for fuel on a scale that was not anticipated 12 years ago, when the coaling plants were designed, is responsible for the small volume of business. Of the steam vessels which passed through the canal during the fiscal year 1924 approximately 70 per cent burned oil. The proportion of

motor vessels is not yet large, but to the extent of their use they also reduce the demand for coal.

Declining sales without a corresponding reduction of overhead charges have made it difficult to quote prices for bunker coal at the canal which would secure a reasonable share of the business that remains, but economies effected after a careful study of all possibilities, in conjunction with a lower range of prices at Norfolk, made it possible to reduce the price of bunker coal at Cristobal from \$12 to \$10 a ton, effective February 1, 1924, and again to \$9 a ton, effective March 15, 1924. The corresponding reductions at Balboa were from \$15 to \$13 and subsequently to \$12. There are few sales at Balboa under present conditions, and no separate force has been maintained for the operation of the plant there since April 1, 1923. When deliveries are to be made operators are transferred temporarily from Cristobal.

The policy has been to fix the price of coal at the minimum figure that will cover all charges, determined in accordance with correct accounting principles, to include amortization, interest, and maintenance, and yield a profit of from 4 to 8 per cent.

The price reductions in February and March stimulated sales, but scarcely to the extent that had been hoped. The monthly sales from July, 1923, to January, 1924, averaged 16,566 tons, and from February to June, 1924, 21,716 tons.

FUEL OIL, DIESEL OIL, GASOLINE

On June 30, 1924, there was tankage at The Panama Canal for the storage of 1,906,040 barrels of fuel oil. At Balboa there were 18 tanks with a capacity of 791,540 barrels, and at Cristobal 22 tanks with a capacity of 1,114,500 barrels. The Panama Canal owned 11 tanks rated at 444,040 barrels, the United States Navy 6 tanks rated at 300,000 barrels, and eight oil companies 23 tanks with a capacity of 1,162,000 barrels. Some of these tanks are used for the storage of Diesel oil.

The Panama Canal continued to maintain central pumping plants at either terminal and handled all oil in and out of storage. Each of these plants was improved by the installation of two new boilers and an additional pump with a capacity of 2,500 barrels an hour. Additional pipe lines and dock connections have also been provided. The oil pumped for all interests during the year, including receipts, issues, and miscellaneous transfers, totaled 13,790,823 barrels, as compared with 10,429,517 barrels in 1923. The net revenue from the oil business, which is derived mainly from pumping charges, amounted in 1924 to \$263,194.25.

One small tank owned by The Panama Canal was converted during the year for the storage of bulk gasoline. The canal now has two

gasoline tanks at each terminal with a combined capacity of 790,771 gallons, and an oil company has one tank at Balboa rated at 1,470,000 gallons.

The oil and gasoline business of the year is summarized in the following table:

	Balboa	Cristobal	Total
Fuel oil sold to steamships by Panama Canal (barrels)	4,043	0	4,043
Fuel oil sold to steamships by companies (barrels)	3,176,385	2,952,234	6,128,619
Number of ships by Panama Canal	2	0	2
Number of ships by companies	1,044	849	1,893
Bulk gasoline sold to steamships by Panama Canal (gallons)	0	0	0
Bulk gasoline sold to steamships by companies (gallons)	0	0	0
Number of ships by Panama Canal	0	0	0
Number of ships by companies	0	0	0
Diesel oil sold to steamships by Panama Canal (barrels)	0	3,550	3,550
Diesel oil sold to steamships by companies (barrels)	128,432	1,185	129,617
Number of ships by Panama Canal	0	86	86
Number of ships by companies	78	3	81

As compared with the fiscal year 1923, sales of fuel oil to steamships show an increase of 35 per cent, while Diesel oil sales show an increase of 132 per cent.

SHIP CHANDLERY AND OTHER SUPPLIES—STOREHOUSE OPERATIONS

The general storehouse at Balboa and the dependent storehouses at Cristobal and Paraiso carried stocks of material for issue as required to the various departments and divisions of The Panama Canal and for sale to vessels. The movement of stock is summarized in the following table:

On hand, June 30, 1923	\$3,252,338.40
Received during the year	5,636,307.91
Total	8,888,646.31
Issued during the year	5,468,971.97
On hand, June 30, 1924	3,419,674.34

Sales to steamships totaled \$85,340.42, local sales \$159,558.54, and so-called credit sales, which included material issued on foreman's orders for the Army and Navy and for jobs ordered by individuals and companies, \$806,945.11, or a total of sales from the storehouses to other than The Panama Canal and Panama Railroad of \$1,051,844.07. The corresponding figures for 1923 was \$986,411.94.

Sales of obsolete, surplus, and scrap material realized \$267,668.14.

HARBOR TERMINALS

There was a material increase of business at the Cristobal and Balboa terminals. Cargo handled and transferred over the docks totaled 933,092 tons, as against 837,271 tons in 1923. Of the total tonnage in 1924, 334,242 tons were stevedored by the Panama Railroad. The gross revenue from terminal operations was \$1,161,838.34,

and expenses aggregated \$867,749.46, leaving a net revenue of \$294,089.88. The work of the past two years is compared in the following table:

	1924	1923
Tons of cargo stevedored.....	331,242	307,575
Revenue per ton stevedored.....	\$0.3543	\$0.3911
Cost per ton stevedored.....	\$0.3056	\$0.3767
Tons of cargo handled and transferred.....	933,092	837,271
Revenue per ton handled.....	\$0.9904	\$0.9668
Cost per ton handled.....	\$0.6817	\$0.6880
Gross operating revenue.....	\$1,161,839.34	\$1,101,908.01
Gross operating expense.....	\$867,749.46	\$823,329.87
Net revenue.....	\$294,089.88	\$278,578.14
Per cent of expense to revenue.....	74.69	74.72

The number of ships handled in 1924 was 2,205, as against 1,912 in 1923. Of the total for 1924, 1,553 were handled at Cristobal, and 652 at Balboa. Agency service was also performed by the Panama Railroad Co. for 290 ships in transit through the canal. The distribution of business between Cristobal and Balboa is further indicated in the table below:

	Balboa	Cristobal
Number of ships discharging or taking cargo.....	652	1,553
Tons of cargo received (ex cargo).....	54,233	495,023
Tons of cargo delivered (per cargo).....	18,807	343,613
Tons of cargo stevedored by Panama Railroad.....	29,604	304,638
Tons rehandled by Panama Railroad.....	10,585	10,831

COMMISSARY SYSTEM

The Panama Railroad commissary system, including five wholesale units, nine retail stores, seven manufacturing plants, two electric refrigerating plants, and an industrial laboratory, was operated as in previous years. Gross receipts from sales amounted to \$7,324,203.76, and the net profits were \$409,248.86. The total capital investment is \$3,628,964.94 made up as follows: Plant, \$2,073,104.36; equipment, \$91,295.87; supplies on hand, \$964,564.71; and floating capital, \$500,000.

The following statement shows by classes the value of supplies on hand at the beginning of the year, the amount purchased during the year, and the value remaining on hand at the end of the year:

	On hand June 30, 1923	Purchased during year	On hand June 30, 1924
Groceries.....	\$138,038.84	\$1,165,601.38	\$152,331.34
Hardware.....	82,840.39	349,166.82	96,924.67
Dry goods.....	285,675.04	843,994.34	299,173.53
Shoes.....	58,520.51	169,517.15	62,426.85
Cold storage.....	79,817.39	1,121,741.11	171,514.82
Tobacco.....	22,088.59	366,643.95	25,896.92
Raw material.....	184,608.69	1,142,864.92	156,298.58
Total.....	851,589.45	5,159,529.67	964,564.71

¹ Includes cattle, milk, butter, and eggs in amount of \$867,646.20.

Purchases were made as follows: In the United States, \$3,817,075.44; in Europe, \$389,593.87; in Central and South America, \$129,324.89; from the cattle industry on the isthmus, \$484,434.53; from The Panama Canal, \$128,467.04; other local purchases, \$210,633.90.

Sales were made as follows:

	1923	1924	Increase
United States Government.....	\$1,083,820.98	\$1,001,572.10	¹ \$82,248.88
Panama Canal.....	696,361.12	767,029.83	70,668.71
Steamships.....	343,598.17	468,291.68	124,693.51
Panama Railroad & Steamship Co.....	170,399.89	230,285.10	59,885.21
Individuals and companies.....	601,649.42	598,549.69	¹ 3,099.73
Employees.....	3,797,343.97	4,419,007.40	621,663.43
Total sales.....	6,693,173.55	7,484,732.80	791,559.25
Less discounts and credits.....	132,720.94	160,529.04	7,808.10
Revenue from sales.....	6,540,452.61	7,324,203.76	783,751.15
Supplies for expense and equipment:			
Retail commissaries and warehouses.....	71,013.09	100,459.98	29,446.89
General.....	1,104.89	1,429.34	324.45
Plants.....	62,950.14	19,005.58	¹ 43,944.56
Total.....	135,068.12	120,894.90	¹ 14,173.22
Loss by condemnation, shrinkage, etc.....	70,213.01	63,252.00	¹ 6,961.01
Loss by clerical errors, pilferage, etc.....	44,591.84	40,003.97	¹ 4,587.87
Total.....	114,804.85	103,255.97	¹ 11,548.88
Grand total.....	6,790,325.58	7,548,354.63	758,029.05

¹ Decrease.

Cattle industry.—There were 8,557 head of cattle in the pastures at the beginning of the fiscal year. Subsequently 2,062 head were purchased, and 254 calves were born. There were 6,150 head sold to the commissary for slaughter, 357 head were transferred to the dairy farm, 3 were sold to individuals and companies, and 103 head died, leaving 4,260 head on hand on June 30, 1924. The gross revenue from sales was \$416,345.05, and expenses totaled \$390,907.66, resulting in a net profit of \$25,437.39. No new pastures were cleared, but 4,153 acres were recleared at an average cost of \$3.55 an acre. All pastures recleared showed a marked improvement in the stand of grass.

Dairy farm.—The herd at the dairy farm was increased from 617 to 663 head. Income from sales of milk, livestock, hides, etc., was \$63,254.99, and the expenses of operation were \$55,024.53, leaving a net profit of \$8,230.46.

Plantations.—The Frijoles and Juan Mina plantations were continued under the superintendence of the cattle industry, while the other and smaller plantations and gardens were leased to contractors in the same manner as last year. The operation of the plantations resulted in a loss of \$2,508.80, the receipts being \$12,783.59 and the expenses \$15,292.39.

HOTELS AND RESTAURANTS

The Hotel Tivoli at Ancon incurred a loss of \$7,405.61, and the Hotel Washington at Colon a loss of \$18,081.74. While these hotels are not profitable, their continued operation is considered necessary for the accommodation of visiting officials of the United States Government, tourists, travelers awaiting steamship connections, and strangers having business with The Panama Canal. When in 1922 the hotels were advertised for lease no satisfactory bids were received.

The restaurants for American and West Indian employees were operated under contract during the fiscal year, and satisfactory service was rendered to all patrons at fair prices by the contractor.

BUILDING CONSTRUCTION AND REPAIRS

Besides the usual maintenance and repair work on all Panama Canal and Panama Railroad buildings the constructing quartermaster division of the supply department began the erection of several new buildings, including the following: A concrete retail commissary store at Cristobal, estimated to cost \$241,821.60; new concrete telephone exchanges at Cristobal, Gatun, and Pedro Miguel, estimated to cost \$59,000, and 15 cottages at New Cristobal, at \$7,000 each, or a total of \$105,000. Alterations to the Balboa telephone exchange were completed at a cost of \$7,500.

PRINTING

The Panama Canal Press carries in stock and manufactures such necessary stationery as is required on the Isthmus in connection with canal operations, besides printing the weekly Panama Canal Record, pamphlets and folders, and miscellaneous job items. The manufacturing output of the plant was valued at \$147,494.26, and the issues and sales from the stationery section amounted to \$117,691.56. The inventory value of all stock on hand was reduced from \$101,792.63 to \$93,787.72. Consistent efforts have been made for some years past to reduce the inventory values to a minimum, and it is considered that this has now been fully accomplished. The plant operates on a self-sustaining basis, and made a profit in 1924 of \$4,373.05.

PANAMA RAILROAD

The net revenue from operations of the Panama Railroad shows a decrease of approximately \$84,000, as compared with 1923, due in part to the heavy increase in track maintenance expense on account of slides and washouts in October, 1923, and in part to an increase of approximately \$64,000 in the cost of repairs to railroad equipment. The gross revenue from operations was \$1,418,652.48, and the gross operating expenses totaled \$1,341,954.31, resulting in a net revenue

of \$76,698.17, as compared with \$160,883.41 for the previous year. The total revenue from freight traffic was \$741,126.61, and from passenger traffic \$378,908.47.

The trackage maintained aggregated 160.32 miles, divided as follows: Main line, yards, and sidings, 108.41; Panama Canal tracks, 42.02; United States Army tracks, 9.89.

The following table shows the number of passengers carried and the passenger revenue for the fiscal years 1923 and 1924:

	Number of passengers carried		Passenger revenue	
	1924	1923	1924	1923
First-class passengers.....	170,058	176,316	\$206,743.25	\$217,547.08
Second-class passengers.....	248,315	243,136	172,165.22	163,256.52
Total.....	418,373	419,452	378,908.47	380,803.60

The average revenue per passenger per mile for 1924 was \$0.0253, and for 1923 it was \$0.0288. The gross revenue from the transportation of passengers shows a decrease of \$1,895.13, and the number of passengers carried shows a decrease of 1,079.

The following table contains the general operating statistics of the Panama Railroad for the fiscal years 1923 and 1924:

	1924	1923
Average miles operated.....	47.61	47.61
Gross operating revenue.....	\$1,418,652.48	\$1,375,777.72
Operating expenses.....	\$1,341,954.31	\$1,214,894.31
Net operating revenue.....	\$76,698.17	\$160,883.41
Per cent of expenses to revenue.....	94.59	88.31
Gross revenue per mile of road.....	\$29,797.36	\$28,896.82
Operating expenses per mile of road.....	\$28,186.39	\$25,517.63
Net revenue per mile of road.....	\$1,610.97	\$3,379.19
Revenue per passenger train mile.....	\$4.32	\$4.26
Revenue per freight train mile.....	\$10.43	\$10.25
Total revenue train mileage.....	\$174,694	\$175,517
Railroad revenue per train mile.....	\$8.12	\$7.84
Railroad operating expense per revenue train mile.....	\$7.68	\$6.92
Net railroad revenue per revenue train mile.....	\$0.44	\$0.92
Freight, passenger, and switch locomotive mileage.....	287,384	287,441
Work-train mileage.....	3,754	2,971
Passenger-train mileage.....	103,624	105,127
Freight-train mileage.....	71,070	70,390

TELEPHONES

The number of telephones installed in the Canal Zone on June 30, 1924, was 2,717. The average number of calls during the 8-hour business day, as determined by peg count, was 23,379, or at the rate of 2,922 an hour. The revenue from telephones and electric clocks was \$200,375.14, and the operating expenses \$196,406.39, resulting in a net revenue of \$3,968.75. The system includes 36 miles of pole line, 249 miles of underground conduit, 136 miles of cable, 13,774 miles of wire, 960 miles of phantom, and 342 miles of simplex circuits.

There are 25 exchanges, of which 22 are manual and 3 automatic. Automatic equipment has been ordered for the four main exchanges at Balboa Heights, Cristobal, Gatun, and Pedro Miguel, and will be installed when delivered. Nine sets of printing telegraph equipment purchased for use in the dispatching of ships were being adjusted at the close of the year preparatory to installation in the port captains' offices and at the locks.

The telephone system is owned by the Panama Railroad Co., but is operated by the electrical division of The Panama Canal.

LANDS AND BUILDINGS

Panama Railroad lands in the cities of Panama and Colon and public lands in the Canal Zone are administered by a joint land office. Rentals for quarters occupied by employees are collected by pay-roll deductions.

The Panama Railroad Co.'s gross revenue from real estate operations during the year was \$157,095.27, against which expenses were charged totaling \$67,738.43, leaving a net revenue of \$89,356.84. The number of Panama Railroad leases in effect at the close of the year was 1,265, and of revocable licenses 7.

On June 30, 1924, there were 2,154 licenses in effect covering 6,837 hectares of agricultural land in the Canal Zone, to which the United States holds title. Under the terms of the circular opening the Canal Zone to agriculture in December, 1921, licensees were allowed to occupy up to 5 hectares of land free of rent until June 30, 1924; no licensee was allowed to hold more than 50 hectares, and an annual rental of \$5 per hectare was charged for the excess over 5 hectares. Collections on this account during the year totaled \$5,420. Most of this land has been planted in bananas, for which there has been a ready market at prices profitable to the growers. Banana exports from Cristobal increased from 264,505 stems during the fiscal year 1923 to 576,297 stems in 1924. This is not all Canal Zone production, but includes some bananas grown in the Republic of Panama. Many new plantations in the Gatun Lake region have not yet come into bearing, and production will increase for some time to come.

The Panama Canal also collected from employees and others the sum of \$616,050.86 in rental charges for quarters, which were maintained at an expense of \$603,003.45.¹

CLUBHOUSES

To the operation of clubs and playgrounds for American and West Indian employees and their families The Panama Canal contributed \$102,650. The additional expenses defrayed from surplus or current

¹ See, however, explanation of Tables 24 and 26 in Section V for statement concerning deficit on operation of quarters for silver employees.

revenue were \$442,390.25 and the income from moving pictures, soda fountains, cigar counters, etc., was \$455,118.77. The accumulated surplus of clubhouse funds held by the collector on June 30, 1924, was \$166,670.33. The clubhouse at Ancon was destroyed by fire in January, 1924, and The Panama Canal assigned to replace it a building which had been used originally as a restaurant and afterwards for nonhousekeeping family quarters.

PANAMA RAILROAD STEAMSHIP LINE

The gross income of the steamship line for the fiscal year ended June 30, 1924, was \$2,443,576.29, and the total expenses were \$2,749,433.78, resulting in a net income deficit of \$305,857.49. This deficit as compared with that for the fiscal year ended June 30, 1923, of \$164,461.45 shows an increase of \$141,396.04.

The steamship line operating as an adjunct of The Panama Canal carried all freight and passengers for account of the United States Government during the year at material reductions from regular tariff rates. Had the line received tariff rates its deficit of \$305,857.49 would have been reversed and a gain of \$134,523.64 shown.

The principal causes to which the deficit of \$305,857.49 are attributable are briefly—

1. The keen competition of the direct lines operating from the South Pacific caused a marked lowering of through rates which materially reduced the freight revenue, despite the fact that the tonnage carried for the year ended June 30, 1924, amounted to 256,395 tons as against 230,916 tons for the prior year, an increase of 25,479 tons.

2. The continued depression in business conditions existing throughout the countries served by the steamship line.

3. The cost of foodstuffs, stores, and supplies during the year, which have remained at the high market established during the last three fiscal years; advances in wages of officers as well as the increased cost of stevedoring due to advances in wages granted to the men.

In addition to current operating expenses the deficit includes depreciation and deferred charges for general and extraordinary repairs incurred in prior years. By eliminating depreciation and deferred charges for extraordinary repairs, the deficit would have been reduced to \$94,842.59.

SECTION III

GOVERNMENT

In organizing a civil government for the Canal Zone, wherever it was found practicable to assign governmental functions to department heads in the organization for the operation and maintenance of the canal proper and to the personnel under them, this has been done. The courts are of course independent, the division of schools is concerned with education and nothing else, and there are other like exceptions, but in general governmental functions are discharged by officials and employees who also have duties connected with the transit of vessels and services subordinate thereto. This results not only in greater economy and efficiency, but insures complete cooperation.

From the financial statements in Section V of this report data on the cost and revenue of various branches of the government may be obtained.

POPULATION

A census of the civil population of the Canal Zone was taken by the police force during the month of June, 1924, a summary of which is given below:

	Americans					All others					Total
	Total men	Em- ployees	Total women	Em- ployees	Chil- dren	Total men	Em- ployees	Total women	Em- ployees	Chil- dren	
Balboa district.....	1,763	1,497	1,972	302	2,035	3,270	2,012	2,489	41	4,451	15,980
Cristobal district..	580	540	664	25	766	3,254	2,148	1,956	74	3,816	11,036
Prisoners.....	25					98		4			127
Total.....	2,368	2,037	2,636	327	2,801	6,622	4,160	4,449	115	8,267	27,143

¹ Includes 142 civilian employees of Army and Navy.

In addition to the civilian population the military population in the Canal Zone in June, 1924, numbered 10,054, making a grand total of 37,197. In June, 1923, the civil population was 24,968, and the military population 9,797.

PUBLIC HEALTH

Malaria.—The total number of malaria cases reported from the Canal Zone and terminal cities during the year, compared with the two previous years, is as follows:

	1921	1922	1923	1924
Employees.....	325	176	216	208
Military and naval personnel.....	810	828	870	894
Nonemployees.....	459	243	657	521
Total.....	1,594	1,247	1,743	1,623

Canal Zone.—The average population (civil and military) for the fiscal year 1924 was 31,963, and this figure has been used as a base for vital statistics. From this population 270 deaths occurred during the year, 239 of which were from disease, giving a rate of 7.48 for disease alone, as compared with 7.42 for 1923, and 7.04 for 1922.

The birth rate for the year was 21.12 per thousand population. The infant mortality rate, based on the number of live births reported for the year, was 30.57 for white children and 105.02 for black children, with a general average of 79.46. Of the total births reported 4 per cent were stillbirths. Of the total deaths reported, 37 per cent occurred among children under 5 years of age. The maternal mortality rate (from conditions due to the puerperal state) was 5.67 per thousand births, stillbirths included.

Panama.—The population of the city of Panama for the year was 59,635. From this population 1,212 deaths occurred during the year, of which 1,178 were from disease, giving a rate of 19.75 for disease alone, as compared with 18.24 for the preceding year.

The principal causes of death, compared with last year, were as follows:

	Number of deaths	
	1923	1924
Pneumonia (broncho and lobar).....	128	276
Tuberculosis (various organs).....	218	193
Diarrhea and enteritis.....	144	121

There were 2,140 live births reported for the year, giving a rate of 35.89 per thousand population. The infant mortality rate, based on the number of live births reported, was 153.27. Of the total number of births reported 5 per cent were stillbirths. Of the total deaths reported 44 per cent occurred among children under 5 years of age. The maternal mortality rate (from conditions due to the puerperal state) was 6.20 per thousand births, stillbirths included.

Colon.—The population of the city for the year was 31,285. From this population 421 deaths occurred during the year, of which 404 were from disease, giving a rate of 12.92 for disease, as compared with 13.20 for 1923.

The principal causes of death, as compared with last year, were:

	Number of deaths	
	1923	1924
Tuberculosis (various organs).....	79	57
Pneumonia (broncho and lobar).....	40	42
Diarrhea and enteritis.....	26	32

There were 745 live births reported for the year, giving a rate of 23.81 per thousand population. The infant mortality rate, based on the number of live births, was 106.04. Of the total births reported 5 per cent were stillbirths. Of the total deaths 28 per cent occurred among children under 5 years of age. The maternal mortality rate (from conditions due to the puerperal state) was 10.24 per thousand births, stillbirths included.

Canal hospitals.—Patients treated in Panama Canal hospitals, fiscal year 1924:

	Number in hospital July 1, 1923		Admitted		Died		Discharged		Transferred		Remaining June 30, 1924	
	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
Ancón.....	170	105	3,490	3,584	57	147	3,396	3,279	24	68	183	195
Colon.....	20	24	907	1,269	14	54	734	889	159	330	20	20
Corozal:												
Insane.....	87	309	53	75	5	24	53	60	1	6	81	294
Cripples.....	4	26	1	3	0	0	3	5	0	0	2	24
Chronics.....	2	23	3	24	0	1	3	22	0	0	2	24
Palo Seco leper colony.....	7	77	0	18	1	4	0	5	0	0	6	86
Total.....	290	564	4,454	4,973	77	230	4,189	4,260	184	404	294	643

Quarantine.—An efficient quarantine was maintained with the minimum delay to shipping and was successful in preventing the admission of communicable diseases into the Canal Zone. On the invitation of the President of the Republic of Panama a conference of quarantine authorities of the west coast of South America convened at Panama on February 25, 1924, and continued in session until February 29. It was attended by official delegates from Chile, Peru, Ecuador, Panama, and the United States, and accomplished useful results in the simplification and standardization of quarantine methods and the closer cooperation of quarantine authorities. Dr. W. C. Rucker, chief quarantine officer of The Panama Canal, did much of the preparatory work for this conference and acted as its secretary general.

MUNICIPAL ENGINEERING

Water Supply.—There was the usual maintenance work on pipe lines, reservoirs, filtration plants, and pumping stations. Slides along the Panama Railroad right of way north of Pedro Miguel following the heavy rains of October and November, 1923, carried away a portion of the 30-inch water main between Gamboa and the Miraflores filtration plant, and pending repairs it became necessary to draw water from Miraflores Lake, using first a suction dredge and then a temporarily installed pumping plant, to supply the southern district, including Panama, Balboa, and Ancon. During the same period of bad weather a portion of the Toro Point main was carried away by the surf and had to be relocated. The 12-inch line from the Agua Clara pumping station to the Gatun storage tank was also relocated and shortened. A new wash water tank was installed at the Agua Clara purification plant, and the steel wash water tank at Mount Hope was cleaned, repaired, and repainted. A 6-inch water line was extended along the Panama Railroad tracks in Gatun to provide fire protection for buildings in this vicinity. The construction of a new concrete water tank at Paraiso was started and 60 per cent completed at the end of the year.

The amount of water consumed was:

	Gallons
Canal Zone.....	2, 633, 131, 000
Panama.....	1, 088, 266, 000
Colon.....	609, 906, 750
Sold to ships.....	126, 238, 500
Total.....	4, 457, 542, 250

Sewers.—The usual maintenance work on the sewer systems of the Canal Zone was attended to. The sewer line along the Panama Railroad tracks at Gatun, washed away by the October–November rains, was relocated and replaced. A short sewer line was laid to serve employees' quarters on the west side of the Panama Railroad tracks at Pedro Miguel.

Roads, streets, and sidewalks.—The Bolivar highway from Cristobal to Gatun was repaired where damaged by the heavy rains of October and November, and a new culvert was added to those already built. The macadam streets in the Gatun district were resurfaced, oiled, and rolled. The Gaillard Highway was repaired and resurfaced between Paraiso and Gamboa. The various streets in the Ancon-Balboa district were repaired. A concrete roadway 450 feet long was built to connect Roosevelt Avenue with the head of Dock 7, Balboa, and the street lay-outs in the vicinity of Dock 6 and the Balboa clubhouse and dispensary were improved.

Sidewalks were constructed in the shop district at Balboa, rendered necessary by the increased automobile traffic from the docks and the consequent danger to pedestrians.

New or additional parking space for automobiles was provided at the entrance to the Cristobal Docks, the Gatun Locks and railroad station, the Balboa terminal building, and the Pedro Miguel restaurant.

A complete preliminary survey was made of a road from Summit to Alhajuela in connection with the Alhajuela dam project. At the request of the Army the canal forces supplied the necessary supervision, skilled labor, and material for the relocation of a part of the road from Pedro Miguel to Camp Gaillard.

Garbage disposal.—The incinerator at Mount Hope was operated throughout the year and burned 21,280 tons of garbage. In the southern district garbage was dumped on waste land and buried.

Cities of Panama and Colon.—The water and sewer systems and the streets of Panama and Colon were maintained, and some minor items of construction work were undertaken. In Colon the collections for water were sufficient to wipe out a deficit as of June 30, 1923, and accumulate a surplus which was applied to reduce the capital cost. In Panama collections were insufficient to meet current charges, and a deficit was incurred, for which the Republic is responsible.

Miscellaneous work.—The municipal division also handled various construction jobs for the Army, the Navy, the Panama Railroad, the Republic of Panama, and various departments of The Panama Canal.

PUBLIC ORDER

As pointed out in the annual report for 1923, the maintenance of public order among the residents of the Canal Zone, who are, with relatively few exceptions, either civilian employees of the United States Government or military and naval personnel, with their families and dependents, is a comparatively simple problem, and the difficulties confronting the police are created by transients and the cosmopolitan population of the adjacent cities of Panama and Colon.

Conditions during the past year have been normal. The number of arrests, 3,274, was lower than in any year since 1905, and the average number of prisoners in the common jails at the close of each month was 63, as compared with 73 in 1923.

The more common charges preferred against persons under arrest were: Violation of the motor-vehicle regulations, with 858 cases; violation of traffic regulations, 190; violation of immigration regulations, 309; violation of license regulations, 106; disorderly conduct, 373; loitering, 275; trespassing, 47; vagrancy, 31; drunk and disorderly, 56; disorderly conduct with possession of liquor, 167; intoxication, 79; violation of national prohibition act, 84; assault and battery, 74; battery, 25; fighting, 43; desertion from the United States Army or

Navy, 58; held for military or naval authorities, 54; held for Panaman authorities, 51; gambling, 25. The persons arrested included representatives of 42 nationalities and 143 trades or professions.

Under the narcotic drugs import and export act 10 arrests were made, with 8 convictions, 1 dismissal, and 1 case awaiting trial on June 30, 1924. There was 1 conviction for violation of the white slave act.

There were two homicides during the year, both resulting from automobile traffic accidents. In each case the chauffeur responsible was tried on a charge of manslaughter and convicted. There were 3 suicides in the Canal Zone and 1 on a steamer in transit between Cartagena, Colombia, and Cristobal, Canal Zone.

At the Canal Zone penitentiary 41 convicts were received, with sentences aggregating 80 years and 3 months, and 58 convicts were discharged. Of the latter, 7 were pardoned and 4 were paroled. At the close of the year 75 convicts remained in custody, as compared with 92 twelve months earlier. Forty-five convicts were deported from the Canal Zone at the expiration of their sentences, and there were 8 other deportations, making a total of 53.

There were 177 men employed on the police force on June 30, 1924, an increase of 4 over the number employed at the beginning of the fiscal year. They were divided between headquarters, the Balboa central station, the Cristobal central station, and the penitentiary, with outposts at Ancon, Pedro Miguel, San Juan, Gatun, Monte Lirio, and Gamboa, the distribution being the same as last year, except that the incorporation of the Alhajueta Basin within the Canal Zone rendered necessary the detail of four men to San Juan on the upper Chagres.

In addition to routine police work, a continuous patrol of the harbors of Balboa and Cristobal was maintained, and police launches were maintained at Gamboa and Gatun for the patrol of the Chagres River and Gatun Lake. Details of police were continued at all canal locks and at the Gatun spillway. Motor-cycle patrols for the enforcement of vehicle regulations were continued at Balboa, Pedro Miguel, Cristobal, and Gatun. There was a monthly patrol of the interior country to prevent unauthorized settlement on public lands.

