

a rock breaker, and one 75-kilowatt synchronous motor operating all machinery about the mine, including generators for electrolytic work.

These motors, as well as all others referred to hereafter, are of Canadian General Electric manufacture. In the properties of the British-American Corporation are four 150 horse-power induction motors, each operating a double drum hoist through equipments which are in every way similar to those at the War Eagle mine. All underground work in and about Rossland is operated at 220 volts. Aside from mining work, the principal power installation is that of the general machine shop of Cunliffe & Abblett, where a 50 horse-power induction motor is installed. There are many small motors ranging from one to five horse-power in size for the furnishing of light power in different industries in Rossland.

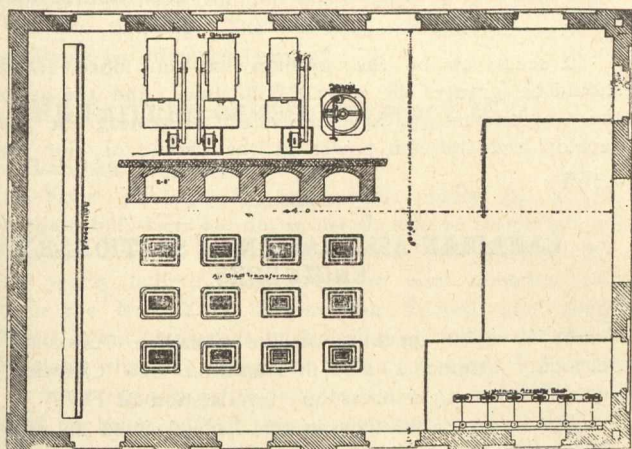


Figure 5—Floor Plan of Sub-Station at Rossland.

One of the most interesting points to be brought out by the Kootenay-Rossland transmission is the demonstration of the fact that the operation of synchronous and induction motors in large units for the driving of hoists and compressors will not necessarily create serious disturbance in the voltage of the distribution circuits, provided high voltage, ample fly-wheel effect and capacity prevails. During daylight the power and lighting circuits are operated in parallel although they are separated and operated independently from the power house by night. The War Eagle hoist, however, is operated on an independent circuit by day, but at night it is cut into the power circuit at the Rossland sub-station.

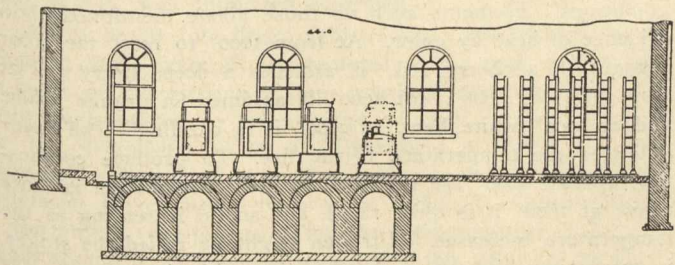


Figure 6—Side Elevation of Sub-Station at Rossland.

The conception and commencement of the work on the remarkably interesting transmission of the West Kootenay Power and Light Company, Limited, are largely due to the efforts of Sir Charles Ross, Bart., and Mr. Oliver Durant. The charter was obtained in the name of Mr. Patrick A. Largey, president of the Centre Star Mining and Smelting Company, Oliver

Durant, manager, and C. R. Hosmer, manager of the Canadian Pacific Railway Company's telegraphs, and it was afterward transferred to the West Kootenay Power and Light Company. Preliminary surveys were made early in 1897, but it was in July of that year that the location of the plant was definitely settled and actual construction begun. The plans of the company contemplate the ultimate utilization of the entire three falls. The plant is under the personal management of L. A. Campbell, who fills the position of electrical engineer in addition to his duties as general manager. The line was erected under the supervision of B. O. Boswell, so well known in California, as superintendent of construction of the lines of the Folsom-Sacramento, Fresno, and other transmissions.

#### A LARGE IRRIGATION SCHEME.

The Canadian Pacific Railway has made a proposition to the Canadian Government, which, in the interest of the great North-West, it might be wise to accept. The company is still entitled to 3,300,000 acres of land under the original main line grant, which is yet unallotted. It offers to take 2,500,000 acres in the arid belt between Calgary and Medicine Hat if it is given the remaining 800,000 acres in the Manitoba and Northwestern reserve—that is, land set aside for the M. & N. W. railway. It will undertake to construct irrigation works for the purpose of reclaiming the 2,500,000 acres, at an estimated cost of from \$3.50 to \$4 an acre, or from \$8,750,000 to \$10,000,000 in all. The water will be taken from the Bow, Saskatchewan and other rivers in the locality. It asks which is only reasonable, that the land, which lies along the railway, should be given en bloc instead of in alternate blocks, as, besides the added cost, it would be manifestly unjust to allow the locaters of the alternate blocks to enjoy the benefit of the irrigation works without contributing to the cost. It is estimated that the land so reclaimed would provide homes for 10,000 farmers, or an agricultural population of 50,000, besides those of other callings who would be necessary for their maintenance. The land without irrigation is worthless for agricultural purposes, and if proper conditions are arranged it might be well to allow the railway company to undertake these irrigation works, even if there is a pretty good thing in it for them.

New York appears to have done a wise thing when it changed its system of payment for snow removal from so much a load to payment for the area cleared. After a recent snow storm, what would have cost \$77,000 under the old plan, was accomplished for \$49,000. In addition, it leaves the corporation men free to collect garbage and attend to their regular work.

—The telephone question has reached an acute stage in Ontario. The Markham and Pickering Co-operative Telephone Company, consisting of farmers who have installed an independent line, wished to place an instrument in Locust Hill station on the C.P.R., and presumably other stations, for their convenience in ascertaining when cars had arrived for shipping stock, etc., but were refused on the ground that under an agreement the Bell Telephone Co. had exclusive telephone rights in the C.P.R. stations. An information was therefore laid against S. F. Sise, president of the Bell