

A special despatch from Nelson states: "The contract for the hydraulic and electrical machinery for the City of Nelson power plant on the Kootenay River has been awarded to Allis-Chalmers-Bullock, Limited, Montreal. The tenders were: Canadian General Electric Co., \$32,000 for the electrical machinery; the Canadian Westinghouse Co., \$31,376 for the electrical machinery, and Allis-Chalmers-Bullock, Limited, \$29,985 for the electrical and \$13,600 for the hydraulic machinery. The latter company having tendered for both the hydraulic and electrical machinery had an advantage over the other two and were awarded the contract.

That the steam turbine is rapidly increasing its foothold in the power field is evidenced by the remarkable increase in manufacture of the well-known Westinghouse-Parsons type. During the six months ending June 30th, 1905, The Westinghouse Machine Company, exclusive builders of the Westinghouse-Parsons type, have contracted for no less than 82,000 kilowatts in turbo-generating machinery, averaging nearly 1,175 kw. capacity per turbine unit. These machines range in size from 200 kw. to 7,500 kw. The latter will be the largest turbines in the world, and three units of this size are under contract for Greater New York railway and lighting power stations. In the distribution of these machines among the various industries, the electric railway has claimed the largest number of machines, averaging 1,496 k.w. in capacity; next in order, industrial plants, averaging 571 kw. capacity, and light and power plants, averaging 1,529 kw. capacity. In the order of total capacity, railway plants have required 38,900 kw., lighting plants, 26,300; industrial, 12,000; miscellaneous, 4,800. The list bears excellent witness to the increasing possibilities of the turbine, and presages a brilliant future. The equipments noted represent solely actual sales only and not including contemplated business or partially closed contracts.

The Elwood Tinworkers Gold Mining Co., of Elwood, Indiana, has ordered from the Merralls Engineering Co. a six-stamp and roller mill, to handle one hundred tons a day, for their mine at Lardeau, B.C. It will be operated by the water power plant to which recent reference was made in the Mining Rev. w. The Craig Gold Mining & Reduction Co., which has the first Merralls stamp mill in operation in Canada, at its Buckingham mine, will shortly add a roller mill. The Merralls Co. has been incorporated in Ontario for the manufacture of mining machinery at London, Ont. Mr. L. A. Morrison is president and manager; Mr. F. D. Woodworth, secretary-treasurer.

The Sullivan Machinery Company is making some important additions to its manufacturing plant at Claremont, N.H., in order to keep pace with the rapid growth of business in air compressors, coal cutters, rock drills and other mining and quarrying machinery. The improvements comprise six new buildings, practically doubling the present plant.

Messrs. Babcock & Wilcox, Montreal, have recently installed boilers as follows:—Canadian Pacific Railway Co., Montreal shops, 1,400 h.p. additional, equipped with Babcock patent superheaters and automatic chain grate stokers; Winnipeg City Water & Electric Light Plant, Winnipeg, Man., 500 h.p., equipped with Babcock patent superheaters and automatic chain grate stokers; Winnipeg Electric Railway Company, Winnipeg, Man., 2,000 h.p., equipped with "Neemes" patent shaking grates, etc.; Dominion Coal Co., Sydney, N.S., 2,500 h.p.; J. R. Booth, Ottawa, 2,000 h.p., boilers and superheaters; Belgo-Canadian Pulp & Paper Co., 500 h.p.; Central Electric Co., Montreal, 200 h.p. additional, Canadian Pacific Railway, Winnipeg, hotel and station, 800 h.p., Canadian Pacific Railway shops, Winnipeg, Man., 1,500 h.p., with superheaters, Canada Car Co., Montreal, 1,800 h.p., with superheaters; Calgary City Electric Lighting plant, Calgary, N.W.T., 500 h.p., with "Neemes" shaking grates. F. W. Bird & Son, Hamilton, Ont., 75 h.p.; South Western Traction Co., London, Ont., 900 h.p.; Singer Mfg. Co., St. Johns, Que., 1,625 h.p. The Dominion Government last fall installed Babcock & Wilcox marine boilers in the Dominion icebreaker "Montcalm," which was used so successfully in breaking the ice on the St. Lawrence during the past winter. The Babcock & Wilcox Co. are also installing an additional economizer and induced draft plant for the Canadian Pacific Railway at Fort William, Ont.