The convicts in the penitentiary were employed during the year on road and municipal improvements, the improvement of the penitentiary grounds, the maintenance of prison buildings, the manufacture and repair of prison clothing, and the upkeep of the prison farm. Their labor, at standard rates, was valued at \$30,146.98. Common jail prisoners were employed on road work, the clearing of trails, janitor service about police stations, and miscellaneous jobs. Their labor was valued at \$20,728.26.

OFFICE OF THE DISTRICT ATTORNEY

The district attorney prosecuted 143 criminal cases before the district court, 74 less than in the preceding year, with 103 convictions, 22 acquittals, 5 cases nol prossed, and 13 dismissed. In addition to the cases disposed of, 7 cases were pending at the end of the year. The decrease in criminal cases was principally in violations of the national prohibition act, violations of the narcotic drugs act, and larceny cases.

The district attorney represented The Panama Canal, the Panama Railroad Co., or the United States Government in nine civil actions, of which four were still pending at the end of the year.

DISTRICT COURT

The district court held sessions at Ancon and at Cristobal and transacted the following business:

Cases pending at the beginning of the year: Civil, 53; probate, 60; criminal, 12. Cases settled during the year: Civil, 104; probate, 166; criminal, 128. Cases pending at the end of the year: Civil, 30; probate, 38; criminal, 6.

Of the civil cases settled, 65 were decided, 38 dismissed, and 1 granted change of venue. Of the criminal cases settled, 13 resulted in acquittal, 93 in conviction, 5 were nol prossed and 16 dismissed. In addition, there was one extradition case.

Number of marriage licenses issued, 508; number of deeds recorded, 16; total collections, \$8,409.88.

MARSHAL

Writs of process received, 673; served, 556; parties not found, 117; fees collected, \$168.80; fees paid to witnesses, jurors, interpreters, etc., \$170.77; total trust funds handled during the year, \$72,370.80.

MAGISTRATES' COURTS

Balboa.—Cases pending at the beginning of the year: Civil, 3; criminal, 2. Cases docketed during the year: Civil, 35; criminal, 1,592. Of the criminal cases disposed of, 54 resulted in acquittal, 1,251 in conviction, 236 were dismissed, and 52 held to the district court. Cases pending at the end of the year: Civil, 4; criminal, 1. Total collections: \$9,695.04.

As provided in the Executive order of May 10, 1911, petitions were made to the district judge for the commitment of 52 persons to the insane asylum for observation.

Cristobal.—Cases pending at the beginning of the year: Civil, 7; criminal, 6. Cases docketed during the year: Civil, 22; criminal, 1,330. Of the criminal cases disposed of, 119 resulted in acquittal,

1,108 in conviction, 44 were dismissed, and 62 held to the district court. Cases pending at the end of the year: Civil, 2; criminal, 3. Total collections: \$10,310.60.

FIRE PROTECTION

No changes have been made in the number or location of fire stations, or the number and distribution of fire-department personnel. At the request of the men the two-platoon system was introduced, effective February 15, 1924. Under this system each company is divided into two equal platoons, one for day duty from 8 a. m. to 6 p. m., and one for night duty from 6 p. m. to 8 a. m. The officer in charge has authority to call the members of the off-duty platoon, whenever, in his opinion, their services are required. The platoons change over every third day.

One American La France combination chemical and hose motor car was purchased during the year and placed in service at the Cristobal fire station, one Ford roadster was purchased for use in the Balboa district, and 500 feet of extinguisher tubing was purchased and added to the equipment. One Webb combination pump and hose wagon was sold during the year to the Panaman fire department.

Periodical inspection of all Government buildings, docks, storehouses, yards, etc., were conducted by the department, fire hose and extinguishers were maintained in good condition, and the volunteers were drilled and instructed.

There were 103 fires, 3 emergency calls, and 3 false alarms during the year. In Panama Canal property there were 81 fires, 9 in Panama Railroad property, 1 in property of the United States Navy, and 12 in private property. The total fire loss was \$51,179.43, of which \$36,087.73 represents the destruction of the Ancon clubhouse, and \$5,250 private property stored in the clubhouse. The value of property threatened by fire is estimated at \$4,744,408.63, distributed as follows: Panama Canal, \$505,416.99; Panama Railroad, \$143,223.06; United States Army, \$4,000; United States Navy, \$1,172.79; private property, \$4,090,595.79. The Panama Railroad total included the estimated value of the Cristobal commissary, where a fire occurred in April, 1924, and the private property involved includes three steamers which caught fire in Canal Zone waters.

PUBLIC SCHOOL SYSTEM

In October, 1923, a new grade school for white children with a personnel of three teachers was opened at Camp Gaillard. With this addition, there are now in the Canal Zone 2 high schools and 6 grade schools for white children, with 80 teachers, and 7 grade schools for colored children, with 39 teachers. The organization also includes

a superintendent and two assistant superintendents. As compared with 1923, the personnel of the division shows an increase of 5.

The net enrollment in the white schools was 2,094, as compared with 1,766 in 1923. In the colored schools the net enrollment was 1,911 in 1924 and 2,010 in 1923. The average daily attendance in the white schools was 1,763.9, and in the colored schools 1,528.5. The two high schools graduated 27 pupils.

There have been minor improvements in the curriculum and in teaching methods, and an attempt has been made to reduce to a minimum the number of pupil failures, and to provide instruction which, in the case of the white schools at least, will compare favorably with that offered in the best public schools in the United States.

Other than the transfer and conversion of the building for the new school at Camp Gaillard there have been no additions to plant; but in the existing schoolhouses for white children 72 rooms out of a total of 75 are now in use, and it will be impossible to provide for any material increase of the school population without additional buildings. There has always been congestion in the schools for colored children.

The estimated value of school property in the Canal Zone is \$550,000 and the estimated expenditures in 1924 were \$217,050.62.

On May 1, 1924, three schools formerly maintained at San Juan de Pequeni and El Vigia on the upper Chagres River, within the area transferred from Panama to the Canal Zone, were reopened under the supervision of the division of schools. As the area is to be depopulated preparatory to the building of a dam at Alhajuela, these schools are temporary, and no attempt has been made to coordinate them with the Canal Zone school system, but Panaman teachers have been employed and the same methods followed as were previously established. The total enrollment in these schools was 175. They are not included in any of the statistics of personnel, enrollment, equipment, or expense quoted in the preceding paragraphs.

POSTAL SYSTEM

Thirteen post offices were in operation at the end of the fiscal year, compared with 12 at the close of the previous year, a new office having been established at France Field on July 1, 1923. Since the incorporation of the Alhajuela Basin within the Canal Zone, effective February 1, 1924, mail for the villages of San Juan de Pequeni, El Vigia, and Tranquilla is now handled by representatives of the Canal Zone postal service, but no post offices have been opened in this area.

The total receipts of the postal service were \$152,336.30, as compared with \$151,958.16 in the preceding year. Current expenses exceeded receipts by approximately \$25,000. As in previous years,

this deficit was due primarily to the fact that under the terms of the Taft agreement all stamps and stamped paper were purchased from the Republic of Panama at 40 per cent of their face value, involving an expenditure for the fiscal year 1924 of \$33,494.63. It was contemplated that this agreement would be abrogated on May 1, 1924, but this date was extended by the State Department to June 1, 1924, with the understanding that no change would be made in existing conditions until the end of the fiscal year. In anticipation of the abrogation of the agreement, arrangements were made for the purchase at a cost of approximately \$1,500 of one year's supply of United States stamps surcharged "Canal Zone," which were received and placed on sale July 1, 1924. Relieved of the subsidy to the Republic of Panama, the Canal Zone postal service should in future be self-sustaining, notwithstanding the large volume of official mail carried under frank.

Money orders were issued to the value of \$2,538,068.39, including deposit orders, issued without fee, to the value of \$738,940. Money order fees totaled \$9,788.92. The total amount on deposit at all post offices on June 30, 1924, including deposit money orders, old postal savings accounts, and fee-paid money orders in favor of the remitter, was \$487,940.80, as compared with \$470,731 on June 30, 1923.

The sales of Treasury savings certificates during the year aggregated \$56,961.50. The sale of these certificates was temporarily discontinued in September, 1923, and resumed on February 1, 1924.

In the registry division of the post offices 243,114 letters and parcels were handled, of which 41,671 were official and accepted for registration without fee.

A total of 2,209 dispatches of foreign mail was made from the post office at Cristobal and 2,158 dispatches were received. At the Balboa post office, which dispatches mail to west coast Central and South American ports only, the number of dispatches outward was 1,574 and inward 519.

United States and foreign transit mail destined to the west coast of Central and South America, as well as mail exchanged between Cuba, Jamaica, and other insular governments and Colombia, Costa Rica, Venezuela, etc., is handled under the supervision of the director of posts. Mail from European countries routed via the Isthmus for transshipment is handled by the director of posts on behalf of the United States Post Office Department, whereas direct agreements are in effect between the director of posts and the postal administrations of Costa Rica, Australia, and New Zealand for the handling of their mails routed via the Isthmus of Panama.

Cable reports were forwarded regularly to the postmaster at New York informing him of connections on the Isthmus for west coast ports, which not only affords better mail service but should result in savings

over the former system of dispatching all mail to the Isthmus for connection rather than holding it at times for dispatch by direct steamers in the New York-west coast service.

During the year mail from the United States and foreign countries was received on about 300 steamers and dispatched to destination on about 400 steamers.

CUSTOMS

The total number of vessels entered at the terminal ports of the canal, including vessels in transit, was 11,643, and the number cleared 11,653, an increase of approximately 30 per cent over the previous year.

All merchandise discharged at Cristobal or Balboa and destined to persons or firms in the Republic of Panama, not consigned to The Panama Canal, the Panama Railroad Co., or the United States Army or Navy, is in the custody of the Canal Zone customs until papers have been submitted from Panaman officials to prove that duty has been paid or waived. Permits for 8,165 releases were granted at Cristobal and for 193 at Balboa. Cargo landed at the latter port is usually forwarded by railroad to Panama, where it passes into the custody of the Panaman authorities.

A total of 2,337 free entry requests was approved for employees of The Panama Canal or the Panama Railroad Co. and members of the United States Army or Navy, who have the privilege of importing articles for their personal use without payment of duty.

Customs duty was paid to the Republic of Panama to the amount of \$51,627.50 on 21,659 mail parcels for nonemployees and on dutiable articles imported through the Canal Zone post offices.

No arrests were made for violations of the customs regulations. At each port, however, numerous attempts to smuggle merchandise of various classes in small quantities were frustrated, and such merchandise confiscated and delivered over to the proper authorities of the Republic of Panama. Eleven arrests were made by police and customs officers for alleged violations of the opium act.

The number of cases of household goods inspected and sealed for employees returning to the United States was 578, and the fees collected for this service totaled \$462. There were 756 invoices certified, on which the fees amounted to \$929.50.

The number of vessels requesting the detail of customs inspectors for the examination of passengers' baggage, etc., after the usual working hours was 574, and the sum of \$4,520 was collected for this special service.

Customs inspectors checked 408 Chinese crews upon arrival and before departure to prevent the illegal landing of Chinese in the Canal Zone or the Republic of Panama. They also assumed respon-

sibility for 454 Chinese passengers, besides 72 on hand at the beginning of the year, of whom 334 were admitted to the Republic of Panama on the authority of that Government, and the others, with the exception of 66 awaiting transportation at the end of the year, either proceeded on their journey or were returned to the port of embarkation. Bonds were accepted for the temporary release in the Canal Zone of 46 Chinese in transit.

SHIPPING COMMISSIONER—SEAMEN

The shipping commissioner and his deputies have the same powers with respect to American seamen as shipping commissioners in the United States and American consuls in foreign ports. During the fiscal year there were 4,201 seamen shipped on American vessels and 4,119 discharged. The total amount of wages earned by seamen who were discharged in the Canal Zone was \$116,841.25; the amount approved for deduction on account of advances, allotments, fines, slop-chest account, etc., was \$33,580.96; and the balance of \$83,260.29 was either paid to them under the supervision of the deputy shipping commissioners or received on deposit for their account. There were 461 American seamen lodged and subsisted at the expense of the United States Government. Of this number 343 were returned to the United States at the expense of the appropriation for the relief of destitute American seamen, and the remaining 118 were signed on vessels and returned to the United States without expense to the Government. The wages and effects of eight American seamen who died in the Canal Zone were handled by the shipping commissioner as provided by law.

ADMINISTRATION OF ESTATES

During the year the estates of 57 deceased and insane employees of The Panama Canal and the Panama Railroad Co. were administered, and there were 32 estates in course of settlement on June 30, 1924.

RELATIONS WITH PANAMA

There was direct correspondence between the government of the Canal Zone and the Republic of Panama on various routine questions. The negotiations for a general revision of the existing agreements between the United States and the Republic of Panama embodied in the Hay-Bunau-Varilla treaty and the so-called Taft agreement, which were pending at the beginning of the year, were not concluded; but under date of May 28, 1924, the President of the United States, acting under authority of a joint resolution of Congress approved February 12, 1923, issued a proclamation abrogating the Taft agreement as of June 1, 1924.

SECTION IV

ADMINISTRATION

CHANGES IN ORGANIZATION AND PERSONNEL

There were no changes in the organization of The Panama Canal during the fiscal year 1924.

Col. Weston P. Chamberlain, Medical Corps, United States Army, was appointed chief health officer June 23, 1924, relieving Col. Henry C. Fisher, Medical Corps, United States Army, who completed a tour of duty with The Panama Canal which began March 31, 1919.

Commander Ross P. Schlabach, United States Navy, was appointed superintendent of the mechanical division, June 13, 1924, relieving Commander Roy W. Ryden, United States Navy, who had occupied the position since September 12, 1921.

Maj. Clarence S. Ridley, Engineer Corps, United States Army, resigned from the position of assistant engineer of maintenance, April 19, 1924. His appointment dated from May 10, 1921. Maj. Francis C. Harrington, detailed to relieve Major Ridley, had not arrived on the Isthmus at the close of the fiscal year.

Surg. Carlisle P. Knight, United States Public Health Service, was appointed chief quarantine officer of The Panama Canal, March 1, 1924, relieving Surg. William C. Rucker, United States Public Health Service, who had served in the same position since October 28, 1920.

Judge B. F. Harrah, assistant auditor of The Panama Canal at Washington, D. C., died on August 18, 1923. His appointment dated from June 17, 1911. The vacancy thus created was filled by the transfer of Mr. Noble Moore from the office of the Comptroller General, October 1, 1923.

INCREASE OF FORCE

For the efficient handling of a greater volume of business it became necessary to make slight increases in the force of certain departments. At the end of June, 1924, the total number of employees was 11,511, as compared with 11,001 in June, 1923. The increase of 510 men is equivalent to 4.6 per cent. The distribution of the personnel is shown in the following table:

Department or division	June, 1923			June, 1924		
	Gold roll	Silver roll	Total	Gold roll	Silver roll	Total
Operation and maintenance:						
Office.....	28	47	75	38	38	76
Electrical division.....	150	146	296	160	172	332
Municipal engineering.....	71	487	558	72	495	567
Lock operation.....	179	570	749	203	589	792
Dredging.....	152	886	1,038	159	872	1,031
Mechanical.....	340	661	1,001	427	822	1,249
Marine.....	156	472	628	175	520	695
Fortifications.....	14	169	183	11	18	29
Supply:						
Quartermaster.....	142	962	1,104	168	1,169	1,337
Subsistence.....	6	80	86	7	82	89
Commissary.....	164	766	930	188	832	1,020
Cattle industry and plantations.....	6	205	211	5	156	161
Hotel Washington.....	8	83	91	7	87	94
Transportation.....	36	157	193	36	161	197
Accounting.....	182	8	190	197	7	204
Health.....	222	692	914	231	702	933
Executive.....	476	264	740	477	249	726
Panama Railroad:						
Superintendent.....	47	254	301	48	230	278
Transportation.....	64	108	172	64	101	165
Receiving and forwarding agent.....	78	924	1,002	75	891	966
Coaling stations.....	62	477	539	62	508	570
Total.....	2,583	8,418	11,001	2,810	8,701	11,511

The pay roll for July, 1923, aggregated \$940,575.46, and for June, 1924, \$1,054,383.45, an increase of 12.1 per cent.

WAGE ADJUSTMENTS

Gold employees.—Under the provisions of the Panama Canal act of August 24, 1912, it is provided that the salaries or compensation of persons in the Panama Canal service “shall in no instance exceed by more than 25 per centum the salary or compensation paid for the same or similar service to persons employed by the Government in continental United States.”

While the payment of the full 25 per cent increment above rates in the United States is permissive and not mandatory, it has at all times been the policy of the administration to allow the full 25 per cent additional compensation over basic rates in the United States for similar employment, in so far as funds were available and so long as a proper coordination in the rates for the various classes and crafts was maintained locally. The policy of paying the full 25 per cent increment above United States rates has been more specifically indorsed since January 1, 1922, at which time employees were required to pay rent for their quarters, charges for fuel, water, electricity, and other services furnished, which prior to that date had been furnished to the employees without cost to them.

In line with the policy of granting the full 25 per cent above United States rates for similar work, in so far as funds and legislative restrictions permitted, adjustments were made in the

rates of numerous crafts during the year, following changes of rates in the United States. The more important adjustment were:

(a) Adjustment of rates of employees in the mechanical trades following the July 1, 1923, and January 1, 1924, wage adjustments in the navy yards in the United States.

(b) Bimonthly adjustments of rates for building trade employees, based on building trades rates in the United States.

(c) Inclusion of the second half of the bonus increment in the salaries of classified employees whose rates of compensation were based on Government salaries in the United States where the congressional increase of \$240 per annum was paid in addition to the basic salary. Owing to lack of funds, however, school teachers, policemen, and firemen received no part of this \$240 increment.

The three foregoing adjustments, together with many minor adjustments involving smaller groups, resulted in a revision of the rates of a majority of the American employees during the course of the year. At the close of the fiscal year adjustment of rates of railroad transportation employees was under way, and likewise preparatory steps were being taken toward allocating the salaries of all employees coming under the provisions of the classification act of 1923 to the new schedule of rates provided for use under classification.

Owing to our isolated location and the necessity of maintaining a proper coordination between closely related positions, the duties of which may vary widely, and whose relationship can not well be understood by a board unfamiliar with local conditions, efforts were made to secure the exemption of employees, in the canal service from the provisions of the classification act of 1923. The necessity of considerable flexibility in the canal organization, allowing immediate adjustments according to the exigencies of the service, makes it of great importance that the canal organization be hampered as little as possible by the obligation of conforming to governmental classifications in the United States where conditions of employment are in many respects entirely different.

The provisions of the Panama Canal act limiting salaries on The Panama Canal to 25 per cent above rates for similar employment in the United States prescribe a definite safeguard in respect to Panama Canal rates of pay and it would be unwise to fetter the canal administration with the provisions of the classification act and the rules and regulations appertaining thereto, administered by a personnel classification board in Washington entirely unfamiliar with local conditions. Such a board would of necessity have to rely on data furnished by the canal administration relative to the duties and responsibilities of each position classified; consequently, the real burden of classification rests with the canal administration in any event, and the proposed method of applying the classification act to the Panama Canal service with the personnel classification board in Washington reviewing and revising the classification made by a local

classification board could only prove a constant source of annoyance and friction.

A careful survey of Panama Canal rates of pay as of May, 1924, for all classes of employees on the Isthmus, showed that as a whole Panama Canal employees were receiving 22.9 per cent above rates for similar service in the United States. This margin above United States' rates is their compensation for tropical service and is within the 25 per cent limitation allowed by law.

Adjustments in the compensation of Panama Canal employees are authorized by the Governor, usually in conformity with recommendation made by a wage board, consisting of an official representative of the administration and a representative selected by the organized employees. When a claim for increase is made, data showing rates for similar employment are obtained from the United States; the comparability of the service, the duties and responsibilities of the employment, the matter of local coordination and other factors are carefully considered, and recommendations submitted accordingly. This wage board held 42 meetings during the year, and submitted recommendations for the revision of a great many rates.

Following the decision that Panama Canal employees outside of the mechanical and allied crafts were to be included under the provisions of the classification act, questionnaires covering some 1,200 positions were prepared for the consideration of the personnel classification board in Washington. The personnel classification board, recognizing the impracticability of classifying positions in the canal service in conformity with classification procedure for the departmental service in Washington, directed that for the present, at least, positions in the canal service be allocated to grades and classes in the classification schedule simply on the basis of their present salaries. At the close of the fiscal year schedules and regulations were being promulgated, preparatory to shifting to the classification rates, effective July 1, 1924. This is a mere mechanical allocation and is not objectionable in itself.

Silver employees.—Although the number used as an index of the cost of living for silver employees, which is derived quarterly from current prices in the Panama Railroad commissaries where these people buy the bulk of their supplies, declined during the year from 46.909 to 37.411 (percentage of increase over 1914), no further reduction was made in the basic rate of pay for silver laborers, which remained at 20 cents an hour.

The wage rate originally fixed for laborers in 1914, which was subsequently increased to correspond as nearly as possible with the ascertained increases in the cost of living but no farther, was made purposely low, with the intention of discouraging the surplus West Indian labor left over from construction days from remaining on the Isthmus, and at the same time free transportation was offered to

all those who applied for repatriation. The situation is now entirely changed. Since the settlement of many West Indians on the land and the development of the banana industry and other sources of employment all surplus competent labor has been absorbed, and the maintenance of a satisfactory canal force warrants the payment of a 20-cent rate for unskilled labor, and of the higher rates for skilled labor derived from it, in competition with other employers. There is the further consideration that the wages of American employees, which fluctuate with wages in the United States, have been generally increased during the year, and it would be difficult to convince the West Indians that, while gold employees were demanding and obtaining better pay, silver employees must suffer a further reduction. The existing schedules for silver employees have accordingly been retained without change.

The following statement shows the fluctuations in living costs and the basic hourly rate for unskilled labor from February 1, 1920:

Date	Living cost over 1914	Indicated rate	Rate adopted	Date	Living cost over 1914	Indicated rate	Rate adopted
Feb. 1, 1920	71.58	21.25	21	July 1, 1922	50.039	18.57	20
Apr. 1, 1920	73.09	21.47	21	Oct. 1, 1922	47.81	18.29	20
July 1, 1920	87.77	23.18	23	Jan. 1, 1923	45.816	18.04	20
Oct. 1, 1920	89.12	23.40	23	Apr. 1, 1923	44.073	17.83	20
Jan. 1, 1921	79.28	22.19	23	July 1, 1923	46.909	18.18	20
Apr. 1, 1921	72.399	21.33	23	Oct. 1, 1923	46.689	18.15	20
July 1, 1921	68.977	20.91	22	Jan. 1, 1924	42.336	17.61	20
Oct. 1, 1921	62.59	20.12	21	Apr. 1, 1924	41.516	17.51	20
Jan. 1, 1922	59.98	19.82	21	July 1, 1924	37.411	17.04	20
Apr. 1, 1922	55.46	19.24	21				

GRIEVANCE BOARD

The board organized in July, 1920, to hear grievances and complaints of American employees and submit its findings and recommendations to the Governor had only two cases brought before it in 1924. One of these arose out of the excessive overtime required of canal pilots following the rapid and unexpected increase of traffic during the early part of 1923 and pending the employment and training of additional men, and the other concerned the relative seniority rights of locomotive engineers and conductors and railroad motor car operators. For the consideration of these two cases the board held six meetings.

PUBLIC AMUSEMENTS AND RECREATION

As in previous years, five clubhouses were maintained for Americans and five for West Indians under the supervision of a bureau of clubs and playgrounds. They are centers for varied community activities, and while designed primarily for employees and their families, they are open to all, and are commonly patronized by transient visitors and by the enlisted men of the Army and Navy. In connection with the clubhouses there are athletic fields, tennis courts, swimming pools,

and children's playgrounds, providing outdoor recreation for both sexes and all ages. Many clubhouse activities are not only self-supporting but yield a considerable net revenue, which can be applied to support such other features as are necessarily conducted at a loss. The operations as a whole show a deficit, which is covered by a subsidy from appropriations. Clubhouse finances for the fiscal year 1924 are dealt with in a paragraph in the section on business operations. Reference is made there also to the destruction of the Ancon clubhouse by fire on January 9, 1924, and to the assignment of an available building to replace it.

The employees support a great number of clubs and fraternal and other organizations, which are either entirely independent of The Panama Canal or merely make use of halls provided by the canal for which a rental charge is collected.

RECRUITING, PURCHASES, AND SALES IN THE UNITED STATES

The number of persons tendered employment through the Washington office was 973, of which number 436 accepted. The corresponding figures for 1923 were 542 and 282. During January it became necessary on very short notice, due to the failure to secure the detail of men through the Navy Department as had been expected, to recruit 50 mechanics for the overhaul of the Gatun Locks, a temporary job lasting only six weeks. In view of the short period of employment and the limited time available, all of these men being required to sail by January 15 and 25, it was necessary in order to secure the 50 men required to tender employment to 271.

The total number of orders placed for the purchase of supplies was 7,182, as compared with 5,381 in the previous year, and the value of supplies ordered was \$4,796,022.22, as against \$2,351,048.33. Owing to this large increase in the work of the purchasing department it was necessary to increase the force by three clerks and two inspectors at the beginning of the fiscal year, and again by two inspectors effective November 1, 1923.

The sale in the United States of surplus canal material handled by the purchasing department during the fiscal year yielded \$327,490.76, based on 50 sale orders, including one order for the sale of the dredge *Culebra* for \$250,000 to the Engineer Department of the Army, as compared with \$448,888.14, based on 184 sale orders, placed during 1923. The regular office force, which was drawn on during the fiscal years 1922 and 1923 to take care of the extra work in connection with the sale of surplus material accumulated on the Isthmus, was released from this work, and this special sales organization was discontinued about September 1, 1923.

The representation of the Washington office on the various Government boards and coordinating committees appointed by the chief coordinator was continued, and involved considerable attention and time, particularly of the higher officials.

SECTION V

FINANCIAL AND STATISTICAL STATEMENTS

This section contains financial statements of The Panama Canal (Tables 1 to 58) and statistical statements of canal traffic (Tables 59 to 63). For convenience of cross reference the original numbering of the financial statements quoted from the annual report of the auditor of The Panama Canal has been preserved, although Tables Nos. 23, 35, 40, 41, and 45 to 58 have not been printed. A complete list of the tables, including those omitted, follows:

Table No.

1. General balance sheets.
2. Balances in appropriation and fund accounting.
3. Appropriations by Congress.
4. Status of authorized bond issue.
5. Cash receipts and disbursements for account of the United States.
6. Payments made by fiscal officers.
7. Receipts and disbursements by collector.
8. Collections repaid to appropriations and to individuals and companies.
9. Collector's special deposit account.
10. Audited pay rolls.
11. Accounts receivable registered and outstanding.
12. Comparative statement of accounts receivable.
13. Comparative statement of accounts payable.
14. Statement of defense capital expenditures to June 30, 1924.
15. Details of canal fixed property.
16. Detail of canal transit equipment.
17. Business property, equipment, etc., by divisions.
18. Business fixed property.
19. Canal business equipment.
20. Status of public works in Panama and Colon.
21. Canal transit material and supplies.
22. Receipts, issues, and transfers of stores.
23. Comparative statement of store balances.
24. Statement of canal earnings, expenses, and net expenses.
25. Canal revenues.
26. Business expenses, revenues, and net revenues.
27. Comparison of expenses and revenues and surplus by years to date.
28. Pay-roll deductions from employees, for rent, etc.
29. Reserves for depreciation.
30. Reserves for repairs.
31. Reserves for gratuity.
32. Cost of production and distribution of electric current.
33. Cost of production and distribution of water.
34. Dredging operations (channel maintenance).

Table No.

35. Money orders issued and paid by Canal Zone and Canal Zone orders paid by other administrations, fiscal years 1907 to 1924, inclusive.
36. Monthly money-order business of Canal Zone postal service.
37. Postal service—audited revenues, fiscal years 1907 to 1924, inclusive.
38. Postal revenues, fiscal year 1924.
39. Postal savings and deposit money-order transactions, fiscal year 1924.
40. Income, bureau of clubs and playgrounds, fiscal year 1924.
41. Expenses, bureau of clubs and playgrounds, fiscal year 1924.
42. Income and expenses, bureau of clubs and playgrounds, fiscal year 1924.
43. Balance sheet, bureau of clubs and playgrounds, June 30, 1924.
44. Coupon books issued, sold, etc., fiscal year 1924.
45. Amounts of injury payments made during the period August 1, 1908, to June 30, 1924.
46. Injury and death payments, September 7, 1916, to June 30, 1924.
47. Number of injuries, by extent of disability, for each division or department.
48. Nature of nonfatal cases, by department or division.
49. Number of cases and compensation paid, classed by injury.
50. Class of work being performed by employees at time of injury, by departments and divisions.
51. Cause of injuries, by departments and divisions.
52. Cost of commissary supplies purchased and sold during fiscal year 1924.
53. Collections made from other than employees.
54. Collections of Panama Railroad land rents.
55. Panama Railroad accounts payable vouchers registered during fiscal year 1924.
- 55-a. Panama Canal accounts payable vouchers registered during fiscal year 1924.
56. Statement of work of the time inspection division.
57. Statistics of silver quarters, exclusive of Barraeks and Las Cascadas.
58. Report of work performed by pay-roll section.
59. Summary of commercial traffic through The Panama Canal during the fiscal year 1924 and since its opening to commercial traffic.
60. Number of commercial vessels of various nationalities passing through The Panama Canal 1915-1924.
- 61-a. Origin and destination of all commercial cargo passing through The Panama Canal from the Atlantic to the Pacific during the fiscal year 1924.
- 61-b. Origin and destination of all commercial cargo passing through The Panama Canal from the Pacific to the Atlantic during the fiscal year 1924.
- 62-a. Tons of cargo carried by commercial vessels passing through The Panama Canal from its opening to June 30, 1924, by fiscal years.
- 62-b. The Panama Canal net tonnage of vessels by nationalities passing through The Panama Canal from its opening to June 30, 1924, by fiscal years.
63. Statement showing the number of vessels, the Panama Canal net tonnage, tolls assessed, and tons of cargo carried by vessels of the principal nations passing through The Panama Canal during the first ten years of its operation.

EXPLANATION OF FINANCIAL STATEMENTS

The financial transactions of The Panama Canal as a whole are covered in Tables Nos. 1 to 58, of which there is an index attached.

