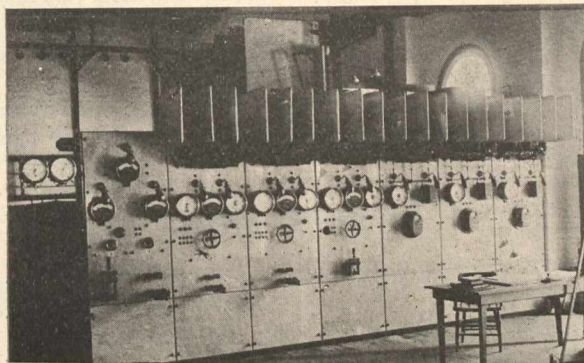


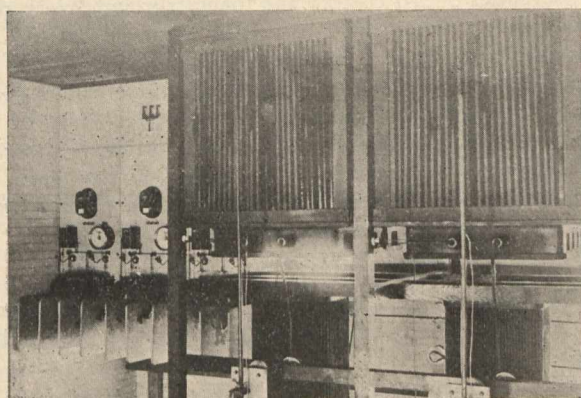
gineer, Wm. Anderson, who has designed and executed the work.

A three-mile feeder is taken off at Grand Forks, twelve miles from Cascade, to the Granby smelter of the Granby Mining and Smelting Co., where current is used for driving Westinghouse induction motors of sizes ranging from three to seven hundred horsepower, and of an aggregate capacity of 2,400 horsepower.



Switchboard.

The sub-station at Phoenix is located at an altitude of about 3,500-ft. above the power-house. The building is of brick, with one end left for future extension, and contains the transformers, line switches, fused circuit breakers, switchboards, etc., substantially duplicating those at the power-house. Engraving No. 6 shows the interior of this sub-station, which, for the immediate present, will be called upon to supply current for two 700-h.p., Westinghouse, type "C" motors for driving two large compressors, a 100-h.p. motor for stone crusher, and a 150-h.p. motor for hoist, as well as furnishing the current for lighting the town of Phoenix.



Interior of Sub-Station.

The Cascade Water, Power and Light Co. estimates that it will have a supply, at low water, for about 6,200-h.p. This will enable the doubling of the present output. All the plans were made and carried out with the view of extending the plant to its full capacity, and from present indications it would seem that the company will have a demand for all the power it can furnish.

—The Engineering News of New York points out that the proposed New York barge canal, estimated to cost about \$100,000,000, may mean so much money thrown away, in the event of the construction of the Montreal, Ottawa and Georgian Bay, 22-ft. waterway through French river, Lake Nipissing and down the Ottawa. By the latter the distance from

Chicago or Duluth to Montreal would be no greater than to Buffalo, about 900 miles, and allowing for delays in passing locks, the time to Montreal would be only fourteen hours longer. A rate on grain of $1\frac{1}{4}$ cents to Buffalo would be equivalent to $1\frac{1}{2}$ cents to Montreal. The barge canal would be useless as an outlet for the grain of the West, if the Canadian canal were built, as it will be some day.

—The telephone question is now before Parliament, W. F. Maclean, M.P., having introduced a bill to compel railway companies to give all telephone companies equal facilities at their stations. This would prevent such difficulties as occurred at Locust Hill. The bill went to a special committee.

—The three companies which have been granted franchises on the Canadian side of the river at Niagara are actively at work. The Canadian Niagara Power Company will develop 100,000 h.p., the Ontario Power Company, 150,000 h.p., and the Toronto and Niagara 125,000 h.p. The expenditure on the three works will reach from \$12,000,000 to \$15,000,000.

—The duty of 57 cents a ton on Nova Scotia coal entering the United States has been taken off. As the Maritime Province coal miners have to look to the United States as a market for a large portion of their output, this will give a stimulus to mining operations, but as there is still a duty of 53 cents a ton on United States bituminous coal entering Canada, our western manufacturers, who are too far away from Nova Scotia to use their coal, are handicapped as to fuel in their competition with United States manufacturers.

—The Government at Ottawa has only made one change of any account in the tariff, as announced in the budget speech. It asks for power to impose, by order-in-council, a duty of \$7 a ton on steel rails whenever it can be shown that the mills in Canada are in a position to manufacture steel rails in sufficient quantity to supply the ordinary requirements of the market. The time for free admission of beet sugar and alluvial gold mining machinery is extended. A surtax is imposed on goods imported from countries which do not trade with us on fair terms. This will hit Germany worse than any other country.

—The worst railway accident of the month was a head-on collision on the Intercolonial, near Windsor, between a fast freight and a passenger train, the latter running at a very rapid rate to make up time. The semaphore was up against the passenger train, but the engineer did not stop, and the only explanation he can give is that he must have lost his senses. He will doubtless lose his situation. Four train men were killed, and the passengers had a most wonderful escape. Four cars left their trucks and shot over the engine for two hundred yards, yet, marvellous to say, no one in them was seriously injured. This fact is attributed to their being built with steel frames.

—Prizes for the summer theses at McGill College, Montreal, have been awarded as follows: In the electrical engineering course, the Greenshields' prize will be divided equally between R. Y. Conklin and A. E. Foreman. In the mechanical engineering course, the Crosby Steam Gauge and Valve Company's prize, to F. A. McKay. In the mining engineering course, the Drummond prize to R. A. Chambers and O. Hall. The scholarship for research, with special reference to national industries, goes to H. Lester Cook. It is worth £150 for two years.