College of Canada, and Edward T. N. Macdougal, are both well-known engineers and contractors in London and Chili. In the latter country they have carried a number of large and important works to a successful finish.

To more fully give a comprehensive idea of this undertaking, a map is given of the route showing connections with the coast ports, a grade profile showing altitudes which vary from 3,250 to 7,852 feet above the sea, and a number of photographs illustrative of the buildings, nature of work and country through which the railway passes.

INTERNATIONAL ENGINEERING CONGRESS, 1915

Rapid progress is being made in working out the final programme of papers for the International Engineering Congress to be held in San Francisco in 1915.

The first volume of the publication of the Congress will consist of a series of articles descriptive of the various technical features of the design and construction of the Panama Canal. The various topics which will be treated are noted in the following list:—

(1 Introductory Chapter.
(2) Dry Excavation for the Panama Canal.
(3) Dredging in the Panama Canal.
(4) Terminal Works, Dry Docks, and Wharves of the Panama Canal.
(4) Permanent Shops of the Panama Canal.
(6) Coaling Plants and Floating Cranes of the Panama Canal.
(7) Meteorology and Hydrology of the Panama Canal.
(8) Design of Locks, Dams, and Regulating Works of the Panama Canal.
(9) Method of Construction of the Locks, Dams, and Regulating Works in the Atlantic Division of the Panama Canal.
(10) Method of Construction of the Locks, Dams, and Regulating Works in the Pacific Division of the Panama Canal.
(11) Design of Lock Walls and Valves for the Panama Canal.
(12) Design of the Spillways on the Panama Canal.
(13) Gates of the Panama Canal Locks.
(14) Electrical and Mechanical Installations of the Panama Canal.
(15) Emergency Dams above Locks of Panama Canal.
(16) Municipal Engineering and Domestic Water Supply in the Canal Zone.
(17) Reconstruction of the Panama Railroad.
(18) Aids to Navigation of the Panama Canal.
(19) Geology of the Panama Canal Zone.
(20) The Working Force of the Panama Canal.
(21) Sanitation in the Panama Canal Zone.
(22) Purchase of Supplies for the Panama Canal.

Each of these topics will be treated by someone on the canal force who has been responsible for the design and construction described. The introductory chapter as well as the topic of Dry Excavation for the Panama Canal will be handled by Colonel Goethals himself.

The programme of papers for the various sections of the Congress is practically completed and notices of them will be published in the near future.

Buoys of reinforced concrete built for Kingston, Jamaica, weigh each about 5 tons, carry about one ton of ballast, and are said to cost a little less than half as much as steel buoys of the same size. The buoys are cylindrical in shape, with the bottom concaved to give protection to the mooring chain eye bolt. The sides have curved horizontal ribs, with bottom reinforced bars built up inside the shell, and waterproof cement on the outside and inside builds up the total thickness of the sides to 3 inches. The top is a solid slab, with reinforcement extended down the side. A temporary manhole serves for removing the interior centring and for convenience in lowering; but its cover is sealed in place when the work is finished. As water sometimes leaks in during the first few days a buoy is in use, a pump hole with brass screw cap is provided.

COAL AND COKE PRODUCTION IN 1913.

THE coal mining industry in Canada in 1913 was marked by an increased production in the Maritime provinces of Nova Scotia and New Brunswick and in the Province of Alberta and a falling off in the provinces of Saskatchewan and British Columbia. In the latter province the decrease was entirely due to the continuance throughout the year of the labor strike in the mines on Vancouver Island. The lessened production in these two provinces was, however, more than offset by the increased output in Alberta and Nova Scotia so that the net result for the year was an increase of about 602,260 tons or 4.15 per cent.

The total production of marketable coal for the year comprising sales and shipments, colliery consumption and coal used in making coke, etc., was 15,115,089 short tons, valued at $36,250,311, as against 14,512,829 tons, valued at $36,019,044, in 1912. Nova Scotia shows an increase of 188,839 tons, or 2.4 per cent.; Alberta an increase of 903,800 tons, or 27.9 per cent.; Saskatchewan a decrease of 16,167 tons, or 7.1 per cent., and British Columbia a decrease of 494,548 tons, or 15.4 per cent. The figures for the Yukon represent for 1913 the production from the Tantalus field only, no record having as yet been received of the output below Dawson.

The production by provinces during the past three years, as given in a recent preliminary report by John McLeish, B.A., of the Division of Mineral Resources and Statistics, Canada, is shown in Table I.

Table I.—Production of Coal by Provinces.

Province.	Tons.	Value.
	—1911—	
Nova Scotia	7,004,420	$14,071,379
British Columbia	2,542,532	7,945,413
Alberta	1,511,036	3,979,264
Saskatchewan	206,779	347,248
New Brunswick	55,781	111,562
Yukon Territory	2,840	12,780
Total	11,323,388	$26,467,646
	—1912—	
Nova Scotia	7,783,888	$17,374,750
British Columbia	3,208,997	10,028,116
Alberta	3,240,577	8,113,525
Saskatchewan	225,342	368,135
New Brunswick	44,780	89,560
Yukon Territory	9,245	44,958
Total	14,512,829	$36,019,044
	—1913—	
Nova Scotia	7,972,727	$17,796,265
British Columbia	2,714,449	8,482,653
Alberta	4,144,377	9,462,836
Saskatchewan	209,175	347,685
New Brunswick	70,311	140,622
Yukon Territory	4,050	20,250
Total	15,115,089	$36,250,311

The exports of coal in 1913 were 1,562,020 tons, valued at $3,961,351, as compared with exports of 2,127,133 tons, valued at $5,821,593, in 1912, a falling off of 565,113 tons or over 26 per cent.

Imports of coal during the year included bituminous, round, and run of mine 10,743,473 tons, valued at $21,756,658; bituminous slack, 2,816,423 tons, valued at