Table No. 1—General balance sheet.—One important change has been made in the general balance sheet. When the commercial value of The Panama Canal and auxiliary works was determined as of April

1, 1922, the amount fixed as having been expended from a national defense standpoint, amounting at that time to \$110,997,602.38, was dropped from the books. During the fiscal year 1924, land settlements were made covering old claims which are properly chargeable to this account, and during the fiscal year 1925 it is estimated that approximately \$40,000 will be spent from the maintenance and operation appropriation for shipping, handling, and storing armor plate for the spillway gates, which should also be charged to the national defense account, and for these reasons, the total national defense expenditures have been taken up on the asset side of the balance sheet and a corresponding capital account set up on the liability side which now amounts to \$112,618,082.12.

The canal transit capital and business capital, which were shown separately last year, have been consolidated. The two capital accounts now represent approximately the total amount appropriated by Congress for canal construction, as shown in detail in Table No. 3.

The item of undistributed business capital was increased by \$150,000, representing the value of store stock carried for account of the constructing quartermaster.

The other asset and liability items in the general balance sheet are taken up in detail in succeeding tables.

Table No. 2—Appropriation and fund accounting.—Cash in the hands of the three fiscal officers was reduced from \$3,166,724.68 on July 1, 1923, to \$1,900,537.96 on June 30, 1924. Of this amount, the disbursing clerk in Washington had \$211,168.22; the paymaster, \$958,036.61; and the collector, \$731,333.13. The amount collectible on registered bills increased \$165,360.62, the total amount outstanding at the end of the year being \$952,207.71.

Table No. 3—Appropriations by Congress.—Individual acts have been omitted in the annual report for several years, and it was thought advisable to print them in detail this year on account of taking up the national defense expenditures in the general ledger. This table shows the total amount of money appropriated for canal construction, less amounts returned to the surplus fund, leaving a net for canal construction amounting to \$386,910,301.

The amount paid to the Republic of Panama to June 30, 1924, was \$3,250,000, and the total amount appropriated for the maintenance and operation, sanitation, and civil government of The Panama Canal and Canal Zone, since 1914, is \$73,094,495.88. The amount appropriated for the fiscal year 1925 is \$7,240,160.

Table No. 4—Status of authorized bond issue.—The status of the authorized bond issue has been changed by the amount returned to the surplus fund. There now remains available out of the total authorized bond issue the sum of \$2,215,782.62.

Table No. 5—Cash receipts and disbursements.—This table shows that the Treasurer of the United States advanced to the fiscal officers of The Panama Canal the sum of \$6,869,500, and disbursed directly \$463,454.16, making a total of \$7,332,954.16. Against this amount the fiscal officers of The Panama Canal remitted to the Treasurer the sum of \$951,418.40 and the direct collections amounted to \$416,192.79, a total of \$1,367,611.19, indicating that The Panama Canal withdrew from the Treasury appropriated funds during the year amounting to approximately \$6,000,000.

Table No. 6—Disbursements by the paymaster.—Disbursements to the amount of \$17,482,161.50 were made during the year by the paymaster. Of this amount the sum of \$6,284,809.52 was on account of the Panama Railroad Co. Employees on the gold rolls of The Panama Canal were paid \$5,918,833.06 and those on the silver rolls \$3,703,083.58, while the sum of \$1,575,435.34 was paid on miscellaneous vouchers.

Collections on the pay rolls amounted to \$3,237,408.96. Of this amount the sum of \$2,553,615.80 was collected for coupon books, the remainder being for miscellaneous items. Of the total collections on pay rolls, the sum of \$2,593,774.40 was disbursed by the paymaster, Panama Canal, the balance, \$643,634.56, being transferred to the collector's accounts.

The American Foreign Banking Corporation was continued as a Government depository. During the year the sum of \$7,229,090 Panama Railroad funds, was transferred to the Treasurer, New York. This amount included \$569,150 mutilated currency, due to rapid deterioration of paper money through climatic conditions. This amount is approximately \$200,000 less than the amount shipped during the fiscal year ended June 30, 1923, which is accounted for by this office putting into circulation nearly \$250,000 in new money.

The circulation of gold coin has been practically eliminated. The total amount of gold reserve on the Isthmus is around \$325,000. Of this amount \$300,000 is being held in reserve by the various banks.

No cash was brought down from the United States by the paymaster during the year, which is the first year in the history of The Panama Canal that it has not been necessary to requisition a considerable quantity of cash for use on the Isthmus.

Tables Nos. 7, 8, and 9—Receipts and disbursements by the collector.—Collections repaid to the appropriations totaled \$8,157,836.33. Miscellaneous receipts collections amounted to \$24,798,311.60. The amount of money handled by the collector through his security deposit accounts totaled \$30,063,355.28. (See Table No. 5.) This makes a total of over \$33,000,000 handled by the collector, and, in addition to this, independent funds consisting of clubhouse funds,

trust funds, postal savings funds, money order funds, interest and Treasury savings certificates, as shown in Table No. 7, amounting to approximately \$2,000,000.

The collections for account of the Panama Railroad Co. amounted to \$12,405,727.56. This makes the total cash turned over in the collector's office more than \$47,000,000.

Table No. 10—Salaries and wages.—The amount of money paid to Panama Canal employees in the fiscal year 1924 was \$9,711,933.36. The amount for the fiscal year 1923 was \$8,627,698.19 and for 1922, \$9,731,338.82. Of the total amount paid in the fiscal year 1924, \$8,145,768.68 was paid directly from the appropriation for maintenance and operation, \$773,301.20 from civil government, and \$792,-863.48 from the sanitation appropriation. The total amount paid on the gold rolls was \$6,000,506.87, and on the silver rolls \$3,711,426.49.

Table No. 11—Accounts receivable.—The number of bills registered in 1924 exceeded the bills in 1923 by 3,200. This table shows the ups and downs of the bills covering tolls in the various months, the month of December being the highest, \$2,335,791.31. The lowest amount was in June, \$1,792,834.42.

Table No. 12—Comparative statement of accounts receivable.—The amount collectible at the end of the fiscal year 1924 was \$165,360.62 greater than at the end of the fiscal year 1923. This was principally due to increased business,

Table No. 13—Accounts payable.—The amount of bills payable by The Panama Canal at the end of the fiscal year was \$1,330,640.04. This is \$176,000 less than the amount owed at the end of the fiscal year 1923.

Table No. 14—Defense expenditures.—This table shows the individual items which were charged off as the proportion of the cost of The Panama Canal, valuable from a national defense standpoint. The amount was increased \$515,000 during the fiscal year 1924, \$400,000 of which represents the book value of the steamship *Colon*, which was sold and written out of the accounts and \$115,000 for old land settlements.

Table No. 15—Canal fixed property.—The total value of fixed property used in connection with transiting vessels is carried at \$235,684,662. No retirements were written off during the fiscal year 1924, but a few additions were made, consisting of rising stem valves, new towing locomotives, signal station, additional parking spaces, and improvements to the lighting system on the Gaillard Highway. Preliminary expenses in connection with the Alhajucla basin, amounting to \$61,950.49, were also added to this account. A large part of this represents land and other property settlements necessary to obtain possession of this area. The total amount added to the value of fixed property during the year was \$210,205.71.

Table No. 16—Canal transit equipment.—The amount invested in equipment used in transiting vessels and channel maintenance was \$4,017,642.46. During the year the dredge *Culebra* was sold to the United States Army engineering department for \$250,000. This dredge was built by the Maryland Steel Co. and delivered at the Isthmus in September, 1907, \$362,425. It is a seagoing suction dredge, twin screw. It was used in the construction of the canal and channel maintenance until the World War, when it was converted into a cattle-carrying vessel to bring cattle here from Colombia. A few years ago it was converted back into a dredge and finally sold for dredging work on the coast of California.

A number of barges carried in the accounts at approximately \$50,000 were withdrawn from service and put on sale. Grader *No. 1*, carried in the accounts at \$55,000, sank and was removed from the accounts. The total withdrawals amounted to \$380,256.33. Additions were made to the extent of \$102,918.49. Barge *No. 3* was rebuilt into a relay pump barge and set up at a value of \$50,000. An excavator was purchased for the dredging division at a cost of \$17,370. Grader machinery was installed on dredge *No. 83* at a cost of \$11,850. Two new launches, named *Helen Louise* and *Butler*, were constructed at a cost of \$12,800 for the two.

Table No. 17—Business property.—This table shows the entire investment in business activities by divisions, showing separately the amount of fixed property, equipment, material and supplies, cash, work in process (which is equivalent to accounts receivable), and undistributed business capital, which is that portion of material and supplies, cash, and accounts receivable carried in the transit accounts for account of the business units. This undistributed business capital was increased by \$150,000, representing material and supplies carried for the constructing quartermaster, consisting of lumber and other building materials. Of these business units, the electric light and power system has the largest investment, totaling \$6,500,000. The investment in the water system is a little more than \$3,000,000: quarters for white employees, \$3,500,000. The investment chargeable to other business units is shown in the first column of this table. It is on these figures that the business divisions are expected to make 3 per cent on the investment, that interest being shown in the last column of Table No. 26.

Table No. 18—Business fixed property.—A new concrete electrical storehouse was built near the Gatun Locks at an expense of approximately \$10,000 out of the depreciation reserve of the electrical division. An additional pump station was established in Miraflores Lake during the flood period last October at a cost of \$19,500. Landslides along the water main between Gamboa and Miraflores cut off the supply of water from the Chagres River, and water was temporarily

pumped from Miraflores Lake until this pump station was installed, which will remain there permanently.

The steamship *Colon* was removed from the business property account, where it had been carried at an appraised value of \$400,000. This vessel was constructed at Cramp's shipyard in Philadelphia in 1899. In 1905 it was purchased by the Isthmian Canal Commission from Ward & Co., agents for the New York & Cuba Mail Steamship Co., for \$650,000, for the purpose of carrying material and supplies and employees to the Isthmus. Its name then was *Mexico*, which in 1906 was changed to *Colon*. At the completion of the canal \$250,000 of its value was written into canal construction and from that time on it was carried in the capital account at a value of \$400,000. It was continuously operated by the Panama Railroad Co., and in February, 1924, was sold to the Alaskan Steamship Co. for the sum of \$600,000. Of this amount \$394,891.91 had been spent for reboiling and overhaul during the latter part of 1923. The balance, \$205,108.09, was covered into the Treasury as miscellaneous receipts toward the amortization of its original value. This amount is shown in Table No. 25 under the heading of "Proceeds from Government property."

The other additions and withdrawals, with the exception of one or two, do not involve any cash transactions. The total amount added to business fixed property was \$56,220.48 and the withdrawals, including the \$400,000 for the *Colon*, were \$506,148.51.

Table No. 19—Business equipment.—Outside of an item of \$26,000 for replaced automobiles, the additions to business equipment consisted of replaced tools, and under the heading of "Withdrawals" the principal items were the monthly depreciation which was written into operations. This is really a method of amortization in order to write the value of machinery and tools into operations approximately as fast as they wear out.

Table No. 20—Waterworks, sewers, and pavements in Panama and Colon.—The amount invested in waterworks, sewers, and pavements in the cities of Colon and Panama, which was reimbursable to the United States as of June 30, 1924, was \$1,893,234.52. The United States Government produces and distributes water in these two cities and collects for same, and these water rentals are used to maintain, operate, and repair the water systems in the two cities, as well as that portion of the Zone system chargeable to Panama and Colon. Out of the water rentals the United States Government also retains interest on the investment at the rate of 2 per cent per annum and amortization on the basis of 50 years from 1907. The sewers and streets are maintained out of the same water fund. If there is a deficit, bills are made against the Republic of Panama, and when there is a surplus it is arbitrarily applied in the amortization of the capital cost. The

unpaid investment in the city of Panama amounted to \$1,024,836.87 and in the city of Colon \$868,397.65. Since the contract started in 1907, approximately \$2,600,000 of the water rentals have been used for the maintenance, operation, and repairs, approximately \$900,000 to pay interest on the investment and \$785,000 have been repaid on the capital cost.

Table No. 21—Material and supplies.—This table shows the value of material and supplies on hand June 30, 1924, as compared with June 30, 1923. Considerable material was purchased during the fiscal year 1924, but it was immediately used, so that the amount on hand is only \$200,000 in excess of that last year. The reserve for inventory adjustments has been reduced approximately \$280,000.

Table No. 22—Material and supplies received and disposed of.—Material purchased and handled through the storehouses amounted to \$3,682,379.38. Last year the purchases were somewhat less than \$2,000,000. Material purchased and delivered directly to divisions without passing through the storehouses amounted to \$844,739.64, compared with \$625,588.09 last year. Material manufactured locally was taken into account at a value of \$355,426.19. The value of material issued was \$3,654,960.52, compared with \$2,978,281.21 last year. Sales amounted to \$1,017,538.79, which is approximately \$300,000 less than was sold last year.

Table No. 23—Comparative statement of material and supplies by commodities.—This table shows the classification of material and supplies carried in the storehouses under 153 classifications, and compares the stock on hand July 1, 1924, with the stock on hand July 1, 1923. The value of fuel oil on hand at the end of the fiscal year 1924 was \$86,073.27; medical stores and supplies, \$54,204.08; papers, etc., Panama Canal Press, \$90,191.88; lock spares and material, Corozal store, \$453,563.87; sand and gravel, Gamboa gravel plant, \$225,614.68.

Table No. 24—Canal transit expenses and earnings.—The gross cost of operating and maintaining The Panama Canal, including overhead, sanitation, and civil government expenses, was \$11,170,800.51, compared with \$10,308,723.06 last year. This figure includes \$655,377.50 theoretical amortization and depreciation of the canal investment. The collections for supplies and services performed by the divisions operating the canal amounted to \$2,796,895.12, compared with \$2,617,945.50 last year; and the net expense \$8,373,905.39, as compared with \$7,690,777.56 last year. Taking out the amortization and depreciation charge leaves the amount payable from the appropriation \$7,718,527.89. This does not include the funds used for capital additions and equipment mentioned in Tables Nos. 15 to 19, inclusive.

The gross expense of the office engineer was \$38,641.18 as compared with \$34,184.02 last year, but the net expense shows a large difference because of the different method followed in billing out what had previously been considered as overhead work. The office engineer billed out most of his expenses last year even to other divisions who also operate from appropriations. This has been changed so that the net expense of the office engineer, meteorology and hydrography, and surveys will remain steady; i. e., nothing will be billed out that will become an overhead expense in some other division.

The net storehouse operating expense was \$323,353.01, approximately \$10,000 less than last year, which is principally due to the larger turnover of business material, in which case the operating expense is advanced to the business divisions.

The street lighting expenses have increased from \$10,000 to \$13,600 on account of the additional lighting which has been provided on Gaillard Highway through Corozal and Fort Clayton, etc.

The charge for water for municipal purposes is shown as \$23,400, which represents the water used for flushing sewers, watering public grounds, filling the Balboa swimming pool, etc. Last year the charge was fixed at \$69,205.86, but this included a fixed charge for fire protection which was eliminated by approval of the Secretary of War. This expense, when there is any, now loses itself in the profit and loss statement of the waterworks system in Table 26.

The \$79,668.86 covering maintenance of laborers' quarters represents the difference between the cost of operating and maintaining houses for silver employees, and the amount of rent collected from this class of employees. As explained before, for economic reasons efforts are directed toward housing as many colored employees in the Zone as possible, and the rent charges and salaries paid are fixed accordingly. This maintenance item is, therefore, equivalent to additional salary for those employees who live in the Zone.

The net expenses of the marine division were considerably less than last year. This is due to an increase of approximately \$140,000 in revenues, the revenues being almost \$1,000,000. The lighthouse subdivision, which operates the salvage boat, had a number of jobs which brought in \$112,000, and the net expense of that division was approximately \$60,000 less than last year.

The net cost of operating and maintaining the locks at Gatun, Pedro Miguel, and Miraflores was \$1,500,000, as compared with \$1,136,000 last year. Most of this increase is due to the cost of overhaul at Gatun, which was considerably more than in former years, the total overhaul cost being over \$300,000. Besides this, of course, there have been increases due to the increased traffic through

the canal. A change is contemplated in the method of effecting periodic overhauls of the locks. It is now intended to overhaul Miraflores Locks in the fiscal year 1925, and in the fiscal year 1926 to make only sufficient repairs in the Pedro Miguel Locks to bring them in step with Miraflores, then overhaul the Gatun Locks in 1927, and Pedro Miguel and Miraflores together in 1929.

The expenses of maintaining Gatun Dam and Gatun Spillway showed an increase from less than \$40,000 in 1923 to nearly \$66,000 in the fiscal year 1924. This is due to the flood last October. Large quantities of rock had to be taken from Sosa Hill to strengthen the Mindi Dike and considerable local filling was done.

The amount expended in connection with damages to vessels in the locks was \$6,177.42 and for damage to vessels in the canal, \$27,981.52, a total of \$34,158.94. Of this amount only \$23,101.51 was actually paid out in cash. The balance, \$11,057.43, represents the value of repairs made by the mechanical division in cases where ships preferred to have the repairs made here at the expense of the canal rather than cash settlement and have the repairs made elsewhere. Of the cash settlements, \$14,904.05 was paid in connection with the steamship *G. Harrison Smith* damaged April 15, 1923, which was reported in last year's annual report. Besides this cash settlement, the sum of \$2,714.33 was expended on the vessel here, making a total for this one vessel of \$17,618.38. From the time the canal was opened to June 30, 1924, the canal had assumed liability and settled for damages to vessels (either by cash settlements or by repairs made at Panama Canal shops and dry docks) to the amount of \$137,046.38, of which \$40,130.12 are for accidents in the locks and \$96,916.26 for injuries in the canal outside of the locks. There are several claims pending, but the amounts are not large. It is to be expected, however, that as traffic increases the accidents will increase in proportion.

The expenses of the dredging division, under the heading of Channel Maintenance, amounted to \$2,340,973.06. Of this amount the sum of \$576,866.31 is chargeable to the removal of La Pita Point in order to facilitate the movement of vessels through Gaillard Cut.

The earnings credited to Executive offices represent a proportion of the salaries and other expenses of the various bureaus which are charged to the Panama Railroad Co. and the various business divisions of The Panama Canal for services performed for them. The earnings deducted from the gross expenses of clubs and playgrounds represent the salaries and wages of certain employees of the club-houses carried on Panama Canal rolls but which are payable from the business funds of the bureau of clubs and playgrounds which are carried separately in the collector's office.

The earnings credited to the accounting department represent a proportion of the salaries and office expenses of this department chargeable to the Panama Railroad and business divisions for services performed. This includes the salaries of whole sections of this department, like the railroad accounting bureau and the coupon accounting section which are bodily chargeable to the Panama Railroad.

The earnings credited to the purchasing bureau of the Washington office represent a charge against the business storehouses for a proportion of the cost of purchasing and inspecting material and supplies used by the business divisions. This amount was arrived at by striking a ratio between the amount of material and supplies used by canal operating divisions as compared with that used by business divisions.

The \$9,627.58 credit to posts under the heading of civil government includes a monthly collection from the United States Post Office Department for handling mails at the Isthmus, and a charge of \$200 per month against the Republic of Panama.

The \$7,000 credit to schools is for tuition charged non-residents and for receipts from the sale of school books, penalties for mutilation, etc.

The earnings under police and prisons, amounting to \$52,600, represent the salaries of policemen carried on Panama Canal rolls but charged to the Panama Railroad, etc.

Under the health department, the earnings at the Ancon and Colon Hospitals amount to \$370,000, which are for hospital fees at fixed rates, including operations and private rooms, for subsistence of patients, burial expenses, etc.

The \$15,000 credit to dispensaries represents the proceeds from the sale of prescribed drugs and medicines.

The \$125,000 revenue credited to Corozal farm and asylum is made up of a charge of \$90,000 against the Panaman Government for its patients there and \$35,000 from the sale of produce from the farm operated by employees injured in the service of the canal.

The \$29,000 credit to quarantine service is made up of \$14,000 charged for the subsistence of those quarantined, and \$15,000 for other miscellaneous services, such as transportation to and from quarantine stations, medical attention, etc.

The gross cost of sanitation, street cleaning, and garbage disposal in the cities of Panama and Colon was reduced by an earning of \$85,000 collected from the Republic of Panama. The \$47,000 credit to Zone sanitation represents charges against the Panama Railroad and other interests of the Zone for garbage disposal and other sanitary measures.

The \$180,000 credited to storehouse operating costs represents the proportion chargeable to material and supplies sold and used by the business divisions of The Panama Canal.

Under the heading of public buildings and grounds, superintendence includes the salaries and office expenses of the chief quartermaster and the \$40,000 credit shown against this expense represents the proportion chargeable to the Panama Railroad for supervision over commissaries and other railroad units and a charge to the various business divisions. The other four items under this heading represent the operations of the district quartermasters, and the earnings applied against the gross expense are collections from employees and others for quartermasters' service performed.

The earnings in the marine division are self-explanatory. The credits allowed the port captains were for miscellaneous services of the marine division. Handling lines includes the handling of lines at the terminals as well as through the locks. The revenue derived from handling lines on northbound ships through the canal is credited to Balboa, and the collections for handling lines on southbound vessels are credited to Cristobal.

Table No. 25—Canal revenues.—This table shows a comparison of the amount deposited in the treasury as miscellaneous receipts for the two fiscal years 1923 and 1924. It sets forth the remarkable increase in tolls, approximately \$6,800,000, over the previous year. The item of proceeds from the sale of Government property represents the net amount received from the sale of the S. S. *Colon*, which is explained in detail under Table No. 18. The miscellaneous item in the fiscal year 1924, amounting to \$1,822.05, is made up of two items—pay car overages, \$1.32, and the escheatment of the estate of Chas. Sackett, amounting to \$1,820.73, for which no heirs could be located. Taxes, fees and fines include \$20,000 collected by the magistrates' courts, \$8,400 by the district courts, approximately \$2,400 for fees and fines imposed by the police department impounding animals, etc., and \$25,000 for motor vehicle and other licenses.

Table No. 26—Business expenses and revenues.—This table embodies the business operations of The Panama Canal as separate and distinct from the operation and maintenance activities directly connected with the transiting of vessels. These auxiliary enterprises are financed by authority of the Panama Canal act, which provided for the repayment to the appropriation of all revenues derived from business activities, with the provision that any profit made on such business be covered into the Treasury annually as Miscellaneous Receipts.

In actual practice, this authority in the act means that The Panama Canal is authorized to use the funds appropriated for transiting

vessels, as a working fund to carry on these business activities, with the provision that it be collected back and made available as fast as it is needed for the purpose for which it was appropriated.

The electric light and power system involves the operation of the Gatun hydroelectric plant, Miraflores steam electric power plant, operation of five substations, maintenance of transmission lines, and the distribution of current and power, the details of which are found in Table No. 32. The revenues are derived from the sale of current and power. The basic rate for electric current to departments and divisions of The Panama Canal and Panama Railroad, and other departments of Government, and employees, is $1\frac{1}{2}$ cents per kilowatt-hour. The basic rate to outsiders is 4 cents per kilowatt-hour. The expenses increased considerably over last year, while the revenues are less. Last year the revenues exceeded the expenses by \$355,221.31. This year the profit was \$214,550.79, which is still \$20,000 in excess of a 3 per cent return on the investment.

Under the heading of electrical work, this division completed, during the past year, the wiring of the Gamboa penitentiary, installed the necessary ducts and cables for a new pumping station at the Darien radio station, installed the cables and equipment for the emergency water pumping station in Miraflores Lake, installed electric equipment aboard the new floating relay pump station of the dredging division, performed considerable electrical work on ocean going vessels. The working force, as well as material and supplies, are interchangeable between the electric light and power system and electrical work, and the loss shown under this head is due more to clerical methods than to actual difference between costs and bills rendered for same.

The water system involves the operation of five principal pump stations, filtration plants, maintenance of reservoirs and pipe lines for the distribution of the water throughout the Canal Zone and into the cities of Colon and Panama and the various Army posts. The details of these operations are shown in Table No. 33. The revenues represent proceeds from the sale of water. The basic rate for departments and divisions of The Panama Canal, Panama Railroad, and United States Government and employees was 15 cents per thousand gallons. The basic rate for outsiders, including water delivered to vessels using the canal, is 50 cents per thousand gallons. Over 40,000,000 gallons were delivered to vessels at Balboa and 85,000,000 to vessels at Cristobal. The net revenues of a little over \$43,000 do not cover 3 per cent on the investment, because under authority of the Secretary of War this system is not given credit for the value of water and water equipment supplied for fire protection. Last year that item, approximating \$50,000, was credited to the water system to the debit of water used for municipal

purposes in Table No. 24. Nothing is gained, however, by using appropriated funds under maintenance and operation to produce a profit to be covered in as miscellaneous receipts.

Municipal engineering work, which involved the expenditure of \$624,000, includes the operation of the Cristobal incinerator and considerable work for the Army, Navy, Panama Railroad, and Panaman Government, in addition to excavation, filling, and concrete work for the various departments and divisions of The Panama Canal which is billed out on the basis of cost plus surcharge to cover overhead and return on the investment.

The shops and dry docks did a business of almost \$3,000,000 during the year, with a net profit of \$171,737.06 compared with \$100,184.33 last year. The operating expenses included an arbitrary reserve charge of \$60,000 to replace roofs on the shop buildings, and a reserve of \$40,000 for the replacement of machinery and tools. This is money set aside out of net revenues and has the effect of reducing the profits by \$100,000. The direct profit on dry dock operations was approximately \$70,000. Included in this account, of course, are the operations of the Panama Railroad roundhouse and car shops which involve the maintenance of all Panama Railroad rolling stock. The remainder of the profit was made in the foundries, gas production plant, rolling mill, boiler shop, fitting and forge shops, etc.

Under the heading of docks, piers, and wharves the revenues are from wharfage charged vessels at Pier 6, Cristobal, and Pier 18, Balboa, both of which are owned by The Panama Canal but operated by the Panama Railroad.

The revenues from pumping fuel oil exceed the expenses by \$250,000. The basic rate for pumping fuel oil into tanks and from tanks to vessels is 4 cents per pumping, which means that The Panama Canal receives 8 cents per barrel for all the fuel oil handled at the Isthmus. Several years ago The Panama Canal was in competition with the other oil companies for supplying oil and large profits were made from the sale of oil. At present, however, The Panama Canal has no oil for sale to outsiders and fixes its prices so that it ceases to compete with the other oil companies who have tanks here and carry supplies of oil for sale to transiting vessels. The storage capacity at Balboa, including The Panama Canal tanks, is approximately 800,000 barrels, and at Mount Hope somewhat over 1,000,000 barrels. During the year approximately 14,000,000 barrels were pumped in and out by the oil-pumping plants at Balboa and Mount Hope.

The figures under the heading of business storehouses represent the value of material and supplies issued to business divisions of The Panama Canal, together with the material sold and the store-

house expenses chargeable to that material. On material issued to departments and divisions and all those entitled to Panama Canal rates, a surcharge of 10 per cent is added to cover purchase, handling, and storing expenses, and on sales to outsiders 25 per cent is added. The storehouses are primarily operated to carry stocks of material and supplies for the divisions necessary to the transiting of vessels, and therefore all the operating expenses are included in Table No. 24 and in that account credit is given for the proportion chargeable to material and supplies used in business activities.

The animal and motor transportation, motor car repair shop, building repairs and construction, and district quartermasters' supplies and services in this table, to some extent, work hand in hand, so that profits and losses from these operations to some extent are theoretical. The animal and motor transportation assumes the cost of repairs, operation, and maintenance of motor cars and derives its revenue by charging for the use of these cars on an hourly basis. The district quartermasters in turn are debited for the use of motor cars and, after adding utility services, derive their revenue from employees and others for delivering coal and kindling, handling household goods and baggage, etc. The building repair and construction division does considerable work on furniture for the district quartermasters and the district quartermasters in turn receive revenue for those services from employees and others who receive the furniture. The charges in these cases are more or less arbitrary, so that the loss of approximately \$29,000 under district quartermasters' supplies and services is more than offset by the revenues shown under the other three units mentioned.

The Panama Canal Press did a business amounting to \$260,000, approximately \$150,000 of which was derived from the manufacturing output and the balance from issues and sales of stationery and office supplies. In addition to showing a profit of \$4,373.05 this year, this unit also set aside the sum of \$5,000 out of the revenues for the replacement of printing presses.

The rent collections for gold quarters were approximately \$375,000 and exceeded the operation and maintenance expenses by \$13,000. By authority of the Secretary of War, that part of the house rent charge which was intended as amortization and interest on the investment has been used to erect some new quarters and for painting and general overhaul of the old quarters occupied. Fifteen type 17 cottages are under construction in New Cristobal.

The amount collected from occupants of silver quarters was \$241,746.21, compared with \$192,355.40 last year. The cost of operating and maintaining these silver quarters was \$79,663.86 in excess of the collections. This deficit is charged off as a canal expense under the

heading of maintenance of laborers' quarters in Table No. 24, the reasons for which are explained under that heading.

The \$500 loss shown under the heading of garage rentals is due to the fact that during the past year the garages required extensive painting and door renewals. These garages are maintained for the benefit of employees' private cars and the monthly rental rates are fixed to cover cost only.

Under the heading of land rentals, the rents collected, amounting to \$32,954.84, are \$1,860.83 short of the expenses charged to this account. This is due to the fact that the entire expense of the agronomist has been charged against these rentals. In this amount are included the rentals from agricultural licenses issued in connection with the repopulation of the Zone for farming purposes, which during the fiscal year 1924 amounted to \$5,000, representing rent on ground in excess of that allowed free prior to July 1, 1924. The rent which will be collected from these farmers during the fiscal year 1925 will be approximately \$30,000; in other words, an increase of about \$25,000 in the revenues. There are 2,562 such licenses in effect. A statement by districts is shown in Table No. 54.

Under the heading of sale of government property is included the sale of the dredge *Culebra* for \$250,000.

The total revenues from these business operations were approximately \$13,000,000 and the profits \$901,624.12 as compared with \$1,140,642.50 last fiscal year.

Table No. 27—Surplus.—Attention is directed to the remarkable increase of surplus from \$13,467,641.19 in the fiscal year 1923 to \$29,775,589.69 in the fiscal year 1924. The total profits from business operations from 1914 to date are \$3,465,835.32.

Table No. 28—Collections from gold employees.—This table shows collections by months from employees for rent and other supplies and services, a large part of which were formerly furnished free. The total amount collected from employees was \$623,162.26.

Table No. 29—Depreciation.—The total amount charged into the accounts as depreciation is now \$4,612,299.52. Of this amount, \$910,673.40 is theoretical depreciation of canal property and \$211,122.02 is theoretical interest on the depreciation fund. Removing these two items from the total above leaves \$3,490,504.10 as the amount of money which is actually in reserve for the replacement of equipment and property, the details of which are shown in this table.

Table No. 30—Reserve for extraordinary repairs.—This reserve was increased by approximately \$175,000. The total amount of cash now actually available for general overhauling of and extraordinary repairs to property and equipment is \$1,414,525.71.