**THE IRON AND STEEL TRADE IN THE UNITED STATES.**

Says the Coal Trade Journal, discussing iron and steel conditions in the United States:—

"Iron and steel and associated products are in demand to such a degree that some of the manufacturers say they are surprised themselves at the volume of tonnage in sight for the next twelve months. It is admitted that the orders already booked will keep mills and furnaces employed at almost limit capacity until well into the second quarter of 1906. Sheets constitute the only item on the list that is regarded as dull, but even here there is expectation of more activity after September 1st. Pig iron is firmer at about old quotations, but sales reported are not in so large a tonnage volume as last month, when buyers evidently sought to cover requirements at the lowest point, and most of them

did so. Out of 41 blast-furnaces in this county, 39 are in blast or will be by the end of this week, and the others as soon as fit for operation. The operations are largely on orders already booked and a new purchasing activity in pig is not expected much before October again. The purchases by the railroads for rails, track supplies and car iron has been a surprise because of the large volume. This is accounted for on the earnings of the roads and the prospects of a large movement of crop products during the winter, which justifies expenditures that have been long needed but held in leash because the money to carry them forward was not previously in sight. Rail orders now booked, with those carried over, including foreign bookings, are authoritatively said to aggregate about 2,700,000 tons, which is pretty close to yearly capacity of all the mills, which is about 3,200,000 tons within the country. Structural materials for bridges, buildings, elevated roadways, ships and miscellaneous uses also embrace a heavy tonnage, while the plate and bar orders constitute a heavy percentage. The iron masters are all in complacent mood, seeing active business with profits ahead for some time, with intimations that before the orders already on hand are filled there will be others of a tonnage that gives promise of a good year for 1906. Machinery makers are busy also, much more so than during the first half of the year. This is due, in large part, to the tremendous development of mining enterprises in the Rocky Mountain States, Alaska, British Columbia and Mexico, to say nothing of countries farther south and abroad. Pittsburg is heavily interested in copper and oil ventures in the West, and machinery orders and pipe and tanks for those sections usually come here.

**WORLD'S OUTPUT OF COPPER**

The production of copper throughout the world in 1904 is placed at 1,407,056,000 pounds, an increase of 7 per cent. over the output in 1903. In fact, the average yearly increase for the past ten years has been 7.3 per cent. The average yearly increase in the United States production during the same period was 3.2 per cent. The United States has been creeping up in its proportion of the world's supply until today its mines furnish 55 per cent. of the world's output.

We give herewith the world's production of copper during the past decade, in pounds, and the yearly percentage of increase:—

Year.	Pounds.	Inc. %
1895..	749,425,600	...
1896..	836,333,120	12.0
1897..	893,659,200	6.0
1898..	961,309,440	8.0
1899..	1,051,254,400	9.0
1900..	1,088,312,960	4.0
1901..	1,444,686,560	5.0
1902..	1,214,453,080	6.0
1903..	1,310,581,440	8.0
1904..	1,407,056,000	7.0
Average..	.....	7.3

**ANTHRACITE MINING COSTS.**

The cost of producing anthracite coal in the United States has been considerably increased since the recent strike. The following table shows the costs of mining of three important companies—the Delaware, Lackawanna & Western, the Delaware & Hudson, and the Lehigh Coal & Navigation Company. The item of improvements at mines is included in the cost of coal, as it is a necessary part of the expenses of mining, and simply means such development as is really required to maintain the production. The averages given in the table are based on the entire quantity of coal handled by the respective companies.—

	D.L.&W.	D.&H.	L.C.&N.
Cost of coal mined and bought.....	\$1.72	\$2.01	\$1.79
Improvements at mines.....	0.08	0.08	0.23
Total cost of coal.....	\$1.80	\$2.09	\$2.02
Transportation and selling .....	1.79	1.14	—
Total cost .....	\$3.59	3.23	—
Average selling price .....	3.97	3.57	—

The Delaware & Hudson costs include a sinking fund charge for all coal mined from the company's estate, which averages four cents per ton on all coal handled by the company.

**COAL OIL BOUNTIES.**

It is estimated that about \$340,000 was paid in bounties on coal produced in Canada during the last fiscal year. At the rate of 1½c per gallon this would represent a net output of some two and one-quarter millions of gallons of crude petroleum. This output of Canadian wells is, while considerable, of course far short of the total consumption. In addition to the home production there was imported during the year about twenty-two million gallons of coal oil, naphtha, gas oil and the like products of petroleum.