Table No. 31—Reserve for gratuity.—The amount of cash in reserve for vacation pay due the employees of the four principal business divisions and the fortifications division is \$492,644.57, an increase of approximately \$70,000 over the amount in reserve last year. This is money actually collected by the business divisions through bills rendered for services performed and thereby made available for the payment of gratuity when the employees go on leave and to furnish replace labor.

Table No. 32—Electric current.—This table has been changed. Last year the unit cost per kilowatt hour was shown as \$0.007, which has now been increased to \$0.0087 by including in the cost the division and general expenses. This figure does still not include a charge for the return on the investment. The unit cost for the fiscal year 1924 was \$0.0107 on a production of 47,786,682 kilowatt hours.

Table No. 33—Water.—This table has been entirely changed from the form in which it was shown last year, so as to show the average cost of producing and distributing water on the basis of 1,000 gallons, and also showing a separation of the cost of furnishing water to the Republic of Panama and that distributed in the Canal Zone. The unit cost in the Canal Zone is 12.09 cents. The basic price for water in the Canal Zone was reduced from 15 cents per thousand gallons to 13 cents, effective July 1, 1924.

Table No. 34—Dredging.—This table has been entirely changed so as to obtain a better unit yardage cost for dredging, listing the various expenses in dipper dredge operations separate from the suction dredges, and then a combined cost and yardage unit which is approximately 40 cents per cubic yard.

Tables Nos. 35 and 36—Money orders.—The amount of money-order business done by the post offices during the fiscal year 1924 was approximately \$2,500,000.

Tables Nos. 37 and 38—Postal service revenues.—The revenue from money-order fees, stamp sales, post-office box rents, and newspaper postage was \$120,411.47. The interest on money-order funds on deposit amounted to \$22,397.25.

Table No. 39—Postal savings.—Postal savings money orders were issued to the amount of \$738,940. The amount paid was \$722,510. The amount on deposit at the end of the year was \$486,980.

Tables Nos. 40 to 43, inclusive—Panama Canal clubhouses.—Table No. 40 shows in detail the income from clubhouse operations, amounting to \$455,118.77. Table No. 41 shows the expenses of operating the clubhouses, \$442,390.25. Table No. 43 shows the current assets and liabilities, the stock of material on hand amounting to \$23,598.03, and the accounts receivable, \$10,965.25. Against this there were bills payable at the end of the year amounting to \$31,026.80. The

surplus to date, which is kept in the collector's office, amounted to \$166,670.33.

Table No. 44—Coupon books.—The total value of coupon books issued to employees and deducted from their salaries amounted to \$3,209,205, and the value of books sold for cash, \$1,333,530. In addition to these, books were issued on charge accounts to the extent of \$81,545, making a grand total of \$4,624,280. The value of coupons used by employees was \$4,638,009.25, of which amount \$4,244,624.35 was used at commissaries in exchange for goods, \$134,947.65 at club-houses, \$246,696.17 at restaurants, and the balance at the Hotels Tivoli and Washington, at the Army and Navy Y. M. C. A.'s, etc.

Tables Nos. 45 to 51, inclusive—Personal injuries.—The contents of these tables are explained in connection with the claims bureau report.

Table No. 52—Commissary purchases and sales.—This table shows a comparison of the various kinds of commissary supplies on hand at the end of the fiscal years 1923 and 1924; also the purchases and place purchased and the details of the sales. The value of goods purchased was slightly in excess of \$5,000,000 and the proceeds from the sale of supplies at wholesale and retail prices combined amounted to \$7,324,203.76. The profits from all commissary operations, including these sales and the net results from the various manufacturing plants, were \$409,248.86.

Table No. 53.—This table shows the collections from other than employees for rent for Panama Canal quarters occupied and the corresponding charges for electric current, water, and janitor service in those quarters, amounting to \$60,000.

Table No. 54.—This table shows the monthly collections of Panama Railroad real estate rentals and Panama Canal market stall rentals, Panama Railroad land rentals amounting to \$153,455.02.

Tables Nos. 55 and 55a.—These tables show by months the accounts payable vouchers registered. The total Panama Railroad vouchers for the year was \$3,758,472.75, and The Panama Canal vouchers amounted to \$4,157,276.63. Of this amount, \$2,615,824.52 was payable from trust funds and \$1,541,452.11 from appropriations.

Table No. 56.—This table shows a tabulation of inspections made by the time inspection bureau.

Table No. 57.—This table shows the number of available silver quarters by apartments and the rental value of same.

Table No. 58.—This is a tabulation of the work performed by the pay-roll section of the claims bureau.

TABLE NO. 1.—Balance sheets, June 30, 1924

TRIAL BALANCE SHEET

DEBITS		CREDITS	
Assets:		Liabilities:	
Canal fixed property	\$235,684,662.00	Canal transit and business capital.....	\$273,673,818.51
Canal equipment.....	4,017,642.46	National defense capital.....	112,618,082.12
Cash due treasury.....	209,675.87	Accounts payable.....	1,330,640.04
Cash working.....	1,131,188.67	Unclassified canal credits.....	8,873.48
Accounts receivable.....	952,207.71	Amortization.....	1,082,845.41
Business property.....	29,136,620.07	Depreciation.....	4,612,299.52
Stores.....	3,470,877.16	Repair reserves.....	1,414,525.71
United States Treasury.....	42,823,230.88	Gratuity reserves.....	492,644.57
Theoretical interest accruals.....	243,967.43	Canal revenues.....	24,681,853.89
National defense expenditures.....	112,618,082.12	Business revenues.....	12,968,777.29
Undistributed business capital (credit account) ¹	1,813,000.00	Canal surplus.....	13,467,641.19
Canal expenses.....	11,170,800.51	Business surplus.....	2,564,211.20
Business expenses.....	12,067,153.17		
Canal earnings (credit account) ¹	2,796,895.12	Total.....	448,916,212.93
Total.....	448,916,212.93		

GENERAL BALANCE SHEET

ASSETS		LIABILITIES	
Assets:		Liabilities:	
Canal fixed property	\$235,684,662.00	Canal transit and business capital.....	\$273,673,818.51
Canal equipment.....	4,017,642.46	National defense capital.....	112,618,082.12
Cash due treasury.....	209,675.87	Accounts payable.....	1,330,640.04
Cash working.....	1,131,188.67	Unclassified canal credits.....	8,873.48
Accounts receivable.....	952,207.71	Amortization.....	1,082,845.41
Business property.....	29,136,620.07	Depreciation.....	4,612,299.52
Stores.....	3,470,877.16	Repair reserves.....	1,414,525.71
United States Treasury.....	42,823,230.88	Gratuity reserves.....	492,644.57
Theoretical interest accruals.....	243,967.43	Canal surplus.....	29,775,589.69
National defense expenditures.....	112,618,082.12	Business surplus.....	3,465,835.32
Undistributed business capital (credit account) ¹	1,813,000.00		
Total.....	428,475,154.37	Total.....	428,475,154.37

¹ A credit

TABLE No. 2. Balances in appropriation and fund accounting ledger June 30, 1924

Assets		Treasury balance subject to requisition for cash	Cash	Accounts receivable	Transfers available	Storehouse stock	Total
1. Maintenance and operation		\$8,262,133.63	\$852,315.10	\$788,160.51	\$212,416.02	\$3,964,189.02	\$14,079,214.28
2. Sanitation		216,976.66	178,650.98	116,053.30	62,078.52		573,791.46
3. Civil government		84,724.62	109,868.94	5,653.18			200,246.74
4. Miscellaneous receipts			209,075.87	42,308.72	843,583.09		1,095,567.68
5. Trust funds			528,669.85				528,669.85
6. Construction and equipment		172,509.97	21,249.86				193,759.83
7. Increase of compensation, 1923		33.32					33.32
8. Increase of compensation, 1924		20.00	107.36				127.36
Total		8,736,398.20	1,900,537.96	952,207.71	1,055,999.11	4,026,207.54	16,671,410.52

Liabilities		Unliquidated encumbrances	Undistributed encumbrances	Outstanding liabilities on encumbrances	Liabilities	Transfers payable	Total
1. Maintenance and operation		\$1,699,754.11	\$3,135,126.26	\$1,308,756.82	\$1,138,202.70	\$843,583.09	\$14,079,214.28
2. Sanitation		274,278.41	19,053.22	48,909.46	101,312.96	98,200.09	573,791.46
3. Civil government		78,782.08	1,644.18	1,431.05	74,198.62	37,265.44	200,246.74
4. Miscellaneous receipts					1,095,567.68		1,095,567.68
5. Trust funds		99,883.58		528,669.85			528,669.85
6. Construction and equipment		33.32			16,925.76	76,950.49	193,759.83
7. Increase of compensation, 1923		127.36					33.32
8. Increase of compensation, 1924							127.36
Total		2,152,859.46	3,153,535.30	1,359,097.33	2,951,877.57	1,055,999.11	16,671,410.52

Detail of cash by fiscal officers				Total
Disbursing clerk	Paymaster	Collector		
\$86,094.92	\$724,952.30	\$41,267.88		\$852,315.10
13,446.24	125,594.11	36,610.63		178,650.98
3,245.77	101,244.72	3,378.45		209,075.87
87,024.07	3,215.48	438,400.30		528,669.85
21,249.86				21,249.86
107.36				107.36
211,168.22	953,036.61	731,333.13		1,900,537.96

1 Debit

TABLE NO. 3.—Statement of appropriations by the Congress

Canal construction appropriation to June 30, 1923.....		\$357,069,143.31
An act to provide for the construction of a canal connecting the waters of the Atlantic and Pacific Oceans, approved June 28, 1902.....	\$50,000,000.00	
An act to provide for the temporary government of the Canal Zone at Panama, the protection of the canal works, and for other purposes, approved Apr. 28, 1904.....	10,000,000.00	
Deficiency act, Apr. 27, 1904.....	35.00	
Public act, Dec. 21, 1905.....	11,000,000.00	
Deficiency act, Feb. 27, 1906.....	5,990,786.00	
Sundry civil act, June 30, 1906.....	25,456,415.08	
Sundry civil act, Mar. 4, 1907.....	27,161,367.50	
Deficiency act, Feb. 15, 1908.....	12,178,900.00	
Sundry civil act, May 27, 1908.....	29,187,000.00	
Deficiency act, Mar. 4, 1909.....	5,458,000.00	
Sundry civil act, Mar. 4, 1909.....	33,638,000.00	
Sundry civil act, June 25, 1910.....	37,855,000.00	
Deficiency act, Feb. 25, 1910.....	76,000.00	
Private act, June 17, 1910—Elizabeth G. Martin.....	1,200.00	
Sundry civil act, Mar. 4, 1911.....	45,560,000.00	
Private Act 174, Jan. 13, 1911—Marcellus Troxell.....	1,500.00	
Private Act 196, Feb. 13, 1911—W. L. Miles.....	1,704.18	
Private Act 248, Mar. 2, 1911—Charles A. Caswell.....	1,056.00	
Sundry civil act, Aug. 24, 1912.....	28,980,000.00	
Private Act 32, July 3, 1912—Heirs of Robert S. Gill.....	2,520.00	
Private Act 34, July 3, 1912—Douglas B. Thompson.....	1,500.00	
Private Act 56, July 10, 1912—Alessandro Comba.....	500.00	
Act Aug. 26, 1912, judgment, Court of Claims.....	196.45	
Sundry civil act, June 23, 1913.....	16,265,393.00	
Private Act 125, Feb. 7, 1913:		
Peter Wiggington.....	500.00	
Raymond R. Ridenour.....	500.00	
Heirs of Charles E. Stump.....	1,500.00	
Private acts of Feb. 18, 1913:		
Parents of Edward Maher.....	1,980.00	
Oscar F. Laekey.....	1,500.00	
Pedro Sanchez.....	2,000.00	
John H. Cole.....	1,951.38	
Robert Coggon.....	1,500.00	
Act Mar. 4, 1913, judgment, Court of Claims.....	900.00	
Act Apr. 6, 1914, judgment, United States court.....	9,489.76	
Sundry civil act, Aug. 1, 1914.....	20,718,000.00	
Deficiency act, Apr. 6, 1914.....	2,450,000.00	
Public Act 188, Aug. 25, 1914, presenting steam launch <i>Louise</i> to French Government.....	6,000.00	
Private Act 66, July 17, 1914—Mary E. Goodley.....	1,000.00	
Act July 29, 1914, judgment, Court of Claims.....	905.38	
Sundry civil act Mar. 3, 1915.....	10,500,000.00	
Private Act 195, Feb. 27, 1915—John Burrows.....	1,433.33	
Private Act 220, Mar. 3, 1915—F. W. Theodore Schroeter.....	1,397.66	
Private Act 222, Mar. 3, 1915—L. V. Thomas.....	1,680.00	
Sundry civil act July 1, 1916.....	9,750,000.00	
Private Act 66, Aug. 4, 1916—Joseph A. Buckholdt.....	3,000.00	
Private Act 85, Aug. 8, 1916—Olaf Nelson.....	1,290.00	
Act Feb. 28, 1916, judgment, Court of Claims.....	1,093.00	
Act Sept. 8, 1916.....	2,537.29	
Sundry civil act, June 12, 1917.....	2,755,000.00	
Deficiency act for war expenses, Mar. 28, 1918.....	593,190.00	
Sundry civil act, July 19, 1919.....	729,898.00	
Deficiency act, Mar. 1, 1921.....	714,007.39	
Less amounts returned to surplus fund fiscal year 1921—		
Panama Canal fund.....	130,852.65	
Canal connecting Atlantic and Pacific Oceans.....	27,989.66	
Total to surplus fund.....		158,842.31
Canal construction appropriation to June 30, 1924.....		386,910,301.00

Annual payments to Republic of Panama.....	\$3,250,000.00
Act of—	
Mar. 4, 1913.....	\$250,000.00
Apr. 6, 1914.....	250,000.00
Jan. 25, 1915.....	250,000.00
Feb. 28, 1916.....	250,000.00
July 1, 1916.....	250,000.00
Mar. 3, 1917.....	250,000.00
Apr. 15, 1918.....	250,000.00
Apr. 15, 1919.....	250,000.00
June 4, 1920.....	250,000.00
Mar. 2, 1921.....	250,000.00
June 1, 1922.....	250,000.00
Jan. 8, 1923.....	250,000.00
May 28, 1924.....	250,000.00
Operation and maintenance (detailed below).....	73,086,901.58
Total appropriations.....	463,247,202.58

	Maintenance and operation	Sanitation, Canal Zone	Civil Government, Panama Canal and Canal Zone	Increase of compensation, Panama Canal	Total
Act of—					
Mar. 3, 1915.....	\$5,200,000.00	\$700,000.00	\$540,000.00	-----	\$6,440,000.00
July 1, 1916.....	5,750,000.00	700,000.00	600,000.00	-----	7,050,000.00
June 13, 1917.....	9,000,000.00	700,000.00	700,000.00	-----	10,400,000.00
July 12, 1917.....	-----	-----	-----	\$10,006.22	10,006.22
June 4, 1918.....	-----	150,000.00	-----	-----	150,000.00
July 1, 1918.....	9,000,000.00	900,000.00	750,000.00	-----	10,650,000.00
July 3, 1918.....	-----	-----	-----	16,000.00	16,000.00
Mar. 1, 1919.....	-----	-----	-----	32,592.66	32,592.66
July 19, 1919.....	7,547,939.00	850,000.00	702,000.00	-----	9,099,939.00
Nov. 4, 1919.....	-----	-----	150,000.00	-----	150,000.00
May 29, 1920.....	-----	-----	-----	34,500.00	34,500.00
June 5, 1920.....	7,531,851.00	850,000.00	900,000.00	-----	9,281,851.00
Mar. 1, 1921.....	-----	-----	24,670.00	-----	24,670.00
Mar. 4, 1921.....	7,250,000.00	850,000.00	900,000.00	21,500.00	9,021,500.00
June 30, 1922.....	2,659,434.00	525,000.00	930,000.00	16,800.00	4,131,234.00
Mar. 2, 1923.....	5,079,683.00	575,000.00	930,000.00	17,520.00	6,602,203.00
	59,018,907.00	6,800,000.00	7,126,670.60	148,918.88	73,094,495.88
Less amount transferred to surplus fund.....	-----	-----	-----	7,594.30	7,594.30
Total.....	59,018,907.00	6,800,000.00	7,126,670.00	141,324.58	73,086,901.58
Appropriation for fiscal year 1925 (act of June 7, 1924).....	5,748,160.00	580,000.00	912,000.00	-----	7,240,160.00

TABLE NO. 4.—Status of authorized bond issue

Authorized bond issue.....	\$375,200,400.00
Appropriated for Canal construction.....	\$386,910,301.00
Less amount exempted by law:	
Colliers <i>Ulysses</i> and <i>Achilles</i>	\$1,985,552.29
Coal barges <i>Mamei</i> and <i>Darien</i>	2,295,746.57
Dock No. 6, Cristobal.....	2,093,190.00
Equipping colliers <i>Ulysses</i> and <i>Achilles</i>	250,000.00
Painting tanks, colliers <i>Ulysses</i> and <i>Achilles</i>	44,279.76
Repairs to steamships, <i>Ancon</i> and <i>Cristobal</i>	720,000.00
Expended for operation and maintenance of Canal.....	4,289,159.00
Stock of material and supplies for operation and maintenance of Canal.....	2,225,000.00
	13,902,927.62
	373,007,373.38
Balance.....	2,193,526.62
Appraised value American Legation building in the city of Panama, exempt from charge to bond issue, act of July 1, 1916.....	22,256.00
Balance available for appropriation within limit of cost of canal and authorized bond issue.....	2,215,782.62

TABLE NO. 5.—Cash receipts and disbursements for account of the United States, fiscal year ended June 30, 1924.

CASH RECEIPTS

	United States Treasurer	Disbursing clerk, Washington, D. C.	Paymaster, Canal Zone	Collector, Canal Zone	Total
On hand July 1, 1923, by appropriations and funds:					
Maintenance and operation, Panama Canal	\$8,498,865.79	\$20,748.10	\$1,433,176.17	\$90,703.09	\$10,243,493.06
Sanitation, Canal Zone, Panama Canal	268,091.15	21,941.25	173,831.43	9,532.29	473,396.12
Civil government, Panama Canal and Canal Zone	64,969.81	3,110.95	103,342.19	1,691.44	173,114.39
Canal connecting Atlantic and Pacific Oceans	27,989.66	-----	-----	-----	27,989.66
Construction and equipment, Panama Canal	272,509.97	21,249.85	-----	-----	293,759.83
Panama Canal fund	127,940.99	2,911.66	-----	-----	130,852.65
Increase of compensation, 1922	615.65	-----	-----	-----	615.65
Increase of compensation, 1923	-----	33.32	-----	-----	33.32
Aviation, Navy, 1922	80,000.00	-----	-----	-----	80,000.00
Miscellaneous receipts, United States revenues	-----	-----	-----	405,994.10	405,994.10
Security deposits	-----	90,506.78	2,273.05	585,679.09	678,458.92
Total	9,340,983.02	360,501.92	1,712,622.84	1,093,599.92	12,507,707.70
Appropriations for fiscal year 1924:					
Maintenance and operation, Panama Canal	5,079,683.00	-----	-----	-----	5,079,683.00
Sanitation, Canal Zone, Panama Canal	575,000.00	-----	-----	-----	575,000.00
Civil government, Panama Canal and Canal Zone	930,000.00	-----	-----	-----	930,000.00
Increase of compensation, 1924 (Washington office)	17,520.00	-----	-----	-----	17,520.00
Total	6,602,203.00	-----	-----	-----	6,602,203.00
Transfers between fiscal officers:					
Maintenance and operation, Panama Canal	888,736.19	4,006,000.00	8,646,167.38	-----	13,540,843.57
Sanitation, Canal Zone, Panama Canal	53,566.03	116,000.00	937,024.66	-----	1,106,590.69
Civil government, Panama Canal and Canal Zone	6,171.20	30,000.00	858,568.62	-----	894,739.82
Panama Canal fund	2,911.66	-----	-----	-----	2,911.66
Increase in compensation, 1923	33.32	-----	-----	-----	33.32
Increase in compensation, 1924	-----	17,500.00	-----	-----	17,500.00
Total	951,418.40	4,169,500.00	10,441,700.66	-----	15,562,619.06
Collections:					
Maintenance and operation, Panama Canal	416,192.79	329,031.72	71.93	7,530,573.22	8,275,869.66
Sanitation, Canal Zone, Panama Canal	-----	40,229.39	20.73	564,837.48	605,087.60
Civil government, Panama Canal and Canal Zone	-----	6,000.00	-----	62,425.63	68,425.63
Miscellaneous receipts, United States revenues	-----	-----	1.32	24,796,206.69	24,796,208.01
Security deposits	-----	412,110.13	2,593,774.40	30,063,355.28	33,069,239.81
Total	416,192.79	787,371.24	2,593,868.38	63,017,398.30	66,814,830.71
Total cash debits	17,310,797.21	5,317,373.16	14,748,191.88	64,110,998.22	101,487,360.47

TABLE NO. 5.—Cash receipts and disbursements for account of the United States, fiscal year ended June 30, 1924—Continued

CASH DISBURSEMENTS

	United States Treasurer	Disbursing clerk, Washington, D. C.	Paymaster, Canal Zone	Collector, Canal Zone	Total
Covered into United States Treasury:					
Maintenance and operation (business profits, 1923).....	\$1,081,986.89				\$1,081,986.89
Canal connecting Atlantic and Pacific Oceans.....	27,989.66				27,989.66
Panama Canal fund.....	130,852.65				130,852.65
Increase in compensation, 1922.....	615.65				615.65
Miscellaneous receipts, United States revenues.....			\$1.32	\$24,992,524.92	24,992,526.24
Total.....	1,241,444.85		1.32	24,992,524.92	26,233,971.09
Transfers between fiscal officers:					
Maintenance and operation, Panama Canal.....	5,506,000.00	\$454,835.23		7,580,008.34	13,540,843.57
Sanitation, Canal Zone, Panama Canal.....	516,000.00	52,831.55		537,759.14	1,106,590.69
Civil government, Panama Canal and Canal Zone.....	830,000.00	6,001.20		58,738.62	894,739.82
Panama Canal fund.....		2,911.66			2,911.66
Increase of compensation, 1923.....		33.32			33.32
Increase of compensation, 1924.....	17,500.00				17,500.00
Total.....	6,869,500.00	516,612.96		8,176,506.10	15,562,619.06
Disbursements:					
Maintenance and operation, Panama Canal.....	33,357.25	4,014,849.67	9,354,403.18		13,402,610.10
Sanitation, Canal Zone, Panama Canal.....	163,680.52	111,892.85	982,282.71		1,257,856.08
Civil government, Panama Canal and Canal Zone.....	86,416.39	29,863.98	860,666.09		976,946.46
Construction and equipment, Panama Canal.....	100,000.00				100,000.00
Increase of compensation, 1924.....		17,392.64			17,392.64
Aviation Navy, 1922.....	80,000.00				80,000.00
Security deposits.....		415,592.84	2,592,801.97	30,210,634.07	33,219,028.88
Total.....	463,454.16	4,589,591.98	13,790,153.95	30,210,634.07	49,053,834.16
On hand June 30, 1924:					
Maintenance and operation, Panama Canal.....	8,262,133.63	86,094.92	724,952.30	41,267.88	9,114,448.73
Sanitation, Canal Zone, Panama Canal.....	216,976.66	13,446.24	128,594.11	36,610.63	395,627.64
Civil government, Panama Canal and Canal Zone.....	84,724.62	3,245.77	101,244.72	5,378.45	194,593.56
Construction and equipment, Panama Canal.....	172,509.97	21,249.56			193,759.53
Increase of compensation, 1923.....	33.32				33.32
Increase of compensation, 1924.....	20.00	107.36			127.36
Miscellaneous receipts, United States revenues.....				209,675.87	209,675.87
Security deposits.....		87,024.07	3,245.48	438,400.30	528,669.85
Total.....	8,736,398.20	211,168.22	958,036.61	731,333.13	10,636,936.16
Total cash credits.....	17,310,797.21	5,317,373.16	14,748,191.88	64,110,998.22	101,487,360.47

TABLE No. 6.—Payments made by paymaster, fiscal year ended June 30, 1924

Month	Panama Canal payments			Panama Railroad payments			Grand total
	Gold rolls	Silver rolls	Vouchers	Pay rolls	Vouchers	Total	
1923							
July.....	\$454,011.80	\$302,636.45	\$167,726.85	\$205,009.27	\$262,109.52	\$457,118.79	\$1,381,493.89
August.....	435,078.45	280,865.45	91,190.63	208,640.68	273,112.52	481,753.20	1,298,788.03
September.....	469,473.43	289,389.61	206,578.11	207,943.87	310,322.14	518,266.01	1,480,707.16
October.....	483,586.85	283,081.73	115,915.25	224,441.24	256,246.45	480,687.69	1,306,171.52
November.....	487,458.19	301,986.25	21,077.41	203,962.01	316,980.89	522,948.90	1,333,460.75
December.....	484,207.70	299,708.31	209,972.39	218,814.01	215,865.76	434,679.77	1,428,568.17
1924							
January.....	506,186.31	312,681.58	97,925.73	227,179.80	319,779.30	546,959.10	1,463,751.72
February.....	502,241.75	311,603.25	126,655.13	226,107.31	331,586.43	557,693.74	1,498,138.89
March.....	521,805.47	356,173.24	117,634.78	233,632.20	341,476.61	575,108.81	1,850,222.30
April.....	499,071.67	351,657.75	112,146.04	214,901.22	402,390.72	617,291.94	1,879,867.40
May.....	530,891.42	310,282.85	189,374.34	221,919.01	279,017.82	500,937.43	1,631,686.04
June.....	545,721.92	313,717.11	118,748.66	255,734.30	335,629.54	591,363.84	1,869,520.63
Total.....	5,918,833.06	3,703,083.58	1,575,435.34	2,650,285.82	3,634,523.70	6,284,809.52	17,482,161.60

TABLE No. 7.—Receipts and disbursements by collector, Canal Zone funds, fiscal year ended June 30, 1924

RECEIPTS

Month	Clubhouse funds	Trust funds	Postal-savings funds	Money-order funds	Interest	Treasury savings certificates	Total
1923							
July.....	\$30,794.29	\$2,195.06	-----	\$85,099.36	\$2,545.99	\$512.50	\$121,147.20
August.....	29,093.25	188.32	-----	96,947.50	1,017.99	20.50	127,297.56
September.....	29,073.05	6,404.36	-----	105,127.38	997.21	348.50	141,956.53
October.....	28,835.50	-----	-----	125,971.27	5,562.11	-----	160,368.88
November.....	27,257.03	103.25	-----	141,237.55	865.33	-----	169,493.16
December.....	28,405.58	933.20	-----	125,495.28	875.14	-----	155,769.20
1924							
January.....	29,465.83	1,643.63	-----	166,086.37	2,355.07	-----	199,550.90
February.....	26,193.68	1,340.31	-----	127,682.10	645.17	23,940.00	180,051.26
March.....	25,105.04	933.98	-----	125,184.65	886.87	4,620.00	157,730.54
April.....	34,077.05	219.25	-----	109,347.53	4,436.68	4,780.00	152,850.51
May.....	27,259.97	278.75	-----	113,133.07	304.41	10,360.00	131,936.20
June.....	26,601.38	286.86	-----	116,042.54	953.25	11,360.00	155,240.23
Total receipts.....	342,161.85	14,520.97	-----	1,437,304.60	22,397.25	56,941.50	1,873,326.17
Cash on hand, July 1, 1923.....	137,327.38	9,081.40	\$181.00	775,137.46	4,168.38	5,207.00	981,102.62
	479,489.23	23,602.37	181.00	2,212,442.06	26,565.63	62,148.50	2,804,428.79

DISBURSEMENTS

1923							
July.....	\$24,977.81	\$1,066.30	-----	\$139,603.83	\$843.82	\$5,207.00	\$171,778.76
August.....	27,779.01	3,194.10	-----	89,014.50	640.78	512.50	112,445.89
September.....	27,204.75	7,123.34	-----	171,000.00	471.94	20.50	211,822.03
October.....	26,725.69	465.14	-----	177,000.00	693.28	348.50	204,733.47
November.....	23,307.48	-----	-----	76,321.66	350.63	-----	100,844.25
December.....	23,633.01	1,559.70	-----	103,300.00	618.23	-----	123,170.99
1924							
January.....	25,575.14	1,081.63	-----	130,500.00	758.38	-----	157,915.15
February.....	30,644.94	594.34	-----	175,225.00	1,012.10	-----	207,386.38
March.....	25,511.12	710.00	-----	132,000.00	1,115.63	23,940.00	183,306.65
April.....	24,184.67	860.00	-----	107,000.00	1,483.83	5,620.00	139,148.50
May.....	29,869.92	30.45	-----	10,644.19	1,282.85	4,780.00	46,007.41
June.....	33,610.90	712.11	-----	215,500.00	10,886.47	10,600.00	271,369.48
Total disbursements.....	323,104.44	17,314.11	-----	1,594,398.52	20,623.39	51,688.50	1,986,528.96
Cash on hand, June 30, 1924.....	156,384.79	6,288.26	181.00	688,043.54	5,942.24	11,670.00	807,809.83
	479,489.23	23,602.37	181.00	2,212,442.06	26,565.63	62,148.50	2,804,428.79

TABLE NO. 8.—Statement of collections repaid to appropriations and to individuals and companies, and collections deposited to miscellaneous receipts during the fiscal year ended June 30, 1924—Continued

Sanitation:		Civil government:	
Health certificates.....	\$22,974.68	Civil government.....	\$46.75
Health department (refund of vacation pay).....	914.00	Civil affairs.....	24.17
General accounts.....	6,406.50	Customs.....	397.50
Chief health office.....	230.97	Postal service.....	4,357.05
Ancon Hospital fees.....	231,406.19	School tuition.....	5,782.56
Ancon Hospital mess.....	16,622.69	Sales of school books.....	589.00
Ancon Hospital burials.....	4,486.35	Sales of school materials.....	258.66
Ancon Hospital miscellaneous.....	5,629.78	Fire protection.....	65.13
Colon Hospital fees.....	33,682.91	Police and prisons.....	50,794.55
Colon Hospital mess.....	3,504.97	District court.....	7.75
Colon Hospital burials.....	706.44	District attorney.....	192.50
Line dispensaries.....	15,055.75		
Corozal farm produce.....	18,802.20	Total, civil government.....	62,425.63
Corozal farm pasturage.....	15.10		
Corozal Asylum fees.....	68,453.31	Miscellaneous receipts:	
Corozal Asylum miscellaneous.....	2,883.24	Public works, Panama, unclassified credits.....	27,891.96
Palo Seco Leper Asylum.....	14,085.00	Public works, Colon, unclassified credits.....	86,462.16
Santo Tomas Hospital.....	429.33	Tolls.....	21,291,708.07
Quarantine services.....	6.25	Taxes, fees, fines, Canal Zone....	55,931.76
Quarantine subsistence.....	13,940.25	Postal receipts.....	119,388.83
Quarantine miscellaneous.....	15,326.65	Interest on bank balances.....	10,000.00
Sanitation, Panama.....	9,226.26	Proceeds from Government property.....	205,108.09
Street cleaning and garbage collection, Panama.....	35,133.67	Miscellaneous.....	1,820.73
Sanitation, Colon.....	2,029.41		
Street cleaning and garbage collection, Colon.....	27,463.13	Total, miscellaneous receipts.....	24,798,311.60
Sanitation, Canal Zone.....	15,422.45		
Total, sanitation.....	564,837.48	Individuals and companies, Panama Railroad Co.....	55.06

RECAPITULATION

Maintenance and operation, Panama Canal.....	\$7,530,573.22
Sanitation, Canal Zone, Panama Canal.....	564,837.48
Civil government, Panama Canal and Canal Zone.....	62,425.63
Total repayment to appropriations.....	8,157,836.33
Miscellaneous receipts.....	24,798,311.60
Individuals and companies.....	55.06
Grand total.....	32,956,202.99

TABLE No. 9.—Statement of transactions in the collector's special deposit account during the fiscal year ended June 30, 1924

IN THE UNITED STATES

Month	Deposits	Panama Canal bills applied	Payments to individuals and companies	Refunds
1923				
July.....	\$317, 914. 80	\$268, 195. 63	\$28, 810. 44	\$7, 281. 70
August.....	266, 591. 17	266, 538. 48	9, 810. 34	3, 473. 10
September.....	177, 154. 76	205, 284. 83	18, 361. 37	4, 252. 28
October.....	167, 868. 64	151, 475. 71	1, 885. 02	2, 558. 81
November.....	203, 859. 06	177, 563. 48	613. 52	2, 549. 35
December.....	208, 482. 16	217, 242. 18	3, 249. 33	4, 440. 33
1924				
January.....	752, 115. 58	166, 425. 88	856. 26	33, 112. 82
February.....	184, 141. 19	155, 639. 57	536. 64	4, 772. 24
March.....	147, 421. 09	759, 034. 97	651. 34	6, 247. 04
April.....	160, 354. 63	141, 121. 48	696. 72	4, 665. 51
May.....	142, 479. 80	144, 476. 24	7, 207. 80	7, 901. 98
June.....	130, 283. 43	94, 816. 43	3, 591. 67	4, 292. 90
Total.....	2, 858, 666. 31	2, 747, 814. 88	76, 270. 45	85, 548. 06

ON THE ISTHMUS

1923				
July.....	\$2, 109, 716. 44	\$2, 046, 454. 53	\$272, 362. 46	\$831. 68
August.....	2, 100, 173. 27	1, 906, 886. 21	213, 306. 71	286. 73
September.....	2, 113, 280. 18	1, 840, 071. 03	230, 737. 50	3, 464. 48
October.....	2, 332, 287. 57	1, 963, 461. 85	263, 027. 47	912. 54
November.....	2, 131, 485. 68	2, 006, 280. 36	224, 687. 34	1, 149. 34
December.....	2, 702, 514. 88	2, 381, 380. 52	279, 170. 82	2, 344. 20
1924				
January.....	2, 632, 885. 43	2, 203, 980. 25	273, 194. 83	809. 19
February.....	2, 038, 425. 71	1, 932, 050. 79	310, 173. 12	2, 489. 28
March.....	2, 276, 245. 81	2, 024, 701. 78	264, 531. 15	499. 12
April.....	2, 259, 508. 50	1, 956, 691. 68	263, 280. 99	1, 793. 15
May.....	2, 235, 415. 33	1, 976, 696. 84	320, 990. 46	956. 42
June.....	2, 272, 690. 17	1, 831, 291. 44	298, 172. 92	1, 881. 50
Total.....	27, 204, 688. 97	24, 069, 947. 28	3, 213, 635. 77	17, 417. 63

RECAPITULATION

	In the United States		On the Isthmus	
On hand July 1, 1923.....	\$103, 426. 64		\$482, 252. 45	
Deposits during year.....	2, 858, 666. 31		27, 204, 688. 97	
Panama Canal bills applied.....		\$2, 747, 814. 88		\$24, 069, 947. 28
Payments to individuals and companies.....		76, 270. 45		3, 213, 635. 77
Refunds.....		85, 548. 06		17, 417. 63
On hand June 30, 1924.....		52, 459. 56		385, 940. 74
Total.....	2, 962, 092. 95	2, 962, 092. 95	27, 686, 941. 42	27, 686, 941. 42

TABLE NO. 10.—Statement of audited pay rolls on Isthmus during fiscal year 1924

	Total	Salaries	Wages
Maintenance and operation:			
Canal transit divisions—			
Executive department—			
Executive	\$21,788.62	\$21,788.62	
Record	78,547.31	78,547.31	
Personnel	36,357.92	36,357.92	
Correspondence	42,532.08	42,532.08	
Property	30,406.83	30,406.83	
Statistics	20,218.96	20,218.96	
General	38,851.38	38,851.38	
Shipping commissioner	32,619.80	32,619.80	
Total, executive department	301,322.90	301,322.90	
Clubs and playgrounds	132,799.76	121,070.73	\$11,729.03
Accounting department—			
Accounting	359,207.39	359,207.39	
Paymaster	38,384.97	38,384.97	
Collector	41,561.12	41,561.12	
Total, accounting department	439,153.48	439,153.48	
Office engineer	33,916.91	33,114.41	802.50
Meteorology and hydrography	29,918.41	27,884.18	2,034.23
Surveys	34,528.83	23,151.08	11,377.75
Supply department—			
Quartermaster—			
Office	42,889.64	42,889.64	
District quartermasters	214,587.92	131,223.24	83,364.68
Storehouses	229,681.98	168,321.13	61,360.85
Total quartermaster	487,159.54	342,434.01	144,725.53
Marine division—			
Superintendent's office	11,677.69	11,677.69	
Port captain—			
Balboa	461,433.76	205,979.03	255,454.73
Cristobal	412,252.61	220,642.43	191,610.18
Lighthouse subdivision	135,322.37	41,009.79	94,222.58
Total, marine division	1,020,686.43	479,398.94	541,287.49
Lock operation—			
Atlantic	465,869.19	116,296.55	349,572.64
Pacific	584,817.72	175,643.12	409,174.60
Total, lock operation	1,050,686.91	291,939.67	758,747.24
Gatun Dam and backfill	37,096.33	10,626.20	26,470.13
Dredging division	1,043,581.92	249,438.60	794,143.32
Total, transit divisions	4,610,851.42	2,319,534.20	2,291,317.22
Canal business divisions—			
Electrical	517,891.77	203,651.50	314,240.27
Municipal engineering	406,825.04	191,407.22	305,417.82
Mechanical division—			
Balboa shops	1,302,919.26	181,666.17	1,121,253.09
Cristobal shops	314,636.17	31,947.33	282,688.84
Total, mechanical division	1,617,555.43	213,613.50	1,403,941.93
Supply Department, Quartermaster—			
Fuel-oil plants	113,241.05	29,123.93	84,117.12
Animal and motor transportation	121,808.08	11,584.74	110,223.34
Motor car repair shop	64,306.13	11,741.70	52,564.43
Building repairs and construction	376,000.58	77,351.59	298,648.99
Panama Canal Press	69,876.33	24,184.96	45,691.37
Farm bureau and lands rented	13,525.46	5,819.58	7,705.88
Hotel Tivoli	54,410.57	27,791.94	26,618.63
Total, quartermaster	813,168.20	187,598.44	625,569.76
Fortifications	61,113.88	29,851.65	31,262.23
Total, business divisions	3,506,554.32	826,122.31	2,680,432.01

TABLE NO. 10.—Statement of audited pay rolls on Isthmus during fiscal year 1924—
Continued

	Total	Salaries	Wages
Maintenance and operation—Continued.			
Injury and death (act Sept. 7, 1916).....	\$28,362.94	\$1,554.66	\$26,808.28
Total, maintenance and operation.....	8,145,768.68	3,147,211.17	4,998,557.51
Civil Government:			
Civil affairs and customs.....	38,178.32	38,178.32	
Posts.....	103,160.10	103,160.10	
Schools.....	176,117.51	176,117.51	
Fire protection.....	95,426.08	95,426.08	
Police and prisons.....	307,079.72	307,079.72	
District courts.....	20,909.11	20,909.11	
District attorney.....	11,347.49	11,347.49	
Marshal.....	7,455.68	7,455.68	
Magistrates' courts.....	13,627.19	13,627.19	
Total, civil government.....	773,301.20	773,301.20	
Sanitation:			
Office.....	12,662.14	12,662.14	
Aneon Hospital.....	327,735.01	268,987.59	58,747.42
Colon Hospital.....	45,991.96	39,228.50	6,763.46
Line dispensaries.....	36,045.76	34,765.26	1,280.50
Corozal farm.....	12,855.03	3,701.25	9,153.78
Corozal Asylum.....	52,898.15	40,764.18	12,133.97
Palo Seco Leper Asylum.....	16,937.59	6,826.88	10,110.71
Santo Tomas Hospital.....	13,920.38	13,920.38	
Quarantine—			
Office.....	539.80	539.80	
Balboa.....	22,085.91	18,769.85	3,325.06
Cristobal.....	23,547.33	22,018.36	1,528.97
Total, quarantine.....	46,173.04	41,319.01	4,854.03
Health Office—			
Panama.....	107,711.19	34,641.55	73,069.64
Colon.....	57,391.02	24,766.24	32,624.78
Sanitation, Zone.....	62,542.21	20,278.97	42,263.24
Total, sanitation.....	792,863.48	541,861.95	251,001.53
Grand total.....	9,711,933.36	4,462,374.32	5,249,559.04

TABLE NO. 11.—Statement of accounts receivable registered during fiscal year
ended June 30, 1924

Month	Number of bills registered	Total	Against the Panama Railroad	Against other departments of the United States	Commercial	Tolls	Repay to appropriations
1923							
July.....	2,914	\$2,638,034.71	\$143,949.39	\$68,589.61	\$301,066.14	\$2,124,429.57	\$513,605.14
August.....	3,055	2,588,167.95	143,194.80	155,840.63	238,450.40	2,050,682.12	537,485.83
September.....	2,756	2,404,211.12	151,849.80	116,003.17	233,465.89	1,902,892.26	501,318.86
October.....	2,817	2,461,402.28	159,275.10	87,582.12	225,633.29	1,988,911.77	472,490.51
November.....	2,803	2,805,903.44	153,387.53	370,035.63	224,252.67	2,058,227.61	747,675.83
December.....	3,077	3,043,653.63	192,043.01	118,705.26	397,114.05	2,335,791.31	707,862.32
1924							
January.....	3,265	2,860,522.82	178,768.20	205,900.60	258,961.21	2,216,892.81	643,630.01
February.....	2,780	3,068,204.94	221,937.55	78,086.61	803,998.74	1,964,182.04	1,104,022.90
March.....	2,993	2,571,034.99	223,412.64	79,972.42	270,489.90	1,997,160.03	573,874.96
April.....	2,750	2,458,680.34	182,731.23	86,756.57	285,336.57	1,903,855.97	554,824.37
May.....	2,960	2,459,824.16	189,252.41	83,323.96	231,399.63	1,955,848.16	503,976.00
June.....	2,654	2,319,526.96	300,319.27	92,375.36	233,997.91	1,792,834.42	526,692.54
Total.....	34,824	31,679,167.34	2,140,120.93	1,543,171.94	3,704,166.40	24,291,708.07	7,387,459.27
Totals for year ended June 30, 1923.....	31,615	23,815,292.55	1,803,006.31	1,453,813.81	3,049,993.73	17,508,478.70	6,306,813.85

TABLE NO. 12.—Comparative statement of accounts receivable

	Fiscal year 1923	Fiscal year 1924
Audited bills.....	\$743,323.29	\$885,015.57
Hospital certificates.....	22,033.55	22,804.57
Injury compensation.....	1,716.81	1,798.95
Cement bags returned to contractor.....	2,283.26	2,232.46
Water rental deficit bills.....	17,498.68	40,356.16
Commissary coupon books honored by the Panama Canal.....	18.50	-----
Total.....	786,847.09	952,207.71

¹ Credit.

TABLE NO. 13.—Comparative statement of accounts payable

	Fiscal year 1923	Fiscal year 1924
United States invoices and ocean freight.....	\$313,131.45	\$326,143.51
Isthmus vouchers.....	181,860.60	148,374.16
Current pay rolls.....	759,745.01	824,658.25
Unpaid salaries and wages.....	253,048.87	57,774.82
Drums, carboys, and reels.....	12,072.13	126,760.76
Treasury settlements in suspense.....	992.68	450.06
Total.....	1,506,706.48	1,330,640.04

¹ Debit.

TABLE NO. 14.—Defense capital expenditures to June 30, 1924

Prism excavation:		Preparatory work, Balboa terminals	\$1,808,921.65
Gatun to sea.....	\$237,482.88	Panama water supply system.....	40,697.58
Gatun to Pedro Miguel.....	2,141,358.67	Other Zone water supply systems..	155,190.03
Pedro Miguel to sea.....	388,049.34	Zone sewage system.....	298,284.69
Gatun locks.....	1,203,953.05	Zone roadways.....	610,956.00
Pedro Miguel locks.....	638,599.30	Fluviographs.....	3,427.02
Miraflores locks.....	867,655.23	Permanent townsite:	
Gatun spillway.....	99,317.86	Ancon-Balboa.....	596,596.73
Miraflores spillway and east dam...	89,133.95	LaBoea.....	123,206.13
Gatun-Mindi levee.....	2,813.01	Red Tank.....	2,614.43
Gatun dam.....	196,462.60	Pedro Miguel.....	96,797.08
Trinidad River dam.....	1,328.47	Gatun.....	1,776.56
Pedro Miguel dam.....	8,633.66	Cristobal.....	355,847.29
Miraflores west dam.....	23,195.78	Sanitary fills.....	636,732.11
LaBoea locks and dams (abandoned).....	748,054.48	Sanitary ditches.....	199,706.52
Colon east breakwater.....	3,771,111.74	Playgrounds.....	13,902.41
Colon west breakwater.....	85,506.42	Administration building, Balboa	
Naos Island breakwater.....	20,312.78	Heights.....	306,211.51
Aids to navigation.....	93,388.54	District court and law department	
Purchase, Toro Point light.....	15,000.00	office, Ancon.....	65,446.39
Floating caisson.....	20,872.15	Shops and store office.....	238,553.94
Power transmission system.....	10,055.46	Terminal office building, Balboa....	3,225.42
Coaling station:		Shops:	
Balboa.....	2,284,568.35	Balboa.....	3,795,260.32
Cristobal.....	3,179,797.59	Cristobal.....	164,147.93
Dry docks:		Storehouses.....	475,934.74
Balboa.....	3,376,647.49	Hotels and mess halls.....	242,909.87
Cristobal.....	23,475.51	Quarters:	
Docks, piers, and wharves:		Gold.....	1,351,269.07
Balboa.....	1,590,160.35	Silver.....	269,685.74
Cristobal.....	1,033,984.61	Miscellaneous buildings.....	543,700.28
Entrance basin, Balboa.....	489,480.39	Ancon Hospital.....	435,325.80
Inner harbor:		Colon Hospital.....	63,876.96
Balboa.....	3,265,207.04	Dispensaries.....	40,303.97
Cristobal.....	237,101.43	Asylums.....	128,506.16
		Quarantine stations.....	40,129.43

TABLE NO. 14.—Defense capital expenditures to June 30, 1924—Continued

Storehouse, health.....	\$2,547.15	Concession from Republic of Panama.....	\$10,000,000.00
Balboa incinerator.....	100,000.00	Relocation of Panama R. R.....	9,800,626.46
Miscellaneous buildings, health.....	129,824.94	Presentation of launch <i>Louise</i> to French Government.....	13,500.00
Schoolhouses.....	49,227.23	Canal Protection, 1917-18.....	25,236.79
Post offices.....	26,987.62	Equipment and property transferred to and from other departments of the Government.....	1,970,877.33
Courthouses, police, and fire stations, etc.....	50,963.50	Construction equipment.....	3,020,090.65
Canal construction and flooded areas.....	991,707.06	Construction material and supplies.....	2,225,000.00
Auxiliary works and buildings.....	146,258.94	Loans to Panama R. R. Co.....	3,247,332.11
Depopulation of Canal Zone.....	2,336,889.63		
Joint land commission expenses.....	356,006.61		
Purchase from New Panama Canal Co.....	38,717,335.97		
Investment Panama R. R. stock.....	155,818.24	Total.....	112,618,082.12

TABLE NO. 15.—Details of canal fixed property, fiscal year 1924

	July 1, 1923	Additions	June 30, 1924
Channels:			
Gatun to sea.....	\$11,636,700.00		\$11,636,700.00
Gatun to Pedro Miguel.....	104,926,542.00		104,926,542.00
Pedro Miguel to sea.....	18,032,612.00		18,032,612.00
Locks:			
Gatun.....	34,848,254.12		
Rising stem valves.....		\$30,800.81	34,879,054.93
Pedro Miguel.....	15,362,860.75		
Rising stem valves.....		13,475.35	15,376,336.10
Miraflores.....	22,529,910.29		
Towing locomotives.....		47,220.94	
Rising stem valves.....		19,892.19	22,597,053.42
Spillways:			
Gatun.....	3,982,199.00		3,982,199.00
Miraflores.....	1,231,256.00		1,231,256.00
Floating caisson.....	326,996.00		326,996.00
Dams:			
Alhajuela.....		61,950.49	61,950.49
Gatun.....	9,626,678.00		9,626,678.00
Gatun-Mindi levee.....	137,822.00		137,822.00
Trinidad River.....	65,057.00		65,057.00
Pedro Miguel.....	423,070.00		423,070.00
Miraflores.....	1,136,594.00		1,136,594.00
Breakwaters:			
Colón-West.....	4,189,810.00		4,189,810.00
Naos Island.....	995,337.00		995,337.00
Aids to navigation:			
Signal station.....	829,251.63	3,569.18	832,820.81
Roads, streets, and sidewalks:			
Parking spaces.....	991,600.01	11,075.76	1,002,675.77
Storm sewers.....	200,000.00		200,000.00
Street-lighting system.....	90,490.00		
Lighting on Gaillard Highway.....		8,746.44	99,236.44
Office buildings:			
Administration.....	918,636.00		918,636.00
Terminal office, Balboa.....	77,409.00		77,409.00
Storehouses.....	300,000.00		300,000.00
Hydrographic structures.....	11,772.00		11,772.00
Health department buildings:			
Aneón Hospital.....	1,305,975.00		1,305,975.00
Colón Hospital.....	191,630.00		191,630.00
Dispensaries.....	120,910.00		120,910.00
Asylums.....	128,471.49		128,471.49
Quarantine stations.....	40,129.00		40,129.00
Other health department buildings.....	58,507.00		58,507.00
Cristobal incinerator.....	75,000.00		
Installation.....		13,474.55	88,474.55
Civil government:			
Schoolhouses.....	443,044.00		443,044.00
Post offices.....	8,995.00		8,995.00
Fire stations.....	21,644.00		21,644.00
Police stations and prisons.....	19,870.00		19,870.00
Courthouses.....	74,896.00		74,896.00
Clubs and playgrounds.....	114,498.00		114,498.00
Total.....	235,474,456.29	210,205.71	235,684,662.00

TABLE NO. 16.—Detail of canal transit equipment

	July 1, 1923	Additions	With- drawals	June 30, 1924
Floating equipment:				
Tugs.....	\$790, 213. 73			\$790, 213. 73
Supply boats.....	51, 544. 48			51, 544. 48
Launches.....	171, 237. 64			
Mary B., new engine.....		\$3, 450. 00		
Helen Louise, built.....		9, 365. 11		
Butler, rebuilt.....		3, 500. 00		
Aspinwall, new engine.....		462. 76		
Lirio, sunk.....			\$2, 400. 37	
No. 8, surveyed for sale.....			500. 00	
Goodwill, surveyed for sale.....			6, 850. 00	178, 265. 14
Dredges.....	1, 424, 666. 60			
No. 83, machinery.....		11, 850. 00		
Culebra, sold.....			250, 000. 00	1, 186, 516. 60
Barges.....	1, 018, 182. 86			
No. 96, renewals.....		2, 100. 00		
No. 170, renewals.....		2, 500. 00		
No. 103, surveyed for sale.....			7, 804. 04	
No. 104, surveyed for sale.....			7, 804. 04	
No. 105, surveyed for sale.....			7, 804. 04	
No. 107, surveyed for sale.....			10, 000. 00	
No. 109, surveyed for sale.....			7, 804. 04	
No. 102, surveyed for sale.....			7, 804. 04	
No. 220, adjustment.....			300. 00	
No. 3, transferred.....			7, 650. 00	965, 812. 66
Floating cranes.....	656, 792. 45			656, 792. 45
Crane boat.....	30, 000. 00			30, 000. 00
Graders.....	83, 690. 30			
No. 1, sunk.....			55, 000. 00	28, 690. 30
Drill barge.....	15, 000. 00			15, 000. 00
Compressor barge.....	20, 848. 00			20, 848. 00
Coal hoist barge.....	2, 112. 00			2, 112. 00
Relay pump barge— Rebuilt from barge No. 3.....		50, 000. 00		50, 000. 00
Other equipment— Road rollers.....	19, 256. 00			
No. 7, surveyed for sale.....			2, 875. 00	
No. 8, surveyed for sale.....			2, 595. 00	13, 786. 00
Automobiles.....	1, 951. 23			
No. 713, transfer.....		700. 00		2, 651. 23
Excavators— No. 1, purchased.....		17, 370. 00		17, 370. 00
Salvage section— Machinery and tools.....	9, 485. 01	1, 620. 62		
Depreciation applied.....			3, 065. 76	8, 039. 87
Total.....	4, 294, 980. 30	102, 918. 49	380, 256. 33	4, 017, 642. 46

TABLE No. 17.—Business property by divisions

	Total	Fixed property	Equip-ment	Stores	Cash	Work in process	Suspense	Undis-tributed business capital
Electric light and power system.....	\$6,466,045.70	\$6,277,573.85	\$8,997.62	\$9,500.32			1 \$26.09	\$170,000.00
Electric work.....	124,824.29		19,612.35	15,047.02		\$24,942.04	222.88	65,000.00
Telephone and telegraph work.....	12,851.56		6,321.79	6,529.77				125,000.00
Water system.....	3,142,314.40	2,933,484.03	25,219.44	58,610.66			1.63	95,000.00
Municipal engineering work.....	177,437.25	1,469,266.45	33,374.64	13,483.55		46,165.66	1 10,586.60	
Public works, Panama.....		1 444,429.58						
Repayments.....								
Balance.....	1,024,836.87	1,024,836.87						
Public works, Colon.....		1 249,502.71						
Repayments.....		1 381,103.06						
Balance.....	868,397.65	868,397.65						
Shops and drydocks.....	1,447,883.32	256,300.00	302,061.74	33,438.55		343,753.61	2,089.59	450,000.00
Steamships.....	1,000,000.00	1,000,000.00						
Docks, wharves, and piers.....	2,968,200.25	2,368,200.25						
Coaling plants.....	300,000.00	300,000.00						
Collars and coal barges.....	3,629,232.00	3,629,232.00						
Fuel-oil plants.....	1,278,975.74	1,077,828.38	6,771.46	86,073.27		28,302.43		80,000.00
Business storerooms.....	807,458.01	300,000.00	230,401.35	2,650.56		4,807.45		500,000.00
Animal and motor transportation.....	289,763.38	14,285.00	13,607.07	4,574.52			77.23	45,000.00
Motor-car repair shop.....	47,814.91	16,633.32	9,146.57	3,001.99				13,000.00
Building repairs and construction.....	364,895.27	11,690.00	19,611.86	90,191.88		106,333.01	1 15,276.30	250,000.00
Panama Canal Press.....	131,931.31					7,127.57		15,000.00
Gold quarters.....	3,428,150.71	3,428,150.71						
Silver quarters.....	616,906.00	616,906.00						
Garages.....	83,524.76	83,524.76						
Boathouses.....	4,000.00	4,000.00						
Hotel Tivoli.....	254,616.83	161,258.13	73,934.11	4,735.11		8,695.83	1 1,811.31	5,000.00
Restaurants.....	228,770.16	198,350.00	30,420.16					
Hotel Aspinwall.....	9,555.06		2,200.86					
Lands rented.....	2,260.86							
Sand and gravel.....	225,614.08			225,614.68				
Nautical charts and publications.....	379.43			1,933.50			19.87	1 1,578.91
Fortifications.....	1 20.74						1 20.74	
Total business property.....	29,136,620.07	25,370,852.06	851,296.08	555,390.38	2,804.96	570,187.50	1 26,910.91	1,813,000.00

1 Credit.

TABLE No. 17.—*Business property by divisions—Continued.*

UNDISTRIBUTED BUSINESS CAPITAL BY DIVISIONS

Division	Accounts receivable	Working cash	Stores	Total
Electric light and power system.....	\$50,000.00	\$20,000.00	\$100,000.00	\$170,000.00
Electric work.....	5,000.00	10,000.00	50,000.00	65,000.00
Water system.....	45,000.00	30,000.00	50,000.00	125,000.00
Municipal engineering work.....	25,000.00	20,000.00	50,000.00	95,000.00
Shops and dry docks.....	100,000.00	100,000.00	250,000.00	450,000.00
Fuel-oil plants.....	75,000.00	5,000.00	.....	80,000.00
Business storehouse.....	250,000.00	.....	250,000.00	500,000.00
Animal and motor transportation.....	15,000.00	10,000.00	20,000.00	45,000.00
Motor-car repair shop.....	.....	3,000.00	10,000.00	13,000.00
Building repairs and construction.....	25,000.00	25,000.00	200,000.00	250,000.00
Panama Canal Press.....	10,000.00	5,000.00	.....	15,000.00
Hotel Tivoli.....	1,000.00	4,000.00	.....	5,000.00
Total.....	601,000.00	232,000.00	980,000.00	1,813,000.00

TABLE No. 18.—*Business fixed property, fiscal year ended June 30, 1924*

	Balance July 1, 1923	Additions	Withdrawals	Balance June 30, 1924
Hydroelectric plant.....	\$1,669,265.12	.....	.....	\$1,669,265.12
Miraflores steam plant.....	308,270.31	.....	.....	308,270.31
Substations.....	1,841,045.18	.....	.....	.....
Electrical storehouse, Gatun.....	.....	\$10,319.39	.....	.....
Depreciation applied.....	.....	.....	\$10,319.39	1,841,045.18
Transmission system.....	1,355,733.38	.....	.....	1,355,733.38
Distribution lines.....	1,103,259.86	.....	.....	1,103,259.86
Total electrical division.....	6,277,573.85	10,319.39	10,319.39	6,277,573.85
Panama water system.....	1,760,062.67	.....	.....	.....
Miraflores Lake pump station.....	.....	19,500.00	.....	1,779,562.67
Colon water system.....	585,642.89	.....	.....	585,642.89
Zone water system.....	568,279.37	.....	.....	568,279.37
Total municipal engineering division.....	2,913,984.93	19,500.00	.....	2,933,484.93
Waterworks and sewers, Panama.....	876,353.22	.....	.....	876,353.22
Pavements.....	592,913.23	.....	.....	592,913.23
Total public works, Panama.....	1,469,266.45	.....	.....	1,469,266.45
Less repayments.....	413,724.98	.....	30,704.60	414,429.58
Balance.....	1,055,541.47	.....	30,704.60	1,024,836.87
Waterworks and sewers, Colon.....	623,883.68	.....	.....	623,883.68
Pavements.....	625,619.03	.....	.....	625,619.03
Total public works, Colon.....	1,249,502.71	.....	.....	1,249,502.71
Less repayments.....	342,679.48	.....	38,425.58	381,105.06
Balance.....	906,823.23	.....	38,425.58	868,397.65
Dry dock, Cristobal.....	50,000.00	.....	.....	50,000.00
Roundhouse, Balboa.....	111,500.00	.....	.....	111,500.00
Car and paint shops, Balboa.....	95,000.00	.....	.....	95,000.00
Total shops and dry docks.....	256,500.00	.....	.....	256,500.00
Steamships:				
Colon.....	400,000.00	.....	.....	.....
Sold.....	.....	.....	400,000.00	.....
Panama.....	400,000.00	.....	.....	400,000.00
Ancon.....	600,000.00	.....	.....	600,000.00
Cristobal.....	600,000.00	.....	.....	600,000.00
Total steamships.....	2,000,000.00	.....	400,000.00	1,600,000.00
Pier 18, Balboa.....	1,168,200.26	.....	.....	1,168,200.26
Pier 6, Cristobal.....	1,200,000.00	.....	.....	1,200,000.00
Total docks, wharves, and piers.....	2,368,200.26	.....	.....	2,368,200.26
Coaling plant, Cristobal.....	500,000.00	.....	.....	500,000.00

TABLE NO. 18.—*Business fixed property, fiscal year ended June 30, 1924—Con.*

	Balance July 1, 1923	Additions	Withdrawals	Balance June 30, 1924
Colliers.....	\$2 029, 232.00			\$2,029, 232.00
Coal barges.....	1, 600, 000.00			1, 600, 000.00
Total colliers and coal barges.....	3, 629, 232.00			3, 629, 232.00
Fuel-oil plant, Balboa.....	458, 860.58			458, 860.58
Fuel-oil plant, Cristobal.....	618, 968.00			618, 968.00
Total fuel-oil plants.....	1, 077, 828.58			1, 077, 828.58
Business storhouses.....	300, 000.00			300, 000.00
Animal and motor transportation.....	18, 132.00			
From public garages.....		\$1, 998.00		
To motor car repair shop.....			\$5, 845.00	14, 285.00
Motor car repair shop.....	19, 864.00			
From animal and motor transportation.....		5, 845.00		
Addition to building 5063, Cristobal.....		412.32		
To building repairs and construction.....			9, 488.00	16, 633.32
Building repairs and construction.....	5, 922.35			
Addition to paint and plumbing shop.....		126.50		
From motor car repair shop.....		9, 488.00		
To building repairs and construction equip- ment.....			3, 846.85	11, 690.00
Gold quarters.....	3, 432, 286.00			
Addition to house 403, Ancon.....		964.71		
House 65, Gatun, demolished.....			200.00	
House 505, Corozal, to United States Army.....			3, 500.00	
House 514, Ancon, demolished.....			1, 400.00	3, 428, 150.71
Silver quarters.....	616, 381.00			
Adjustment house 914, La Boca.....		825.00		
Sale house 14, Gamboa.....			300.00	616, 906.00
Garages.....	78, 902.29			
Additional garages.....		6, 741.56		
To animal and motor transportation.....			1, 998.00	
Adjustment of construction cost 142.....			121.09	83, 524.76
Boathouses.....	4, 000.00			4, 000.00
Hotel Tivoli.....	161, 258.13			161, 258.13
Restaurants.....	198, 350.00			198, 350.00
Grand total business property.....	25, 820, 780.09	56, 220.48	506, 148.51	25, 370, 852.06

TABLE NO. 19.—*Canal business equipment*

	Balance July 1, 1923	Additions	Withdrawals	Balance June 30, 1924
Electric light and power system:				
Machinery and tools.....	\$6, 994.58	\$2, 303.17	\$303.54	
Depreciation applied.....			877.31	\$8, 116.90
Automobiles.....	880.72			880.72
Electric work:				
Machinery and tools.....	14, 116.74	2, 184.13		
Depreciation applied.....			1, 720.29	14, 580.58
Automobiles.....	3, 822.27	1, 209.50		5, 031.77
Telephone and telegraph work:				
Machinery and tools.....	6, 422.96	744.47	86.46	
Depreciation applied.....			759.18	6, 321.79
Water system:				
Machinery and tools.....	23, 372.05	10, 182.77		
Depreciation applied.....			8, 335.38	23, 219.44
Municipal engineering work:				
Machinery and tools.....	24, 105.32	12, 110.12	244.56	
Depreciation applied.....			8, 850.32	27, 120.56
Automobiles.....	6, 254.08			6, 254.08
Shops and dry docks:				
Machinery and tools.....	384, 508.24			
Depreciation applied.....			22, 446.50	362, 061.74
Fuel-oil plants:				
Machinery and tools.....	4, 351.27	4, 995.08	175.00	
Depreciation applied.....			2, 399.89	6, 771.46
Animal and motor transportation:				
Machinery and tools.....	959.86	3, 230.55	667.58	
Depreciation applied.....			564.16	2, 958.67
Automobiles.....	220, 159.75	26, 621.57	22, 695.27	224, 086.05
Mules.....	3, 356.63			3, 356.63

TABLE NO. 19.—*Canal business equipment—Continued*

	Balance July 1, 1923	Additions	Withdrawals	Balance June 30, 1924
Motor car repair shop:				
Machinery and tools.....	\$8,121.24	\$7,790.38	\$80.04	
Depreciation applied.....			2,224.51	\$13,607.07
Building repair and construction:				
Machinery and tools.....	881.61	10,986.90	67.66	
Depreciation applied.....			2,654.28	9,146.57
Panama Canal Press:				
Machinery and tools.....	21,514.64	603.98		
Depreciation applied.....			2,506.76	19,611.86
Hotel Tivoli:				
Machinery and tools.....	62,535.93	18,444.32	299.46	
Depreciation applied.....			6,746.68	73,934.11
Restaurants:				
Machinery and tools.....	33,380.13	231.15		
Depreciation applied.....			3,191.12	30,420.16
Hotel Aspinwall:				
Machinery and tools.....	10,970.23		400.00	
Depreciation applied.....			1,015.17	9,555.06
Lands rented:				
Machinery and tools.....	307.46	1,542.11		
Depreciation applied.....			675.47	1,174.10
Mules.....	1,086.76			1,086.76
Total.....	838,102.47	103,180.20	89,986.59	851,296.08

TABLE NO. 20.—*Status of public works in cities of Panama and Colon, June 30, 1924*

	Total	Panama	Colon
Construction cost:			
Waterworks and sewers.....	\$1,515,431.85	\$891,548.17	\$623,883.68
Pavements.....	1,203,337.31	577,718.28	625,619.03
Total.....	2,718,769.16	1,469,266.45	1,249,502.71
Maintenance, operation, and repairs, including proportion of Zone system.....	2,606,726.99	1,487,662.31	1,119,064.68
Interest at 2 per cent per annum:			
Waterworks and sewers.....	584,152.51	210,153.56	173,998.95
Pavements.....	318,028.57	168,833.83	149,194.74
Zone system.....	190,700.42	128,855.14	67,845.28
Total.....	898,881.50	507,842.52	391,038.97
Total payable from water rentals.....	6,224,377.65	3,464,771.29	2,759,606.36
Water rentals and deficit payments applied to—			
Maintenance, operation, and repairs.....	2,606,726.99	1,487,662.31	1,119,064.68
Interest.....	898,881.50	507,842.52	391,038.97
Proportion of capital cost.....	785,178.48	404,073.42	381,105.06
Total.....	4,290,786.97	2,399,578.26	1,891,208.71
Collections to be applied from unpaid deficit bills to capital costs.....	40,356.16	40,356.16	
Capital cost reimbursable June 30, 1924 (in addition to unpaid deficit bills):			
Waterworks and sewers.....	1,058,225.12	618,009.50	440,215.62
Pavements.....	835,009.40	406,827.37	428,182.03
Total.....	1,893,234.52	1,024,836.87	868,397.65
Total payable from water rentals.....	6,224,377.65	3,464,771.29	2,759,606.36

TABLE No. 24.—Statement of canal earnings, expenses, and net expenses

	Fiscal year 1924		Net canal expenses
	Canal expenses	Earnings	
Executive department:			
Executive offices.....	\$317,608.58	\$110,614.29	\$206,994.29
Cables and radiograms.....	2,917.89	2,498.37	419.52
Shipping commissioner.....	41,117.43	-----	41,117.43
Canal record.....	14,564.69	145.21	14,419.48
Land office.....	2,405.70	-----	2,405.70
Legal services.....	383.74	-----	383.74
Railroad motor cars.....	1,868.56	-----	1,868.56
Clubs and playgrounds.....	173,318.43	70,668.43	102,650.00
Total.....	554,185.02	183,926.30	370,258.72
Accounting department:			
Accounting office.....	385,587.17	221,807.17	163,780.00
Paymaster's office.....	44,950.55	27,546.00	17,404.55
Collector's office.....	46,587.80	29,212.50	17,375.30
Total.....	477,125.52	278,565.67	198,559.85
Washington office:			
Chief of office.....	48,833.40	36.26	48,797.14
Purchasing bureau.....	160,479.62	40,723.18	119,756.44
Assistant auditor's office.....	27,527.76	-----	27,527.76
Disbursing clerk's office.....	7,861.92	-----	7,861.92
Total.....	244,702.70	40,759.44	203,943.26
Civil government:			
Civil affairs.....	15,999.54	24.17	15,975.37
Customs.....	27,778.11	397.50	27,380.61
Posts.....	177,813.26	9,627.58	168,185.68
Schools.....	224,114.38	7,063.76	217,050.62
Fire protection.....	114,997.81	169.13	114,828.68
Police and prisons.....	365,622.12	52,592.22	313,029.90
District court.....	26,476.70	7.75	26,468.95
District attorney.....	13,869.00	102.50	13,766.50
Marshal.....	9,410.61	-----	9,410.61
Magistrates' courts.....	15,222.27	-----	15,222.27
Total.....	991,303.80	69,984.61	921,319.19
Health department:			
Chief health office.....	22,946.98	967.68	21,979.30
Ancon Hospital.....	573,179.82	322,328.23	250,851.59
Colon Hospital.....	95,951.22	47,681.88	48,269.34
Dispensaries.....	59,387.16	15,145.13	44,242.03
Corozal Farm and Asylum.....	151,638.18	124,800.45	26,837.73
Palo Seco Leper Asylum.....	42,393.09	15,888.00	26,505.09
Santo Tomas Hospital.....	14,735.55	469.33	14,266.22
Medical storehouse.....	6,910.45	-----	6,910.45
Quarantine service.....	72,184.79	29,188.86	42,995.93
Sanitation, Panama.....	61,417.24	9,907.81	51,509.43
Street cleaning and garbage collection, Panama.....	68,844.63	38,332.81	30,511.82
Sanitation, Colon.....	26,335.39	2,536.26	23,799.13
Street cleaning and garbage collection, Colon.....	59,943.99	34,391.76	25,552.23
Sanitation, Zone.....	112,729.89	47,031.27	65,698.62
Total.....	1,368,598.38	688,669.47	679,928.91
Office engineer.....	38,641.18	31,338.04	7,303.14
Meteorology and hydrography.....	41,047.23	824.79	40,222.44
Surveys.....	38,272.48	7,221.01	31,051.47
Storehouses, general:			
Balboa storehouse.....	365,611.43	149,580.83	216,030.60
Administration building storehouse.....	6,151.89	-----	6,151.89
Paraiso storehouse.....	28,504.86	4,000.00	24,504.86
Cristobal storehouse.....	102,922.18	26,256.52	76,665.66
Total.....	503,190.36	179,837.35	323,353.01
Public buildings and grounds:			
Superintendence.....	47,179.57	40,813.41	6,366.16
Balboa.....	216,983.17	106,540.02	110,443.15
Pedro Miguel.....	43,214.11	35,092.14	8,121.97
Gatun.....	31,572.16	22,691.24	8,880.92
Cristobal.....	64,988.66	37,893.38	27,095.28
Total.....	403,937.67	243,030.19	160,907.48
Street lighting.....	13,659.29	-----	13,659.29
Water for municipal purposes.....	23,400.00	-----	23,400.00

TABLE No. 24.—Statement of canal earnings, expenses, and net expenses—Contd.

	Fiscal year 1924		Net canal expenses
	Canal expenses	Earnings	
Roads, streets, and sidewalks.....	\$101,092.20		\$101,092.20
Storm sewers.....	15,591.86		15,591.86
Miscellaneous general expenses:			
Tracks and equipment maintenance.....	36,481.62		36,481.62
Recruiting and repatriating employees.....	29,173.85		29,173.85
Transportation, employees on Isthmus.....	120,000.00		120,000.00
Compensation, injured employees.....	1,000.00		1,000.00
Maintenance laborers' quarters.....	79,668.86		79,668.86
Total.....	266,324.33		266,324.33
Marine division:			
Marine superintendent.....	11,308.65		11,308.65
Port captain—			
Balboa.....	113,693.82	\$7,268.24	106,425.58
Cristobal.....	54,215.56	1,600.53	52,615.03
Board of admeasurement.....	45,953.74	3,215.00	42,738.74
Board of local inspectors.....	4,190.46	2,987.80	1,202.66
Pilots—			
Balboa.....	143,118.20	88,881.73	54,236.47
Cristobal.....	164,722.93	171,904.30	¹ 7,181.37
Tugs and launches—			
Balboa.....	211,148.96	191,355.54	19,793.42
Cristobal.....	216,107.23	218,339.53	¹ 2,232.30
Handling lines—			
Balboa.....	100,877.62	102,998.91	¹ 2,121.29
Cristobal.....	88,559.46	99,044.00	¹ 10,484.54
Lighthouse subdivision.....	275,020.27	112,192.74	162,827.53
Total.....	1,428,916.90	999,788.32	429,128.58
Lock operation and maintenance:			
Gatun Locks—			
Superintendence.....	39,653.46		
Operation.....	269,516.97		
Maintenance.....	436,932.17		
Total, Gatun Locks.....	746,102.60	2,982.38	743,120.22
Pedro Miguel Locks—			
Superintendence.....	22,153.38		
Operation.....	218,543.44		
Maintenance.....	92,595.55		
Total, Pedro Miguel Locks.....	333,292.37	2,301.67	330,990.70
Miraflores Locks—			
Superintendence.....	27,020.95		
Operation.....	261,653.88		
Maintenance.....	124,320.24		
Total, Miraflores Locks.....	412,995.07		412,995.07
Miraflores spillway.....	3,298.29		3,298.29
Corozal store (locks).....	9,844.98		9,844.98
Total, locks.....	1,505,533.31	5,284.05	1,500,249.26
Gatun Dam, maintenance.....	56,593.61	9,049.78	47,543.83
Gatun spillway.....	9,559.07		9,559.07
Damage to vessels in locks.....	6,177.42		6,177.42
Damage to vessels in canal.....	27,981.52		27,981.52
Channel maintenance:			
Atlantic entrance.....	10,603.36		
Gaillard Cut.....	2,014,950.88		
Miraflores Lake.....	12.56		
Pacific entrance.....	122,254.31		
Cristobal Harbor.....	1,090.37		
Balboa Harbor.....	97,485.22		
Removal floating obstructions.....	29,765.10		
Floating derricks, maintenance.....	66,085.89		
Dredging division work.....	57,341.47		
Total.....	2,399,589.16	58,616.10	2,340,973.06
Total.....	10,515,423.01	2,796,895.12	7,718,527.89
Amortization.....	350,000.00		350,000.00
Depreciation.....	305,377.50		305,377.50
Grand total.....	11,170,800.51	2,796,895.12	8,373,905.39

¹ Earnings exceeded expenses.

TABLE NO. 25.—Detail of canal transit revenues

	Fiscal year 1923	Fiscal year 1924
Tolls.....	\$17,507,630.52	\$24,289,603.16
Taxes, fees, fines, Canal Zone.....	45,951.58	55,931.76
Postal receipts.....	118,260.19	119,388.83
Interest on bank balances.....	20,000.00	10,000.00
Proceeds from government property.....		205,108.09
Miscellaneous.....	1.77	1,822.05
Total.....	17,691,844.06	24,681,853.89

TABLE NO. 26.—Statement of business expenses, revenues, and profit and loss, fiscal year 1924

	Fiscal year 1924		Profit or loss	Fixed capital charge 3 per cent per annum
	Expenses	Revenues		
Electric light and power system.....	\$509,563.10	\$724,113.89	\$214,550.79	\$193,976.08
Electrical work.....	254,277.57	245,354.09	¹ 8,923.48	3,581.28
Telephone, telegraph, and signal system.....	207,145.98	208,972.97	1,826.99	370.27
Water system.....	530,045.32	573,209.76	43,164.44	74,053.29
Municipal engineering work.....	623,732.29	656,627.68	32,895.39	7,776.78
Public works, Panama.....	188,638.74	225,530.86	² 34,892.12	34,892.12
Public works, Colon.....	112,753.66	135,902.57	² 23,148.91	23,148.91
Shops and dry docks.....	2,780,125.31	2,951,862.37	171,737.06	46,200.54
Docks, wharves and piers.....	50,497.64	76,047.36	25,549.72	71,046.00
Fuel oil plants:				
Handling fuel oil.....	305,454.28	556,376.95	250,922.67	-----
Fuel oil sales.....	503,352.68	507,497.60	4,144.92	-----
Tank rentals.....		8,126.66	8,126.66	-----
Total.....	808,806.96	1,072,001.21	263,194.25	37,682.33
Business storehouses.....	3,006,371.42	3,036,301.29	29,929.87	27,536.12
Animal and motor transportation.....	324,438.06	366,222.82	41,784.76	8,777.62
Motor car repair shop.....	133,114.69	136,664.08	3,549.39	1,329.80
Building repairs and construction.....	846,467.42	882,924.70	36,457.28	6,667.05
Panama Canal Press.....	256,464.96	260,838.01	4,373.05	4,146.87
Quarters, gold.....	361,257.24	374,304.65	13,047.41	102,948.34
Quarters, silver.....	241,746.21	241,746.21	-----	18,518.28
Garages.....	17,665.87	17,165.89	¹ 499.98	2,457.36
Boathouses.....	643.07	631.15	¹ 11.92	120.00
District quartermaster supplies and services.....	194,837.58	165,900.85	¹ 28,936.73	-----
Hotel Tivoli.....	205,572.20	198,535.57	¹ 7,036.63	7,318.83
Restaurants.....	10,782.51	8,170.00	¹ 2,612.51	7,201.48
Building rentals.....	6,870.18	11,717.95	4,847.77	-----
Land rentals.....	34,815.67	32,954.84	¹ 1,860.83	-----
Equipment rentals.....		11.15	11.15	-----
Market rentals.....	350.45	2,346.91	1,996.46	-----
Sand and gravel.....	23,817.93	26,053.30	2,235.37	7,027.75
Sale of government property.....	254,467.75	255,722.41	1,314.66	-----
Nautical charts and publications.....	1,422.39	2,421.75	999.36	11.75
Fortifications division.....	80,521.00	80,521.00	-----	-----
Grand total.....	12,067,153.17	12,968,777.29	³ 901,624.12	686,788.85

¹ Loss.² Figured at 2 per cent in accordance with contract.

³ Profits on public works, Panama and Colon, amounting to \$58,041.03, have been included in quarterly remittances to the United States Treasurer covering interest and amortization collections from the Republic of Panama. The balance of the \$901,624.12 net profits above, after deducting the \$58,041.03 already remitted, which balance amounts to \$843,583.09, will be immediately covered into the United States Treasury as miscellaneous receipts, United States revenues, in accordance with regulations.

TABLE No. 27.—Comparison of expenses, revenues, and surplus to date

CANAL TRANSIT OPERATION

	Tolls	Taxes, licenses, fees, fines, postal receipts, etc.	Total transit revenues	Net canal transit expenses	Net revenues
1914	\$14,618.68		\$14,618.68	\$166,030.91	¹ \$151,412.23
1915	4,343,383.69		4,343,383.69	4,123,128.09	220,255.60
1916	2,599,830.42	\$158,711.96	2,558,542.38	6,999,750.15	¹ 4,441,207.77
1917	5,631,781.66	176,617.04	5,808,398.70	6,788,047.60	¹ 979,648.90
1918	6,264,765.71	147,077.57	6,411,843.28	5,920,342.94	491,500.34
1919	6,156,118.95	197,898.03	6,354,016.98	6,112,194.77	241,822.21
1920	8,493,082.56	442,789.01	8,935,871.57	6,548,272.43	2,387,599.14
1921	11,261,919.31	778,197.39	12,040,116.70	9,328,300.14	2,711,816.56
Total	44,565,500.98	1,901,291.00	46,466,791.98	45,986,067.03	480,724.95
To business surplus		480,724.95	480,724.95		480,724.95
	44,565,500.98	1,420,566.05	45,986,067.03	45,986,067.03	
1922	11,193,383.47	192,208.85	11,385,592.32	7,919,017.63	3,466,574.69
1923	17,507,630.52	184,213.54	17,691,844.06	7,690,777.56	10,001,066.50
1924	24,289,603.16	392,250.73	24,681,853.89	8,373,905.39	16,307,948.50
Grand total	97,556,118.13	2,189,239.17	99,745,357.30	69,969,767.61	29,775,589.69

CANAL BUSINESS OPERATIONS

	Business rev- enues	Business expenses	Net revenues
1914	\$690,298.32	\$695,720.71	¹ \$5,422.39
1915	2,135,074.92	2,191,475.70	¹ 56,400.78
1916	6,488,521.61	6,476,623.17	11,898.44
1917	7,579,588.44	7,540,160.78	39,427.66
1918	10,324,071.91	10,317,912.35	6,159.56
1919	13,684,881.18	13,623,853.92	61,027.26
1920	14,705,371.82	14,465,685.69	239,686.13
1921	15,232,317.08	14,668,105.88	564,211.20
Total	70,840,125.28	69,979,538.20	860,587.08
Profit carried in canal-transit operations above		379,862.13	¹ 379,862.13
Net revenues carried to surplus	70,840,125.28	70,359,400.33	480,724.95
Interest on public works, Panama and Colon, etc., not included in net revenues in prior years	619,584.59		619,584.59
Adjusted status June 30, 1921	71,459,709.87	70,359,400.33	1,100,309.54
1922	7,747,227.57	7,423,968.41	323,259.16
1923	10,872,843.36	9,732,200.86	1,140,642.50
1924	12,968,777.29	12,067,153.17	901,624.12
Total	103,048,558.09	99,582,722.77	3,465,835.32

¹ Deficit.

TABLE NO. 28.—Statement of deductions for rent of gold quarters and allied charges from employees on the Panama Canal and Panama Railroad rolls, July 1, 1923, to June 30, 1924

PANAMA CANAL ROLLS

Month	Rent and janitor	Current	Water	Telephone	Garage	Hospital	Miscellaneous	Total
1923								
July.....	\$20,937.28	\$3,196.69	\$1,591.22	\$1,040.47	\$1,137.77	\$2,225.79	\$8,256.76	\$38,385.98
August.....	21,272.74	3,190.03	1,604.73	1,095.30	1,166.38	2,413.30	10,209.08	40,951.56
September.....	21,551.90	3,283.94	1,619.82	1,048.45	1,181.65	2,140.19	9,287.42	40,113.37
October.....	22,956.87	3,299.13	1,727.04	1,255.33	1,203.95	2,295.98	9,838.24	42,576.54
November.....	22,934.85	3,772.10	1,698.16	1,300.53	1,194.16	2,179.74	9,701.14	42,780.68
December.....	23,084.70	3,821.97	1,715.76	1,305.35	1,209.51	2,141.52	11,918.34	45,197.15
1924								
January.....	23,207.95	3,832.06	1,754.02	1,295.68	1,211.71	3,271.12	11,058.80	45,631.34
February.....	24,114.93	3,583.46	1,847.21	1,331.34	1,188.30	3,048.68	10,885.09	46,002.01
March.....	24,004.88	3,392.10	1,830.38	1,347.31	1,192.04	3,520.48	11,793.25	47,080.44
April.....	23,842.83	3,350.94	1,825.74	1,362.08	1,228.92	3,032.74	12,125.45	46,779.70
May.....	24,082.63	3,133.34	1,822.60	1,325.34	1,228.29	2,735.50	11,520.20	45,847.99
June.....	23,239.83	3,512.42	1,781.45	1,218.49	1,191.10	2,425.86	11,460.09	44,829.24
Total.....	275,231.39	41,378.18	20,819.13	14,928.67	14,333.78	31,430.90	128,053.95	526,176.00

PANAMA RAILROAD ROLLS

1923								
July.....	\$4,237.17	\$664.02	\$313.63	\$260.87	\$153.13	\$375.53	\$1,442.33	\$7,446.68
August.....	4,311.69	639.04	314.79	260.80	148.00	410.42	2,363.91	8,148.65
September.....	4,218.46	651.46	307.99	258.63	136.00	728.68	2,081.85	8,383.07
October.....	4,203.51	554.86	311.01	279.34	160.65	405.76	1,734.64	7,649.77
November.....	4,327.48	690.03	324.47	285.10	162.10	347.83	1,478.78	7,624.79
December.....	4,398.63	693.77	331.18	294.40	154.00	388.34	2,018.33	8,278.65
1924								
January.....	4,346.25	675.11	318.37	321.28	146.00	575.97	1,779.47	8,162.45
February.....	4,445.83	674.11	327.46	291.32	148.00	513.94	1,635.66	8,036.32
March.....	4,737.04	661.62	338.71	325.26	152.00	642.97	1,344.34	8,201.94
April.....	4,493.53	631.02	322.92	330.54	158.50	535.26	1,274.57	7,746.34
May.....	4,589.46	605.86	329.64	301.02	155.87	633.89	2,485.11	9,100.85
June.....	4,455.40	633.45	317.55	323.04	189.20	591.33	1,391.78	7,906.75
Total.....	52,764.45	7,783.35	3,857.72	3,536.60	1,863.45	6,149.92	21,030.77	96,986.26
Grand total.....	327,995.84	49,161.53	24,676.85	18,465.27	16,197.23	37,580.82	149,084.72	623,162.26

TABLE NO. 29.—Detail of reserves for depreciation

	Fiscal year 1923	Fiscal year 1924
Canal-transit property:		
Equipment—		
Tugs.....	\$338,325.24	\$380,639.24
Supply boats.....	15,531.60	17,931.60
Launches.....	84,954.95	85,538.42
Dredges.....	417,260.13	467,240.80
Barges.....	497,616.45	499,421.45
Crane boat.....	560.00	2,240.00
Graders.....	21,007.90	17,715.60
Drill barges.....	1,218.75	1,968.75
Air-compressor barge.....	7,618.52	8,951.96
Coal-boist barge.....	1,857.62	2,061.62
Road rollers.....	12,698.56	9,652.40
Automobiles.....	502.33	606.69
Total equipment.....	1,429,152.25	1,493,968.53
Fixed property.....	610,755.00	910,673.40
Total canal-transit property.....	2,039,907.25	2,404,641.93

TABLE NO. 29.—Detail of reserves for depreciation—Continued

	Fiscal year 1923	Fiscal year 1924
Business property:		
Fixed property—		
Electric light and power system.....	\$1,131,538.42	\$1,215,382.67
Water system.....	66,439.38	48,373.89
Dry docks.....	5,000.00	10,000.00
Fuel-oil plants.....	283,862.54	294,515.34
Animal and motor transportation.....	1,813.44	2,856.66
Motor-car repair shop.....	1,986.36	3,244.00
Building repairs and construction.....	120.24	2,213.22
Gold quarters.....	32,493.44	132,149.07
Garages.....	7,654.80	15,156.64
Boathouses.....	399.96	799.92
Hotel Tivoli.....	20,552.97	34,279.05
Restaurants.....	7,161.63	11,928.63
Total fixed property.....	1,559,023.18	1,770,899.09
Equipment:		
Electric light and power system.....	483.20	628.16
Automobiles.....	179,079.73	180,008.32
Shop equipment.....	18,328.38	40,000.00
Panama Canal press.....		5,000.00
Total equipment.....	197,891.31	225,636.48
Total business property.....	1,756,914.49	1,996,535.57
Total.....	3,796,821.74	4,401,177.50
Theoretical interest.....	94,385.79	211,122.02
Grand total.....	3,891,207.53	4,612,299.52

TABLE NO. 30.—Detail of reserves for repairs

	Fiscal year 1923	Fiscal year 1924
Canal-transit property:		
Equipment—		
Tugs.....	\$378,391.92	\$450,249.58
Supply boats.....	9,119.03	9,413.73
Launches.....	7,711.95	12,332.94
Dredges.....	230,919.50	298,021.70
Barges.....	211,897.41	160,889.99
Crane boat.....	1,442.06	9,319.85
Graders.....	16,967.68	12,033.20
Drill barges.....	2,550.65	9,477.67
Air compressor barge.....	375.00	4,853.13
Coal hoist barge.....	675.93	675.93
Relay barge.....		151.64
Road rollers.....	250.04	792.52
Total equipment.....	860,301.17	953,942.20
Fixed property—		
Baseball stadium.....	220.68	58.94
Total canal-transit property.....	860,521.85	954,001.14
Business property:		
Fixed property—		
Electric light and power system.....	3,379.65	4,501.25
Shops and dry docks.....	79,648.15	94,600.89
Fuel oil plants.....	230,689.65	270,498.94
Hotels.....	12,439.74	486.92
Total fixed property.....	311,277.71	370,088.00
Equipment—		
Shops and dry docks.....	66,994.10	80,045.95
Building repairs and construction.....		10,390.62
Total equipment.....	66,994.10	90,436.57
Total business property.....	378,271.81	460,524.57
Grand total.....	1,238,793.66	1,414,525.71

¹ Debit.

TABLE NO. 31.—Reserve for gratuity due employees

	Fiscal year 1923	Fiscal year 1924
Electrical division.....	\$70,243.48	\$79,717.01
Municipal engineering division.....	52,168.25	51,740.65
Mechanical division—Shops and dry docks.....	258,845.42	316,479.81
Building, repairs, and construction division.....	17,115.62	24,056.47
Fortifications.....	25,695.91	20,650.63
Total.....	424,068.68	492,644.57

TABLE NO. 32.—Detail of cost of production and distribution of electric current

	Fiscal year 1923	Fiscal year 1924
Gatun hydroelectric power plant:		
Operation and maintenance.....	\$32,296.61	\$41,327.29
Division and general expense.....	10,060.54	7,740.84
Reserve for depreciation.....	25,019.28	25,038.96
Reserve for repairs.....	2,400.00	2,400.00
Total cost.....	69,776.43	76,507.09
Net kilowatt hours generated.....	45,560,996	41,612,717
Unit cost.....	\$0.0015	\$0.0018
Miraflores steam electric power plant: ¹		
Operation and maintenance.....	59,719.44	134,958.36
Division and general expense.....	8,470.88	26,027.61
Reserve for depreciation.....	4,617.96	4,624.08
Reserve for repairs.....	1,320.00	1,320.00
Total cost.....	74,128.28	166,930.05
Net kilowatt hours generated.....		6,173,965
Total cost, both plants.....	\$143,904.71	\$243,437.14
Total net kilowatt hours generated.....	45,560,996	47,786,682
Average cost per kilowatt hour.....	\$0.0032	\$0.0051
Operation of substations:		
Balboa.....	13,759.33	15,814.91
Cristobal.....	14,459.98	17,022.32
Gatun.....	18,772.70	22,447.50
Miraflores.....	17,802.71	22,813.89
Gamboia.....	3,865.80	2,178.11
Division and general expense.....	19,914.31	15,217.03
Reserve for depreciation.....	27,615.72	27,615.72
Reserve for repairs.....	1,500.00	1,500.00
Total cost.....	117,690.55	124,609.48
Transmission lines:		
Inspection and maintenance.....	19,699.02	28,918.45
Division and general expense.....	4,636.47	3,526.93
Reserve for depreciation.....	20,336.04	20,336.04
Reserve for repairs.....	4,980.00	4,980.00
Total cost.....	49,651.53	57,761.42
Distribution lines:		
Inspection and maintenance.....	61,899.49	59,726.09
Division and general expense.....	7,063.21	7,480.13
Reserve for depreciation.....	16,521.24	16,548.84
Total cost.....	85,483.94	83,755.06
Grand total cost of distributed power.....	396,730.73	509,563.10
Total net kilowatt hours.....	45,560,996	47,786,682
Unit cost.....	\$0.0087	\$0.0107

¹ Miraflores steam power plant is generally operated as a reserve generative station and for stand-by service. During the fiscal year 1923 it was required to carry load on 36 occasions, while during the fiscal year 1924 load was carried on 44 occasions. In addition, from January 1 to March 10, the plant was operated full time, due to the extreme low level of Gatun Lake, which would not permit the operation of the Gatun hydroelectric station at maximum capacity.

TABLE No. 33.—Detailed cost of production of water per 1,000 gallons

	Fiscal year 1923			Fiscal year 1924		
	Amount	Quantity	Unit cost	Amount	Quantity	Unit cost
Pacific system:		<i>Thousand gallons</i>			<i>Thousand gallons</i>	
Operation of pump stations—						
Balboa.....	\$45,347.30	2,097,481	\$0.0216	\$43,816.79	2,088,928	\$0.0209
Miraflores.....	5,592.59	386,735	.0144	5,224.57	350,155	.0149
Panama.....	4,392.37	77,268	.0568	4,348.81	79,345	.0548
Gamboa.....	71,279.05	3,468,510	.0205	61,481.62	3,007,740	.0204
Miraflores Lake.....				10,378.36	50,161	.2068
Operation of filtration plant:						
Miraflores.....	67,064.91	2,717,255	.0246	67,545.87	2,671,131	.0252
Maintenance of reservoirs.....	8,806.93	2,717,255	.0032	1,030.40	2,671,131	.0003
Maintenance of pipe lines.....	58,535.97	2,717,255	.0215	69,321.39	2,671,131	.0259
Depreciation.....	29,122.50	2,717,255	.0107	29,846.28	2,671,131	.0111
Total division expense.....	290,141.62	2,717,255	.1068	292,994.09	2,671,131	.1096
Administration and accounting.....	8,726.62	2,717,255	.0032	8,680.35	2,671,131	.0032
Proportion of storehouse expense.....	2,482.19	2,717,255	.0009	2,412.80	2,671,131	.0009
Proportion of general expense.....				1,938.58	2,671,131	.0007
Total expense.....	301,350.43	2,717,255	.1109	306,025.82	2,671,131	.1145
Atlantic system:						
Operation of pump stations—						
Mount Hope.....	36,537.87	1,484,799	.0246	31,455.54	1,355,258	.0235
Gatun.....	21,554.23	391,322	.0551	22,351.54	423,599	.0527
Monte Lirio.....	1,328.83	2,680	.4958	462.16	2,353	.1964
Frijoles.....	1,593.91	4,471	.3565	1,668.50	5,013	.3328
Operation of filtration plant—						
Mount Hope.....	20,527.86	1,484,799	.0138	19,130.37	1,335,258	.0143
Gatun.....	20,689.83	391,322	.0529	17,390.74	423,599	.0410
Maintenance of reservoirs.....	18,862.39	1,876,121	.0101	21,774.71	1,758,857	.0123
Maintenance of pipe lines.....	43,869.66	1,876,121	.0234	47,207.44	1,758,857	.0298
Depreciation.....	14,276.04	1,876,121	.0076	13,688.48	1,758,857	.0077
Total division expense.....	179,250.62	1,876,121	.0955	175,129.58	1,758,857	.0995
Administration and accounting.....	5,523.38	1,876,121	.0029	5,299.65	1,758,857	.0030
Proportion of storehouse expense.....	1,571.06	1,876,121	.0008	1,882.48	1,758,857	.0010
Proportion of general expense.....				557.16	1,758,857	.0003
Total expense.....	186,345.06	1,876,121	.0993	182,868.87	1,758,857	.1039
Grand total, water system.....	487,695.49	4,593,376	.1061	488,894.69	4,329,988	.1129

PROPORTION CHARGEABLE TO REPUBLIC OF PANAMA

	Fiscal year 1923			Fiscal year 1924		
	Amount	Quantity	Unit cost	Amount	Quantity	Unit cost
Pacific system:		<i>Thousand gallons</i>			<i>Thousand gallons</i>	
Operation, pump stations—						
Balboa.....	\$23,027.72	1,063,952	\$0.0216	\$22,901.81	1,090,749	\$0.0209
Gamboa.....	22,666.33	1,063,952	.0213	20,920.52	1,090,749	.0191
Miraflores Lake.....				4,237.97	1,090,749	.0038
Operation, filter plant—						
Miraflores.....	26,311.61	1,063,952	.0247	26,957.69	1,090,749	.0247
Maintenance, pipe lines.....	6,674.12	1,063,952	.0063	10,682.18	1,090,749	.0097
Depreciation.....	10,211.66	1,063,952	.0096	10,618.93	1,090,749	.0097
Total division expense.....	88,891.44	1,063,952	.0835	96,328.10	1,090,749	.0883
Proportion general expense.....	7,867.98	1,063,952	.0074	8,570.92	1,090,749	.0078
Total expense.....	96,759.42	1,063,952	.0909	104,899.02	1,090,749	.0961
Atlantic system:						
Operation, pump stations—						
Mount Hope.....	16,480.43	719,638	.0229	14,416.11	609,907	.0236
Operation, filter plant—						
Mount Hope.....	9,951.65	719,638	.0138	8,739.49	609,907	.0143
Maintenance, reservoirs.....	3,555.23	719,638	.0049	4,501.59	609,907	.0078
Maintenance, pipe lines.....	171.18	719,638	.0002	274.62	609,907	.0004
Depreciation.....	4,240.57	719,638	.0059	3,980.57	609,907	.0065
Total division expense.....	34,399.06	719,638	.0478	31,912.38	609,907	.0523
Proportion general expense.....	3,015.85	719,638	.0042	2,793.15	609,907	.0045
Total expense.....	37,414.91	719,638	.0520	34,705.56	609,907	.0568
Grand total, water system.....	134,174.33	1,783,590	.0752	139,604.58	1,700,656	.0820

TABLE NO. 33.—Detailed cost of production of water per 1,000 gallons—Contd.
PROPORTION CHARGEABLE TO CANAL ZONE

	Fiscal year 1923			Fiscal year 1924		
	Amount	Quantity	Unit cost	Amount	Quantity	Unit cost
Pacific system:		<i>Thousand gallons</i>			<i>Thousand gallons</i>	
Operation, pump stations—						
Balboa.....	\$22,319.58	1,033,529	\$.0216	\$20,914.98	998,179	\$.0209
Miraflores.....	5,592.59	386,735	.0144	5,224.57	350,155	.0149
Paraiso.....	4,392.37	77,268	.0568	4,348.81	79,345	.0548
Gamboa.....	48,612.72	2,404,558	.0202	40,552.10	1,916,991	.0211
Miraflores Lake.....				6,140.39	50,161	.1224
Operation, filter plant—						
Miraflores.....	40,753.30	1,653,303	.0246	40,588.18	1,580,382	.0256
Maintenance, reservoirs.....	8,806.93	1,653,303	.0053	1,030.40	1,580,382	.0006
Maintenance, pipe lines.....	51,861.85	1,653,303	.0314	58,639.21	1,580,382	.0370
Depreciation.....	18,910.84	1,653,303	.0114	19,227.35	1,580,382	.0121
Total division expense.....	201,250.18	1,653,303	.1217	196,665.99	1,580,382	.1244
Administration and accounting.....	8,726.62	1,653,303	.0053	8,680.35	1,580,382	.0054
Proportion storehouse expense.....	2,482.19	1,653,303	.0015	2,412.80	1,580,382	.0015
Proportion general expense.....	17,867.98	1,653,303		16,632.34		
Total expense.....	204,591.01	1,653,303	.1238	201,126.80	1,580,382	.1272
Atlantic system:						
Operation, pump stations—						
Mount Hope.....	20,037.44	765,161	.0262	17,039.43	725,351	.0234
Gatun.....	21,554.23	391,322	.0551	22,351.64	423,599	.0527
Monte Lirio.....	1,328.83	2,680	.4958	462.16	2,353	.1964
Frijoles.....	1,593.91	4,471	.3565	1,668.50	5,013	.3328
Operation, filter plant—						
Mount Hope.....	10,576.21	765,161	.0138	10,390.88	725,351	.0143
Gatun.....	20,699.83	391,322	.0529	17,390.74	423,599	.0410
Maintenance, reservoirs.....	15,307.16	1,156,483	.0132	17,273.12	1,308,698	.0131
Maintenance, pipe lines.....	43,698.48	1,156,483	.0378	46,932.82	1,308,698	.0358
Depreciation.....	10,035.47	1,156,483	.0087	9,707.91	1,308,698	.0074
Total division expense.....	144,851.56	1,156,483	.1253	143,217.20	1,308,698	.1094
Administration and accounting.....	5,523.38	1,156,483	.0048	5,299.65	1,308,698	.0040
Proportion storehouse expense.....	1,571.06	1,156,483	.0014	1,882.48	1,308,698	.0014
Proportion general expenses.....	13,015.85			12,236.02		
Total expense.....	148,930.15	1,156,483	.1288	148,163.31	1,308,698	.1132
Grand total, water system.....	353,521.16	2,809,786	.1258	349,290.11	2,889,080	.1209

¹ Credit.

TABLE No. 34.—*Dredging operations (channel maintenance)*

Operation	Excavation						Total	
	Gaillard Cut		Pacific entrance		Balboa inner harbor			Atlantic entrance
	Cost	Cost per cubic yard	Cost	Cost per cubic yard	Cost	Cost per cubic yard	Cost	Cost per cubic yard
Dredging, dipper:								
Dipper dredges (operation).....	\$471,772.01		\$32,069.73		\$31,013.88		\$534,855.62	
Tugs and barges (towing).....	558,180.10		11,553.12		18,112.51		587,845.73	
Hydraulic graders.....	37,266.97						37,266.97	
Drill barges.....	85,872.71						85,872.71	
Drilling.....	113,846.48						113,846.48	
Blasting.....	46,157.68						46,157.68	
Sluicing.....	18,132.06						18,132.06	
Channel lights.....	360.13		75.21		94.44		529.78	
General expense.....	187,276.93		12,085.96		9,312.26		208,675.15	
Total dipper dredging.....	1,518,865.07	\$0.6537	55,784.02	\$0.5382	58,533.09	\$0.4645	1,633,182.18	\$0.6396
Dredging, suction:								
Suction dredges (operation).....	172,169.62		40,520.73		28,187.64		259,167.88	
Relay pumps.....	31,548.78						32,233.71	
Pine lines.....	39,143.49		571.27				39,714.76	
Dikes.....	1,807.70		1,745.41				3,553.11	
General expense.....	80,925.99		4,840.03		3,755.95		976.08	
Total, suction dredging.....	325,595.58	.2374	57,371.37	.0907	31,943.59	.0904	425,167.51	.1668
Total, dredging expense.....	1,844,460.65	.4992	113,155.39	.1537	90,476.68	.1888	2,058,349.69	.4034
Expenses, idle equipment.....	129,862.76		3,098.92		7,008.54		140,316.61	
Drainage projects.....	40,627.47						40,627.47	
Miscellaneous operations.....							95,679.29	
Total, channel maintenance.....	2,014,950.88		122,254.31		97,485.22		2,340,973.06	

1 Includes removal of La Pita Point, \$576,866.31.

TABLE NO. 36.—*Postal service—Statement showing the monthly money-order business of the Canal Zone Postal Service during the fiscal year ended June 30, 1924*

Month	Money orders issued, including deposit money orders		Interest paid on deposit money orders	Money orders paid by Canal Zone post offices			Canal Zone money orders paid by—		
	Number	Amount		United States	Costa Rica	Canal Zone ¹	Martinique	Costa Rica	United States
1923									
July.....	9,110	\$192,719.06	\$838.41	\$23,907.97	\$50.00	\$88,845.49	\$18.00		\$129,793.58
August.....	9,460	197,922.50	940.78	19,848.94	8.00	88,386.90			105,752.64
September.....	8,694	184,389.13	471.44	18,846.62		60,984.11	3.00	\$1,040.18	133,509.56
October.....	9,953	205,302.88	659.28	18,354.76	15.00	59,892.85	10.00		135,236.43
November.....	11,273	210,116.67	494.73	18,040.30	50.00	56,186.11			127,673.31
December.....	12,155	218,599.11	618.28	21,098.75		72,944.87	15.00	1,229.54	101,489.84
1924									
January.....	12,117	255,194.70	606.95	19,962.24		65,957.66	2.00		169,206.81
February.....	10,376	202,298.07	1,012.10	17,569.06		63,848.37	1.00		122,663.57
March.....	11,142	218,990.83	1,115.53	22,010.26	6.00	85,730.49	2.00	1,498.47	189,254.83
April.....	10,943	218,745.68	1,483.83	23,496.76	20.00	88,007.64			143,680.07
May.....	10,934	226,344.81	1,221.74	23,825.35		91,396.00			136,424.99
June.....	10,536	206,765.27	886.47	23,559.26		86,619.86			165,330.66
Totals..	126,993	2,537,388.71	10,349.57	253,520.27	149.00	908,800.36	51.00	3,768.19	1,660,016.29

¹ Including deposit money orders.

TABLE NO. 37.—*Postal service—Statement of audited revenues, fiscal years 1907 to 1924, inclusive*

Year	Receipts						Interest on money-order funds
	Miscellaneous	Money-order fees	Stamp sales	Box rent	Newspaper postage	Total revenue	
1907.....		\$9,832.65	\$54,803.79			\$64,636.44	
1908.....		19,309.14	72,708.67		\$0.87	92,018.68	
1909.....		21,720.93	74,241.87		85.53	96,048.33	
1910.....		22,980.96	83,765.60		81.50	106,828.06	
1911.....		23,457.98	82,585.21		28.51	106,071.70	
1912.....		22,889.93	87,497.21		144.24	110,531.38	
1913.....		23,366.31	100,599.15		318.84	124,284.30	
1914.....		19,408.44	90,792.63		463.67	110,664.74	
1915.....		13,169.55	75,202.29	\$2,973.65	988.50	92,333.99	
1916.....		12,878.29	76,337.08	5,029.50	1,410.39	95,655.26	
1917.....	\$1,207.59	12,371.28	74,474.98	8,100.00	1,703.89	97,857.74	\$12,884.57
1918.....	1,344.75	11,918.35	83,939.74	8,147.30	1,825.38	107,175.52	32,940.22
1919.....	2,313.25	10,424.16	81,723.76	8,268.20	2,553.88	105,283.25	25,746.20
1920.....	1,951.64	10,207.59	87,096.72	8,776.55	1,782.53	109,815.03	22,141.38
1921.....	2,522.35	11,606.28	102,354.76	11,605.20	1,268.77	129,357.36	25,803.10
1922.....	2,152.09	9,153.56	93,683.24	10,637.50	1,525.87	117,152.26	32,696.81
1923.....	2,211.64	9,889.70	93,532.29	10,733.55	1,834.07	118,201.25	25,173.21
1924.....	1,962.68	9,835.21	95,458.07	11,001.10	2,154.41	120,411.47	22,397.25
Totals..	15,665.99	274,420.31	1,510,797.06	85,272.55	18,170.85	1,904,326.76	199,782.74

TABLE NO. 38.—*Postal service—Statement of postal revenues, fiscal year ended June 30, 1924*

Month	Receipts						Interest on money order funds
	Miscellaneous	Money order fees	Stamp sales	Box rent	Newspaper postage	Total revenue	
1923							
July.....	\$172.20	\$710.30	\$6,631.30	\$1,037.85	\$149.77	\$8,701.42	\$2,545.99
August.....	163.46	762.07	6,845.81	100.80	226.47	8,098.61	1,017.99
September.....	140.39	689.82	6,100.00	1,463.50	185.45	8,579.16	997.24
October.....	170.43	777.47	6,739.59	1,167.20	149.06	9,003.75	5,562.11
November.....	151.48	851.35	7,463.69	103.60	151.23	8,721.35	865.33
December.....	157.15	942.12	11,232.10	1,614.15	247.75	14,193.27	875.14
1924							
January.....	164.72	1,008.59	9,048.44	1,138.65	160.14	11,520.54	2,355.07
February.....	184.82	770.30	9,480.52	72.85	193.41	10,701.90	945.17
March.....	152.53	844.64	6,992.38	1,418.40	171.24	9,609.19	886.87
April.....	215.14	846.25	8,271.85	1,347.10	186.51	10,866.85	4,456.68
May.....	159.28	836.07	8,507.50	77.25	123.34	9,703.44	904.41
June.....	131.08	796.23	8,144.89	1,429.75	210.04	10,711.99	955.25
Total.....	1,962.68	9,835.21	95,458.07	11,001.10	2,154.41	120,411.47	22,397.25

TABLE NO. 39.—*Postal service—Statement of postal savings payments and deposit money-order transactions (in lieu of postal savings system) for fiscal year ended June 30, 1924*

Month	Postal savings certificates		Deposit money orders		
	Balance July 1, 1923	Paid	Balance July 1, 1923	Issued	Paid
1923					
July.....	181.00		470,550.00	61,385.00	73,795.00
August.....				53,615.00	73,250.00
September.....				54,760.00	46,250.00
October.....				60,380.00	44,455.00
November.....				60,285.00	42,670.00
December.....				54,915.00	56,965.00
1924					
January.....				61,615.00	48,785.00
February.....				65,870.00	50,475.00
March.....				65,555.00	71,385.00
April.....				64,415.00	71,285.00
May.....				73,045.00	73,710.00
June.....				63,100.00	69,485.00
Balance unpaid June 30, 1924.....		181.00			486,980.00
Total.....	181.00	181.00	470,550.00	738,940.00	1,209,490.00

TABLE NO. 42.—*Summary of income and expenses, Bureau of Clubs and Playgrounds, July 1, 1923, to June 30, 1924*

	Ancon	La Boca	Balboa	Pedro Miguel	Paraiso	Gatun	Gatun Silver
Soda fountain inventory, July 1, 1923.....	\$544.80	\$388.10	\$1,606.72	\$166.86	\$205.04	\$336.26	\$249.27
Cigars and candy inventory, July 1, 1923.....	1,047.99	385.53	2,381.59	171.84	448.51	400.77	433.90
Salable merchandise inventory, July 1, 1923.....	1,372.58		6,187.56	70.67		786.04	
Bureau of Clubs and Playgrounds' stock, inventory, July 1, 1923.....							
Balboa storeroom inventory, July 1, 1923.....							
Total expenditures, fiscal year 1924.....	47,766.93	26,205.17	186,043.14	12,099.06	21,637.28	26,882.03	16,481.50
Earnings, fiscal year 1924.....	15,990.03	2,884.72	1,967.61	1,300.45	3,251.44	13,773.51	454.83
Total.....	44,742.27	29,863.52	195,251.40	11,207.98	25,542.27	24,631.59	17,619.50

1 Losses.

TABLE No. 42.—Summary of income and expenses, Bureau of Clubs and Playgrounds, July 1, 1923, to June 30, 1924—Continued

	Ancon	La Boca	Balboa	Pedro Miguel	Paraiso	Gatun	Gatun Silver
Soda fountain inventory, June 30, 1924	\$274.32	\$343.02	\$380.09	\$210.87	\$223.72	\$375.06	\$227.20
Cigars and candy inventory, June 30, 1924	749.50	272.98	439.13	182.89	329.30	294.97	196.79
Salable merchandise inventory, June 30, 1924	682.44		1,843.04	287.23		374.55	
Bureau of Clubs and Playgrounds' stock, inventory, June 30, 1924							
Balboa storeroom inventory, June 30, 1924			12,681.35				
Total income, fiscal year 1924	43,036.01	29,217.52	179,907.79	10,526.99	24,989.25	23,587.01	17,195.51
Total	44,742.27	29,863.52	195,251.40	11,207.98	25,542.27	24,631.59	17,619.50

	Cristobal	Cristobal silver	Red Tank	Balboa boat-house	Bureau of Clubs and Playgrounds' stock	General secretary	Totals
Soda fountain inventory, July 1, 1923	\$373.70	\$161.14	\$187.18				\$4,219.07
Cigars and candy inventory, July 1, 1923	676.59	611.75	284.04	\$383.01			7,225.52
Salable merchandise inventory, July 1, 1923	1,016.92			66.33			9,500.10
Bureau of Clubs and Playgrounds' stock, inventory, July 1, 1923					\$10,282.96		10,282.96
Balboa storeroom inventory, July 1, 1923							
Total expenditures, fiscal year 1924	42,776.59	37,991.01	15,504.82	3,743.50	4,199.91	\$1,059.31	442,390.25
Earnings, fiscal year 1924	3,423.96	3,534.80	921.73	172.37	¹ 271.30	2,757.95	5,098.90
Total	48,267.76	42,298.70	16,897.77	4,365.21	14,211.57	3,817.26	478,716.80

Soda fountain inventory, June 30, 1924	303.67	118.36	155.07				2,611.38
Cigars and candy inventory, June 30, 1924	539.16	789.00	327.47	189.22			4,310.41
Salable merchandise inventory, June 30, 1924	764.99			42.64			3,994.89
Bureau of Clubs and Playgrounds' stock, inventory, June 30, 1924							12,681.35
Balboa storeroom inventory, June 30, 1924							
Total income, fiscal year 1924	46,659.94	41,391.34	16,415.23	4,153.35	14,211.57	3,817.26	455,118.77
Total	48,267.76	42,298.70	16,897.77	4,365.21	14,211.57	3,817.26	478,716.80

¹ Losses.

TABLE No. 43.—Bureau of Clubs and Playgrounds, balance sheet, June 30, 1924

ASSETS		LIABILITIES	
Cash on-hand:		Surplus:	
Secretaries' balances	\$6,749.06	To June 30, 1923	\$161,572.43
On deposit with collector	156,384.79	Less surplus adjustment	1.00
	\$163,133.85		161,571.43
Inventories:		Profit, current fiscal year	5,098.90
Soda fountain	2,611.38		\$166,670.33
Cigars and candy	4,310.41	Accounts payable:	
Salable merchandise	3,994.89	Audited vouchers	31,026.80
Balboa storeroom stock	12,681.35		
	23,598.03	Total	197,697.13
Accounts receivable:			
Registered bills	10,965.25		
Total	167,697.13		

TABLE No. 44.—Commissary coupons issued, sold, and honored during the fiscal year 1924

COUPON BOOKS ISSUED ON PAY-ROLL DEDUCTION

Month	\$2.50 silver		\$5 silver		\$7.50 silver		\$5 gold		\$15 gold		Total value
	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value	
1923-24											
July.....	1,860	\$4,650.00	19,356	\$96,780.00	6,345	\$47,587.50	771	\$3,855.00	5,949	\$89,235.00	\$212,107.50
August.....	1,470	3,675.00	19,452	97,260.00	6,716	50,370.00	838	4,190.00	6,054	90,810.00	246,305.00
September.....	2,140	5,350.00	18,982	94,910.00	6,349	47,617.50	821	4,105.00	6,026	90,390.00	212,372.50
October.....	1,461	3,652.50	19,703	98,515.00	6,799	50,992.50	863	4,315.00	6,375	95,625.00	253,100.00
November.....	2,415	6,037.50	19,293	96,015.00	6,626	49,193.00	904	4,520.00	7,190	107,985.00	294,252.50
December.....	1,891	4,727.50	23,907	119,535.00	8,452	63,390.00	1,001	5,005.00	8,280	121,200.00	316,837.50
January.....	1,969	4,922.50	20,702	103,510.00	6,321	48,907.50	886	4,430.00	7,107	106,605.00	298,375.00
February.....	2,033	5,082.50	21,434	107,170.00	6,804	51,480.00	883	4,415.00	7,067	106,005.00	295,317.50
March.....	2,293	5,732.50	22,473	112,365.00	7,344	55,050.00	891	4,455.00	7,179	107,685.00	297,377.50
April.....	1,717	4,292.50	20,664	103,320.00	7,206	54,045.00	871	4,355.00	7,181	107,715.00	272,632.50
May.....	1,869	4,672.50	20,563	104,465.00	6,876	51,570.00	889	4,443.00	7,104	107,440.00	270,025.00
June.....	1,892	4,730.00	20,758	103,790.00	7,040	52,800.00	954	4,770.00	6,925	103,933.00	270,025.00
Total.....	23,010	57,525.00	247,527	1,237,635.00	83,138	623,535.00	10,572	52,860.00	82,510	1,237,650.00	3,209,205.00

COUPON BOOKS SOLD FOR CASH

Month	\$2.50 silver		\$5 silver		\$7.50 silver		\$5 gold		\$15 gold		Total value
	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value	
July.....	2,183	\$5,457.50	705	\$3,525.00	75	\$562.50	7,212	\$36,210.00	3,225	\$48,375.00	\$94,130.00
August.....	2,208	5,670.00	638	3,190.00	79	592.50	7,541	37,705.00	3,307	50,505.00	97,692.50
September.....	2,107	5,267.50	665	3,325.00	64	480.00	7,654	35,270.00	3,318	50,770.00	94,112.50
October.....	2,234	5,585.00	617	3,065.00	50	375.00	7,694	38,470.00	3,502	53,450.00	100,945.00
November.....	2,339	5,847.50	734	3,670.00	71	532.50	8,495	42,475.00	4,245	63,675.00	116,200.00
December.....	2,483	6,207.50	835	4,175.00	95	712.50	9,855	49,275.00	4,462	66,950.00	127,300.00
January.....	2,641	6,602.50	610	3,050.00	91	682.50	9,820	49,100.00	4,483	67,215.00	126,680.00
February.....	2,116	5,290.00	612	3,060.00	94	705.00	7,670	38,350.00	3,782	56,730.00	104,133.00
March.....	2,207	5,517.50	685	3,425.00	101	757.50	8,630	43,150.00	4,209	63,135.00	115,985.00
April.....	2,534	6,335.00	770	3,850.00	129	967.50	9,870	49,350.00	4,649	69,735.00	130,297.50
May.....	2,353	5,882.50	707	3,555.00	133	997.50	9,223	46,115.00	4,175	62,625.00	119,155.00
June.....	2,283	5,707.50	748	3,740.00	116	870.00	8,465	42,325.00	3,623	54,345.00	106,987.50
Total.....	27,748	69,370.00	8,326	41,630.00	1,098	8,235.00	101,559	507,795.00	47,100	706,500.00	1,333,530.00

Coupon Books Sold on Credit

July.....	145	\$725.00	259	\$4,610.00
August.....	170	850.00	280	3,200.00
September.....	129	645.00	257	3,855.00
October.....	219	1,095.00	308	4,620.00
November.....	218	1,090.00	392	5,715.00
December.....	270	1,350.00	434	6,970.00
January.....	234	1,170.00	390	7,860.00
February.....	240	1,200.00	414	7,020.00
March.....	248	1,240.00	431	7,410.00
April.....	282	1,410.00	460	7,705.00
May.....	337	1,683.00	442	8,310.00
June.....	281	1,405.00	445	8,315.00
Total.....	2,773	13,865.00	4,512	67,080.00

COMMISSARY COUPONS HONORED

Month	Commissaries	Panama Canal club-houses	Restaurants under contract	Hotel Tivoli	Hotel Washington	Marine equipment	Panama R. R. pasture menses	Army and Navy Y. M. C. A.	Miscellaneous	Total value
1923-4										
July.....	\$328,835.37	\$10,791.87	\$20,374.20	\$189.33	\$98.85	\$30.56	\$48.94	\$162.40	\$143.24	\$360,674.76
August.....	317,052.02	11,005.03	19,312.96	244.30	129.25	40.50	49.21	150.02	165.46	349,048.75
September.....	318,083.39	10,945.25	18,653.07	253.31	315.50	43.50	41.41	139.21	165.34	348,639.98
October.....	316,080.84	11,423.18	20,220.31	281.66	136.00	21.00	20.96	209.00	253.03	348,645.98
November.....	352,074.09	10,911.13	20,341.81	263.60	185.75	52.00	18.75	200.77	199.92	384,237.82
December.....	387,610.12	11,704.47	21,934.00	202.77	207.41	33.55	5.55	295.25	370.74	421,653.86
January.....	398,736.02	11,698.69	22,622.18	281.56	149.20	25.50	12.66	241.80	289.83	433,427.44
February.....	347,702.06	11,298.34	21,509.60	215.15	186.90	25.50	25.97	206.84	215.87	381,406.83
March.....	378,238.98	11,946.02	22,575.24	260.61	160.65	42.50	33.12	306.23	282.90	413,840.20
April.....	375,049.41	11,517.21	20,650.29	249.95	462.30	38.00	62.87	273.00	186.89	408,489.92
May.....	374,398.99	10,847.21	20,213.97	189.88	283.15	35.50	71.05	273.32	209.41	406,719.49
June.....	349,662.51	10,965.25	19,436.54	195.55	347.30	52.50	73.44	288.73	202.40	381,224.22
Total.....	4,244,624.35	134,947.65	246,696.17	2,817.67	2,662.26	440.61	463.94	2,676.57	2,680.03	4,638,069.25

TABLE No. 59.—Summary of commercial traffic through The Panama Canal during the fiscal year 1924 and since its opening to commercial traffic

	Atlantic to Pacific				Pacific to Atlantic				Total			
	Vessels	Tonnage		Tons of cargo	Vessels	Tonnage		Tons of cargo	Vessels	Tonnage		Tons of cargo
		Registered Gross	Registered Net			Registered Gross	Registered Net			Registered Gross	Registered Net	
1923												
July.....	255	1,535,089	974,045	690,032	219	1,421,761	890,969	1,647,752	474	2,956,850	1,865,014	2,337,784
August.....	219	1,619,801	1,018,327	738,600	193	1,239,302	784,920	1,430,150	454	2,839,103	1,801,356	2,168,750
September.....	198	1,242,798	775,346	511,719	213	1,371,516	863,911	1,656,984	413	2,614,314	1,639,557	2,168,703
October.....	229	1,502,481	944,771	622,747	198	1,241,904	770,065	1,504,855	427	2,744,856	1,720,850	2,127,367
November.....	231	1,486,242	934,068	652,914	205	1,354,178	838,197	1,583,381	436	2,850,430	1,772,295	2,218,295
December.....	278	1,733,542	1,090,950	734,278	228	1,464,911	923,395	1,760,356	506	3,198,453	2,013,395	2,494,634
Total.....	1,452	9,119,953	5,736,677	3,930,290	1,258	8,073,572	5,075,976	9,585,443	2,710	17,193,525	10,812,653	13,515,733
1924												
January.....	253	1,611,376	1,006,812	682,312	223	1,449,441	915,244	1,745,020	476	3,060,817	1,922,056	2,427,332
February.....	219	1,302,547	874,930	673,815	199	1,394,610	800,530	1,563,801	418	2,687,166	1,731,466	2,243,016
March.....	212	1,348,476	836,248	623,348	217	1,378,735	867,847	1,648,924	429	2,727,211	1,704,095	2,272,472
April.....	202	1,317,594	818,921	665,029	201	1,308,018	818,988	1,323,692	403	2,637,909	1,637,909	2,158,721
May.....	209	1,335,581	831,856	712,344	208	1,330,911	828,755	1,641,642	417	2,666,462	1,660,611	2,353,986
June.....	193	1,233,711	761,814	596,762	184	1,217,866	758,055	1,426,088	377	2,431,577	1,519,869	2,022,850
Total.....	1,288	8,239,255	5,130,581	3,929,810	1,232	7,979,590	4,965,425	9,549,167	2,520	16,218,845	10,126,006	13,478,977
Total for fiscal year.....	2,740	17,359,208	10,867,258	7,860,100	2,490	16,053,162	10,071,401	19,134,610	5,230	33,412,370	20,938,659	26,994,710
Fiscal year ending June 30:												
1915.....	522	2,657,865	1,860,276	2,070,993	553	2,758,922	1,932,206	2,817,461	1,075	5,416,787	3,792,573	4,888,454
1916.....	396	1,912,846	1,277,728	1,369,019	362	1,683,683	1,118,434	1,729,095	758	3,596,529	2,306,162	3,094,114
1917.....	874	4,170,733	2,819,848	2,929,260	929	4,360,088	2,978,709	4,129,303	1,803	8,530,821	5,798,557	7,058,563
1918.....	915	3,638,042	2,736,542	2,689,300	1,154	5,433,297	3,837,531	4,892,731	2,069	9,371,339	6,574,073	7,532,031
1919.....	857	3,458,417	2,673,958	2,740,254	1,167	4,418,186	3,451,032	4,176,367	2,024	7,876,693	6,124,900	6,916,621
1920.....	1,180	5,391,567	4,168,873	4,092,516	1,298	5,668,252	4,377,171	5,281,983	2,478	11,959,819	8,546,044	9,374,499
1921.....	1,471	7,287,556	5,740,902	5,892,078	1,421	7,234,859	5,374,071	5,707,136	2,892	14,522,415	11,415,870	11,599,214
1922.....	1,509	8,006,781	6,404,172	5,495,934	1,227	6,454,362	5,013,287	5,388,476	2,730	14,361,083	11,417,459	10,884,910
1923.....	2,125	12,777,168	8,095,870	7,086,259	1,842	10,855,773	6,862,284	12,181,616	3,867	23,632,941	14,889,699	16,961,875
1924.....	2,740	17,359,208	10,867,258	7,860,290	2,490	16,053,162	10,071,401	19,134,610	5,230	33,412,370	20,938,659	26,994,710
Total.....	12,589	66,900,183	46,576,427	42,175,713	12,443	64,820,524	45,317,659	65,735,278	25,032	131,780,707	91,894,086	107,910,991

TABLE No. 60.—Number of commercial vessels of various nationalities passing through The Panama Canal

Month	Argentinian	Belgian	Brazilian	British	Chilean	Chinese	Colombian	Costa Rican	Cuban	Danish	Danrig	Dutch	Ecuadorian	Finnish	French	German	Greek	Honduran	Italian	Japanese	Mexican	Nicaraguan	Norwegian	Panamanian	Peruvian	Portuguese	Russian	Spanish	Swedish	United States	Uruguay	Yugo Slav	Total	
ATLANTIC TO PACIFIC																																		
1923																																		
July				53	3		2			7		1	1		3	5			2	10	1		13			2			2	4	146		255	
August				58	5		1			2		5	1		4	6			1	8			8			3			2	2	157		491	
September				50	3		3			2		6	4		3	4			1	6			4			3			3	2	111		198	
October				58	3		3			3		2	1		3	6			2	9			5			2			1	1	132		229	
November				62	2		3			3		5	1		7	1			1	9			10			1			5	1	116		231	
December				77	1		1			4		6			3	8			3	10			11			4			3	3	143		278	
1924																																		
January				68	3					5		6			2	6			3	10			10			3			2	3	132		253	
February				62	1					3		3			6	5			2	13			7			1			1	1	105		219	
March				56	1					4		1			3	8			7	7			4			2			1	1	118		212	
April				50	1					3		1			4	6			3	6			2			4			1	1	116		202	
May				66	3		1			1		1			2	8			1	8			3			3			3	1	108		209	
June				53	1		1			2		1	7		3	8			1	4			3			3			1	1	103		193	
Total fiscal year:																																		
1924				713	26		12			34	7	53	1		41	77			20	100	1		78			8			23	19	1,437		2,740	
1923	1			599	32		9			29		56	2		32	49			15	85	1		69			19			6	13	1,068		2,125	
1922				533	27		1			25		34			28	20			11	122	6		68			3			4	21	573		1,569	
1921				502	40		2			28		26			26	3			13	86	4		76			5			2	15	579		1,471	
1920				393	38		4			17		17			9	5			13	84			46			3			2	20	10	493		1,180
1919				308	48		2			37		6			29				47	47			56			33			3	2	10	207		857
1918				305	50		10			44		30			19				2	33	4		145			41			5	12	218		915	
1917				371	50		11			36		36			4				54	6	1		170			43			1	10	7	176		874
1916				193	16		19			10		11			1				19	1	1		18			16			5	103		396		
1915				227	16		16			11		5			2				1	4			1			2			7	223		522		
Total	1	1	3	4,144	343	6	22	37	3	248	7	274	1		190	154	8	3	77	634	18	2	642	44	308	1	13	92	119	5,187	2	5	12,589	
PACIFIC TO ATLANTIC																																		
1923																																		
July				38	4		1			2		6			5	4			3	7			4			1			1	1	139		219	
August				35	3		1			2		3			1	5				5			4			1			2	2	127		193	
September				41	3		1			4		3			1	4			3	4			11			1			1	3	126		215	
October				38	1		1			4		4			1	4				5			1			4			3	1	129		198	
November				43	1		3			2		2			4	5			2	5			5			2			1	2	128		205	
December				53	1		1			2		4			4	7			3	7			8			4			2	3	127		228	

TABLE No. 60.—Number of commercial vessels of various nationalities passing through The Panama Canal—Continued

Month	Argentinian	Belgian	Brazilian	British	Chilean	Chinese	Colombian	Costa Rican	Cuban	Danish	Danzig	Dutch	Ecuadorian	Finnish	French	German	Greek	Honduran	Italian	Japanese	Mexican	Nicaraguan	Norwegian	Panamanian	Peruvian	Portuguese	Russian	Spanish	Swedish	United States	Uruguay	Yugo Slav	Total				
PACIFIC TO ATLANTIC—continued																																					
1924																																					
January				59	1				4		6				5	5		2	2	6	9			2	1	3					4	2	120		223		
February				46	2				2		5				8	8		3	3	6			4		3							3	1	115		199	
March				50	2				2		2				6	6		3	3	8			7		2							2	2	117		217	
April				50	1		1		2		3				3	6		1	1	8			4		3							1	1	116		201	
May				53	1				4		3				3	8		2	2	4			6		4							2	2	112		208	
June				46	1		1		2		5				5	6		1	1	4			2		1							2	2	104		184	
Total fiscal year:																																					
1924				552	21		10		31	4	49			3	42	73		23	71					58	13	35					22	20	1,460		2,490		
1923		3		466	30		9		36		53				24	41		14	78					78	12	41					7	19	926		1,832		
1922				402	26				28		32			2	18	16		12	50					45	5	30					5	14	522		1,227		
1921		1		470	23		6		32		24				23	17		2	34					64	3	28					3	22	10	631		1,421	
1920			1	360	41		1		5		13				34			13	34					60	1	38					21	9	636		1,298		
1919		1		289	45		6		42		13				40			2	40					72	2	42					3	17	317		1,167		
1918		1		397	46		9		37		18				53			2	21					151	2	42					3	6	14	349		1,154	
1917				469	49		12		3		17				5			2	1	18				26	1	43					1	10	11	228		929	
1916				163	17		5		8		4				1			2	1	7				1	75	1	14				8	110	362		1,110		
1915				238	19				13		2				1			1	1	2				26	1	2					10	236		553			
Total	2	6	1	3,758	317	6	20	36	4	268	4	245	1	5	273	159	9	3	75	386	10	1	655	39	304	1	8	96	132	5,615		4	12,443				
TOTAL TRAFFIC BY FISCAL YEARS																																					
1924				1,265	47		22		65	11	102		1	3	83	150		43	171					136	21	70					45	39	2,917		5,230		
1923	1	3		1,065	62		18	1	65		109				56	90		29	163					147	31	80					14	31	1,994		3,967		
1922				935	53				53		66				51	37		20	189					113	8	60					9	35	1,095		2,736		
1921			1	972	63		16	1	60		50				44	19		25	136					140	8	60					4	44	25	1,210		2,892	
1920			1	753	79		2	1	9		29				60	17		26	118					106	4	75					2	2	41	19	1,259		2,478
1919			1	607	93		4	1	79		9				104			4	87					296	2	64					3	27	784		2,024		
1918			1	702	96		2	19	100		48				52			4	54					296	2	83					3	11	26	567		2,069	
1917				780	99		23	6	43		74				9			2	22					145	5	86					2	20	18	404		1,803	
1916				358	33				17		15				2			3	1					44	3	30					1	13	213		1,758		
1915				465	35				24		7				3			3	2					42	1	4					6	17	459		1,075		
Grand total...	3	7	4	7,902	660	12	42	73	7	516	11	519	2	5	463	313	17	6	152	1,020	28	3	1,297	83	612	2	21	189	250	10,802	2	9	25,032				

TABLE No. 61-A.—Origin and destination of all commercial cargo passing through The Panama Canal from the Atlantic to the Pacific, fiscal year 1924

[Figures represent tons of 2,240 pounds]

Month	Tons of cargo from—										Tons of cargo to—										
	East coast, Central America	West Indies	East coast, South America	East coast, Canada	East coast, Mexico	Cristobal, Canal Zone	Continent of Europe	British Isles	East coast, United States	Total from Atlantic ports	West coast, South America	West coast, United States	Far East	Australasia	West coast, Canada	West coast, Central America	Balboa, Canal Zone	West coast, Mexico	West coast, North America	Hawaii	Philippines
July.....	1,388	6,916	9,847	11,402	7,344	98,813	56,452	497,870	690,032	84,732	363,520	113,226	102,861	6,681	4,779	2,476	3,000	167	8,590	-----	-----
August.....	1,567	9,102	11,086	34,520	13,209	82,469	60,932	525,680	738,600	114,203	384,614	132,667	72,254	18,348	6,832	1,022	2,376	31	6,061	192	-----
September.....	-----	2,419	6,364	26,314	7,919	65,333	50,213	359,057	511,719	83,279	218,143	79,066	86,422	7,817	12,396	10,650	10,657	-----	947	2,342	-----
October.....	437	2,366	11,523	28,130	6,714	52,244	77,201	435,209	622,747	139,558	218,576	123,899	102,859	5,292	4,460	4,660	4,660	3,533	1,028	22,134	-----
November.....	-----	7,815	10,024	24,247	5,863	63,243	42,655	474,097	632,914	188,733	269,674	140,790	95,334	200	11,151	6,421	-----	18	4,116	16,477	-----
December.....	-----	8,953	6,416	52,765	8,990	63,868	88,618	504,638	734,278	133,200	242,658	195,970	114,689	12,005	6,287	9,503	1,869	9,972	8,185	-----	-----
January.....	-----	7,467	16,209	13,357	7,789	82,634	64,392	490,464	682,312	85,843	284,521	201,253	88,720	13,536	4,437	-----	-----	7,436	4,945	-----	-----
February.....	5,253	9,580	7,651	19,133	5,635	88,479	77,495	466,589	679,815	100,726	273,748	161,000	103,303	13,616	5,141	-----	-----	-----	6,006	9,307	-----
March.....	5,294	4,024	8,300	20,563	5,622	68,057	64,658	450,090	623,548	113,266	280,013	103,724	83,676	8,448	7,063	7,962	-----	-----	7,928	-----	-----
April.....	5,347	8,177	1,358	19,169	7,941	95,902	84,203	412,935	635,029	102,246	283,649	193,301	112,091	12,975	6,824	7,998	-----	-----	3,917	-----	-----
May.....	-----	8,867	10,000	16,939	9,641	105,016	77,726	483,155	712,344	134,232	266,665	122,630	119,091	24,244	12,392	7,201	-----	-----	12,639	2,521	10,729
June.....	-----	6,310	11,900	18,100	8,768	78,037	78,250	376,866	596,762	108,191	247,375	87,370	114,585	16,924	8,641	11,568	-----	-----	775	1,392	-----
Fiscal year.....	2,004	41,206	90,191	110,677	278,648	94,865	948,095	817,795	5,476,619	7,860,100	1,290,208	3,347,186	1,557,796	1,201,885	141,086	90,403	58,002	18,790	38,488	55,015	61,271

1 Includes cargo for the United States, Canada, or Mexico that can not be definitely assigned on information furnished.

TABLE No. 61-B.—Origin and destination of all commercial cargo passing through The Panama Canal from the Pacific to the Atlantic, fiscal year 1924

[Figures represent tons of 2,240 pounds]

Month	Tons of cargo from—										Tons of cargo to—										
	Miscellaneous	West coast, Mexico	West coast, North America ¹	Hawaiian Islands	West coast, Central America	West coast, Canada	Australasia	Far East	West coast, United States	West coast, South America	Total from Pacific ports	East States, United States	British Isles	Continent of Europe	Cristobal, Canal Zone	East coast, Canada	West Indies	East coast, South America	East coast, Mexico	Miscellaneous	
July	22,761	9,592	2,280	7,125	36,000	44,307	17,897	1,129,834	377,956	1,647,752	1,288,965	153,655	113,007	11,657	78	28,033	78	25,453	26,904	6,250	
August	13,854	6,558	7,500	7,733	15,295	18,907	28,806	1,112,542	231,513	1,430,150	1,131,525	106,907	79,127	7,362	9,542	4,273	5,256	85,857	301	1,560	
September	4,900	8,394	32,103	6,916	13,680	4,568	3,792	1,258,844	355,674	1,654,984	1,208,028	173,052	158,050	19,705	13,810	5,191	39	52,759	26,850	4,900	
October	2,243	3,027	429	4,356	17,234	23,129	11,058	1,155,315	243,110	1,504,820	1,173,185	139,362	111,107	18,479	8,632	9,224	3,213	34,518	7,100	2,243	
November	24,438	1,505	1,500	4,637	71,640	40,815	9,796	1,207,254	245,841	1,583,381	1,141,326	140,173	171,511	15,067	11,917	6,797	---	92,674	5,916	24,438	
December	6,250	4,343	632	15,076	101,881	23,809	13,337	1,100,424	457,864	1,745,020	1,240,803	216,935	191,159	32,888	9,446	13,089	500	61,235	49,200	6,250	
January	29,238	1,623	632	20,447	157,294	35,142	---	1,001,728	343,968	1,563,800	1,151,766	178,404	210,439	19,082	27,330	19,363	2,105	58,012	---	29,238	
February	19,863	1,623	9,462	12,006	161,020	41,404	31,406	1,087,604	306,331	1,648,924	1,132,528	199,826	195,067	14,693	15,926	2,803	---	2,789	---	19,863	
March	18,864	10,015	5,983	12,006	168,556	23,463	15,967	1,014,927	386,800	1,523,692	1,066,275	225,455	189,692	20,752	73,191	8,299	5,243	17,515	9,990	18,864	
April	---	---	---	---	183,121	37,763	11,513	882,168	276,661	1,426,088	986,390	221,026	143,684	8,893	29,758	6,890	2,553	---	23,214	1,400	18,864
May	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
June	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fiscal year	115,880	18,798	93,606	32,446	87,317	1,223,102	376,747	193,918	12,984,300	4,008,496	19,134,610	13,811,341	2,169,332	1,996,485	214,546	197,204	127,352	35,129	504,760	78,461	115,880

¹ Includes cargo from the United States, Canada, or Mexico that can not be definitely assigned on information furnished.

TABLE No. 62-A.—Tons of cargo carried by commercial vessels passing through The Panama Canal from its opening to June 30, 1924, by fiscal years

Nationality	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	Total
Belgian.....					464	406	12,700		23,952		37,522
Brazilian.....						8,916	6,700				15,616
British.....			3,333,750	2,615,675	1,876,939	2,830,283	3,738,257	3,329,861	4,929,317	6,051,842	32,537,083
Chilean.....	50,879	53,573	184,446	153,259	161,340	104,738	61,737	46,182	76,670	107,147	999,971
Chinese.....				13,417	13,421	13,700	14,400				54,938
Colombian.....			3,069	2,091	1,137	27	2,112		7,054	5,897	12,978
Costa Rican.....			7,370				1,200				8,414
Cuban.....	116,003	94,950	242,567	420,063	325,277	42,533	322,059	272,779	307,876	317,274	2,461,981
Danish.....									54,764		54,764
Dutch.....	26,402	61,959	314,203	293,063	119,297	128,442	216,488	290,573	487,937	573,929	2,452,313
Feudtorian.....					72						72
Finnish.....	13,000	7,176	36,680	159,859	286,812	125,240	132,826	139,463	230,175	407,249	1,530,990
French.....						59,239	73,837	121,888	330,134	737,103	1,322,201
German.....				5,741	8,301			11,956	36,533	6,362	63,093
Greek.....											321
Honduran.....		321									321
Italian.....	900		5,700	13,793		63,441	47,988	38,851	75,238	123,156	371,087
Japanese.....	42,600	117,780	446,358	407,399	503,427	726,338	798,617	1,044,515	943,400	935,245	5,925,679
Mexican.....			22,545	253	132		3,785	10			26,735
Nicaraguan.....											6
Norwegian.....	166,522	229,368	597,581	1,090,823	577,679	404,323	637,887	408,268	704,282	539,101	5,355,844
Panamanian.....			135			872	1,500	526	40,589	35,719	79,341
Peruvian.....	8,202	62,210	156,609	143,344	121,521	119,418	105,322	64,370	111,519	102,136	907,654
Portuguese.....						10,775					10,775
Russian.....	21,030	24	3,230	7,059	8,340	12,867	11,343				63,893
Spanish.....			71,080	35,394	10,447	101,563	143,076	23,701	32,178	67,903	484,942
Swedish.....	53,292	47,236	94,515	132,521	143,516	74,244	128,919	141,448	181,810	220,517	1,218,018
United States.....	2,187,904	848,857	1,475,725	2,098,277	2,758,886	4,547,140	5,163,025	4,950,519	11,055,156	16,654,435	51,739,924
Yugo-Slav.....							8,325			45,231	53,556
Total.....	4,888,454	3,094,114	7,058,563	7,532,031	6,916,621	9,374,499	11,599,214	10,884,910	19,567,875	29,994,710	107,910,991

TABLE No. 62-B.—The Panama Canal net tonnage of commercial vessels, by nationality, passing through The Panama Canal from its opening to June 30, 1924, by fiscal years

Nationality	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	Total
Argentinian		2, 335			265	266	8, 092		13, 524		2, 335
Belgian				(¹)		19, 164	4, 566				92, 147
Brazilian						2, 760, 188	3, 978, 329		4, 892, 338	6, 097, 011	23, 730
British	1, 630, 833	1, 161, 097	2, 663, 250	2, 529, 203	1, 915, 744	2, 760, 188	3, 978, 329	3, 785, 526	4, 892, 338	6, 097, 011	31, 424, 119
Chilean	94, 638	91, 243	265, 210	253, 561	253, 561	212, 000	159, 727	150, 398	201, 411	176, 472	1, 839, 301
Chinese				7, 799	15, 204	7, 799	12, 098				42, 900
Colombian				66	66	95	95			5, 767	11, 958
Costa Rican			1, 909	1, 577	945	25	2, 784	18			7, 353
Cuban			9, 292			32, 221	236, 512	227, 473	240, 053	245, 929	9, 994
Danish		68, 011	163, 882	272, 940	213, 534	82, 221	236, 512			88, 276	1, 793, 098
Danzig											88, 276
Dutch		39, 642	260, 500	197, 627	88, 299	132, 535	248, 801	283, 428	510, 970	551, 701	2, 304, 638
Ecuadorian					66					36	102
Finnish			38, 889	147, 805	253, 774	114, 664	4, 281	190, 171	252, 333	4, 798	9, 079
French	10, 703	4, 343				52, 755	67, 334	122, 893	336, 149	600, 156	1, 535, 211
German				6, 572	8, 003			18, 618	23, 526	4, 038	1, 233, 287
Greek											600, 757
Honduran	122	484									606
Italian	4, 158	3, 861	6, 430	17, 218		98, 692	102, 783	73, 393	117, 782	164, 448	588, 765
Japanese	24, 897	81, 818	291, 500	238, 814	341, 064	513, 243	613, 243	872, 066	753, 219	815, 468	4, 547, 731
Mexican			24, 446	229	113		5, 632	2, 219	2, 292	192	34, 523
Nicaraguan			1, 598								1, 644
Norwegian	130, 776	172, 459	490, 534	876, 024	497, 555	397, 632	548, 227	385, 007	597, 359	546, 633	4, 642, 200
Panama	9, 403	439	160	60		1, 007	1, 370	700	61, 828	43, 036	108, 633
Peruvian		74, 429	218, 593	208, 958	106, 956	191, 689	157, 495	161, 930	216, 829	189, 046	1, 595, 328
Portuguese						9, 002					9, 002
Russian		1, 475	4, 546	5, 700	5, 699	6, 093	11, 279				37, 192
Spanish			49, 124	24, 469	11, 066	108, 651	117, 400	27, 264	41, 201	172, 572	599, 747
Swedish		41, 537	69, 202	80, 191	95, 684	76, 825	113, 661	121, 446	130, 361	161, 963	944, 724
United States	1, 700, 145	652, 989	1, 239, 492	1, 704, 040	(²)	3, 791, 088	4, 861, 761	4, 971, 509	10, 208, 536	15, 806, 899	47, 193, 801
Uruguayan						410	4, 508			27, 087	31, 595
Yugo-Slav											
Total	3, 792, 572	2, 396, 162	5, 798, 557	6, 574, 073	6, 124, 990	8, 546, 044	11, 415, 876	11, 417, 459	18, 605, 786	26, 148, 878	100, 820, 397

¹ Argentinian Navy school ship of 2,187 tons displacement.

² Uruguayan cruiser of 3,100 tons displacement.

TABLE NO. 63.—Statement showing, by nationality, the number of vessels, the Panama Canal net tonnage, tolls assessed, and tons of cargo carried through The Panama Canal during the first 10 years of operation

Nationality and year	Number of ships	Panama Canal net tonnage	Tolls	Tons of cargo
United States:				
1915.....	459	1,700,145	\$2,002,845.77	2,187,904
1916.....	213	652,989	724,219.01	848,857
1917.....	404	1,239,492	1,238,322.63	1,475,725
1918.....	567	1,704,040	1,713,827.23	2,098,277
1919.....	781	2,257,342	2,327,261.48	2,758,886
1920.....	1,129	3,791,088	3,805,924.77	4,547,140
1921.....	1,210	4,861,761	4,784,577.35	5,163,025
1922.....	1,095	4,971,509	4,867,495.81	4,950,519
1923.....	1,994	10,208,536	9,474,034.93	11,055,156
1924.....	2,947	15,806,899	14,483,327.71	16,654,435
Total.....	10,802	47,193,801	45,421,836.69	51,739,924
British:				
1915.....	465	1,630,833	1,847,341.10	2,200,514
1916.....	358	1,161,097	1,140,395.07	1,570,660
1917.....	780	2,663,250	2,595,158.60	3,393,750
1918.....	702	2,529,203	2,498,596.49	2,615,675
1919.....	607	1,915,744	1,951,715.87	1,876,939
1920.....	753	2,760,188	2,805,018.50	2,830,268
1921.....	972	3,978,329	3,989,281.58	3,738,257
1922.....	935	3,795,526	3,728,007.80	3,329,861
1923.....	1,065	4,892,338	4,736,221.04	4,929,317
1924.....	1,265	6,097,611	5,814,983.83	6,051,842
Total.....	7,902	31,424,119	31,109,719.88	32,537,083
Norwegian:				
1915.....	42	130,776	141,066.91	166,522
1916.....	44	172,459	149,357.56	229,368
1917.....	145	490,534	448,948.53	597,581
1918.....	296	876,024	823,748.57	1,090,823
1919.....	128	497,555	460,057.68	577,679
1920.....	106	397,632	371,408.79	404,323
1921.....	140	548,227	523,311.94	637,887
1922.....	113	385,007	374,870.62	408,268
1923.....	147	597,359	558,839.74	704,292
1924.....	136	546,633	496,876.96	539,101
Total.....	1,297	4,642,206	4,348,487.30	5,355,844
Japanese:				
1915.....	6	24,897	30,260.40	42,600
1916.....	24	81,818	88,229.68	117,780
1917.....	72	291,500	305,702.63	446,358
1918.....	54	238,814	248,063.30	407,399
1919.....	87	341,064	364,622.57	503,427
1920.....	118	515,243	543,936.93	726,338
1921.....	136	613,245	655,176.51	758,617
1922.....	189	872,466	953,949.00	1,044,515
1923.....	163	753,219	815,638.48	943,400
1924.....	171	815,468	844,976.31	935,245
Total.....	1,020	4,647,734	4,850,555.81	5,925,679
Chilean:				
1915.....	35	94,638	101,275.95	50,879
1916.....	33	91,243	80,192.25	53,573
1917.....	99	265,210	236,588.20	184,446
1918.....	96	254,841	223,146.30	153,259
1919.....	93	253,561	212,511.90	161,340
1920.....	79	212,000	169,472.55	104,738
1921.....	63	159,727	147,023.75	61,737
1922.....	53	150,398	115,757.90	46,182
1923.....	62	201,411	158,182.50	76,670
1924.....	47	176,472	157,035.25	107,147
Total.....	660	1,859,501	1,601,186.55	999,971

TABLE No. 63.—Statement showing, by nationality, the number of vessels, the Panama Canal net tonnage, tolls assessed, and tons of cargo carried through The Panama Canal during the first 10 years of operation—Continued

Nationality and year	Number of ships	Panama Canal net tonnage	Tolls	Tons of cargo
Danish:				
1915.....	24	92,537	\$110,680.30	116,603
1916.....	18	68,011	66,938.80	94,950
1917.....	43	163,882	141,461.44	242,567
1918.....	100	272,946	249,761.14	420,063
1919.....	79	213,534	207,404.47	325,277
1920.....	9	32,221	43,528.35	42,533
1921.....	60	236,512	211,411.86	322,059
1922.....	53	227,473	222,146.65	272,779
1923.....	65	240,053	221,569.36	307,876
1924.....	65	245,929	229,205.17	317,274
Total.....	516	1,793,098	1,734,107.54	2,461,981
Dutch:				
1915.....	7	21,075	24,103.58	26,402
1916.....	15	39,642	43,910.44	61,959
1917.....	74	260,500	270,321.78	314,203
1918.....	48	197,627	214,211.46	233,063
1919.....	19	88,299	97,467.75	119,297
1920.....	29	152,535	128,868.98	128,442
1921.....	50	248,801	229,248.94	216,488
1922.....	66	293,428	260,138.38	290,573
1923.....	109	510,970	450,356.36	487,957
1924.....	102	551,761	489,807.54	573,929
Total.....	519	2,364,638	2,206,435.21	2,452,313
Peruvian:				
1915.....	4	9,403	10,034.30	8,202
1916.....	30	74,429	67,691.30	62,210
1917.....	86	218,593	199,860.25	159,609
1918.....	83	208,958	177,732.30	143,344
1919.....	64	166,956	133,243.12	121,524
1920.....	75	191,689	161,964.75	119,418
1921.....	60	157,495	107,160.64	105,322
1922.....	60	161,930	103,035.30	64,370
1923.....	80	216,829	152,620.10	111,519
1924.....	70	189,046	127,183.38	102,136
Total.....	612	1,595,328	1,240,525.44	997,654
French:				
1915.....	3	10,703	12,843.60	13,600
1916.....	1	4,343	4,782.50	7,176
1917.....	9	38,889	39,446.42	36,680
1918.....	52	147,805	152,028.03	159,859
1919.....	104	253,774	283,971.06	286,812
1920.....	60	114,664	127,818.17	125,249
1921.....	44	155,889	164,575.94	132,836
1922.....	51	190,171	216,475.40	139,463
1923.....	56	252,333	258,360.69	230,175
1924.....	83	386,640	428,571.60	407,249
Total.....	463	1,555,211	1,688,873.41	1,539,099
Swedish:				
1915.....	17	50,824	58,174.76	53,292
1916.....	13	41,537	35,892.70	47,236
1917.....	18	69,202	56,793.78	94,515
1918.....	26	80,191	74,621.25	132,521
1919.....	27	95,684	88,572.73	143,516
1920.....	19	76,825	62,268.74	74,244
1921.....	25	113,661	93,331.25	128,919
1922.....	35	124,416	105,939.90	141,448
1923.....	31	130,361	108,151.33	181,810
1924.....	39	161,993	130,935.00	220,517
Total.....	250	944,724	814,681.44	1,218,018

TABLE No. 63.—Statement showing, by nationality, the number of vessels, the Panama Canal net tonnage, tolls assessed, and tons of cargo carried through The Panama Canal during the first 10 years of operation—Continued

Nationality and year	Number of ships	Panama Canal net tonnage	Tolls	Tons of cargo
Spanish:				
1917.....	20	49,124	\$47,731.15	71,080
1918.....	11	24,469	24,032.78	35,394
1919.....	5	11,066	11,092.29	10,047
1920.....	41	106,651	98,228.02	101,563
1921.....	44	117,400	118,548.41	143,076
1922.....	9	27,264	32,712.88	23,701
1923.....	14	41,201	38,102.75	32,178
1924.....	45	172,572	160,336.90	67,903
Total.....	189	549,747	530,785.18	484,942
Italian:				
1915.....	2	4,158	3,992.40	900
1916.....	1	3,861	2,779.92	0
1917.....	2	6,430	6,029.80	5,700
1918.....	4	17,218	16,875.70	13,793
1920.....	26	98,692	98,959.79	63,441
1921.....	25	102,783	103,206.60	47,988
1922.....	20	73,393	75,511.30	38,851
1923.....	29	117,782	119,329.58	75,258
1924.....	43	164,448	170,565.90	125,156
Total.....	152	588,765	597,250.99	371,087
German:				
1920.....	17	52,755	49,953.38	59,239
1921.....	19	67,334	62,908.95	73,837
1922.....	37	122,893	120,087.25	121,888
1923.....	90	336,149	312,395.35	330,134
1924.....	150	660,156	604,085.65	737,103
Total.....	313	1,239,287	1,149,430.58	1,322,201
Miscellaneous:				
1915.....	11	22,583	24,931.12	21,036
1916.....	8	4,733	3,700.39	345
1917.....	51	41,951	41,097.84	36,349
1918.....	30	21,937	22,208.60	28,561
1919.....	27	30,411	31,907.67	31,877
1920.....	17	43,861	48,581.43	47,563
1921.....	44	54,712	57,126.19	69,166
1922.....	20	21,555	21,704.22	12,492
1923.....	62	107,245	104,612.64	102,133
1924.....	67	173,250	153,072.34	155,673
Total.....	337	522,238	508,942.44	505,195
Total traffic:				
1915.....	1,075	3,792,572	4,367,550.19	4,888,454
1916.....	758	2,396,162	2,408,089.62	3,094,114
1917.....	1,803	5,798,557	5,627,463.05	7,058,563
1918.....	2,069	6,574,073	6,438,853.15	7,532,031
1919.....	2,024	6,124,990	6,172,828.59	6,916,621
1920.....	2,478	8,546,044	8,513,933.15	9,374,499
1921.....	2,892	11,415,876	11,276,889.91	11,599,214
1922.....	2,736	11,417,459	11,197,832.41	10,884,910
1923.....	3,967	18,605,786	17,508,414.85	19,567,875
1924.....	5,230	26,148,878	24,290,963.54	26,994,710
Total.....	25,032	100,820,397	97,802,818.46	107,910,991

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