

business, 1st connection, \$30.68; 2nd connections, \$28; special rates to large customers. Residence: \$24.35. Measured service: \$14.61, and two cents per outgoing call. Extension telephones: \$4.87 per annum. Desk telephones: \$1.22 per annum additional. Three-fourths of the subscribers take the unlimited service. The system, which includes nineteen miles of conduits, and thirty-five miles of ducts, containing 4,910 miles of wire, cost \$210,400. A special feature in connection with the Hull system provides for free intercommunication between the subscribers of the municipal service and those of the National Telephone Company in Hull and other towns. This arrangement is due to the fact that an agreement granting the company underground privileges was entered into some years ago, and upon the municipality deciding to establish its own service, notice to terminate these rights was given to the "National." The company fought the issue to the House of Lords, and being defeated, the matter was finally settled on terms which enable the municipality to carry on its business under much more favorable conditions than prevail elsewhere.



PERSONAL.

John F. Johnson, special engineer of the Canada Car Co., was in Toronto the last week in December.

W. W. Brown, superintendent of the Crow's Nest Pass Co.'s light and power plant, at Fernie, B.C., is holidaying at his home in Petrolia, Ont.

Theophile Viau, contractor, of Hull, died last month of consumption of the throat, at the age of 57. Mr. Viau was a well-known citizen, and had a large share in the construction of the city waterworks.

Robert J. Fleming, assessment commissioner for Toronto, has been appointed manager of the Toronto Railway Co. E. H. Keating, his predecessor in this office, becomes consulting engineer for Mackenzie & Mann, and has left for Mexico in connection with the syndicate's concessions in that country.

E. W. Carr, formerly assistant engineer to Mr. Goldmark, chief engineer of the C.P.R. shops at Montreal, has been transferred temporarily to Winnipeg, to assist F. Crosby, the company's resident engineer, in the installation of the steam and electrical power plants.

The following were visitors to Toronto during December: D. W. Robb, of the Robb-Armstrong Co., Amherst, N.S.; H. J. Fuller, of the Fairbanks Co., Montreal; F. H. Leonard, of Montreal; E. G. Yeates, of the London Machine Tool Co., London; F. D. Shallow, of Moniteur du Commerce, Montreal.

The friends of E. G. Barrow, city engineer of Hamilton, will sympathize with him in the bereavements he has suffered in the past month. Mr. Barrow's son, John J., died as the result of injuries sustained while working on the double tracking of the Grand Trunk, and Mrs. Barrow died the next day from the shock of her son's death.

J. F. Birchard, formerly with the C. H. Mortimer Publishing Co., and for the last three years with J. T. Wing & Co., of Detroit, has severed his connection with that company, and after January 1st will represent on the road J. N. Tallman & Sons, of Hamilton, manufacturers of babbit metals and solders and high grade bronze and brass castings.

The name of J. H. Ashdown, of Winnipeg, is being mentioned for the vacant position on the Transportation Commission, caused by the death of John Bertram. Mr. Ashdown is sixty years of age, and is the owner of the largest hardware business west of Toronto. He has been president of the Winnipeg Board of Trade, has taken a leading part in municipal affairs for many years, and is known throughout the West as one of the ablest business men of the Dominion.

After having built the Canadian Niagara Power Co.'s great hydraulic plant, at Niagara Falls, Cecil B. Smith has returned to Toronto to resume practice as consulting and contracting engineer, with offices at 36 Toronto St. Mr. Smith is a "made in Canada" engineer, and the record he has made as resident supervising engineer of one of the greatest water-power plants of the world, reflects credit upon the

rising generation of Canadian civil engineers. At the annual meeting of the Canadian Society of Civil Engineers this month, Mr. Smith will give some account of the huge work completed at Niagara Falls.



PORT ARTHUR AND FORT WILLIAM.

Examples of Municipal Ownership.

(Correspondence of Canadian Engineer.)

The men who have been administrators of the affairs of the "twin towns" of Port Arthur and Fort William have only to maintain their integrity along with their local patriotism to be regarded as statesmen when the civic and industrial history of Canada is written. They have already successfully dealt with problems in civic government at which the large cities of Eastern Canada have balked, and they are now laying the foundations of public control on lines that will make for the best development of the power which these cities of the future seem destined to exert upon the Dominion commercially and otherwise. That they have a destiny, no one who looks at the map of Canada can doubt. They are the great natural harbors of the greatest lake in the world, this lake itself being the Atlantic Ocean of the wonderful chain of inland seas that makes Canada unique in the geography of the world. Whatever the future of Hudson Bay may be, these cities will be a great entre-port for the grain going out of and the merchandise coming into the prairie lands of the West. Thunder Bay and the mouths of the Kaministiquia were a great trading post in the days of the Indians and canoe traffic, and the hardy French pioneers endorsed the judgment of the Indians as early as 1669. Verendrye made Fort William a base of supplies when he made his first journey to the Red River in 1731. Nature has marked the position out as a great port under modern conditions of traffic in great ships more distinctly than under the primitive conditions of the past. Fort William alone has over 25 miles of natural waterfront, the shallowest depth of which is 21 feet, while in the marshy flat, that now separates it from Port Arthur, there is easy dredging for the creation of more docks than there are in London or New York. It is said that vessels of 18 ft. draft can navigate for eight miles or more up the river Kaministiquia, and level land runs back over a mile from the river for nearly seven miles of this distance, affording still more docking and railway accommodation. Then there is the Mission river, a delta of the main river, giving in its two miles of course more deep water frontage.

Port Arthur is already a great lake port, and there is at present a keen rivalry between the towns for leadership in the lake and railway traffic. In civic and commercial relationship there is much analogy between the history of these towns and Minneapolis and St. Paul, which, while separated only by a river, are rivals in everything but their dealings with the outside world. Port Arthur and Fort William are eagerly competing for the advantage of being the lake terminus of the Grand Trunk Pacific, but it may be that both will get a share of this new traffic. Gold, copper and iron give variety to the resources of the country back of Thunder Bay, the great Mesaba iron range of Minnesota extending into this country. As noted in the local papers, preparations are being made to establish iron blast furnaces here and to develop a part of the 30,000 electrical horse-power available from the Kakabeka Falls on the Kaministiquia, which are sixteen miles distant from the town as the crow flies, or eighteen miles following the course of the river. These falls have a total fall of 118 feet, and if all the power is developed that can be, it will easily yield 50,000-h.p. Then Port Arthur has its own water power from the Current river, now supplying the lighting system of the town. About 5,000-h.p. is available now, and this can be extended when required by several thousand horse-power more. Some of this power has already been contracted for by the Ogilvies for their elevators and projected flour mills and by Mackenzie, Mann & Co. in connection with the Canadian Northern Railway, and the blast furnaces in which they will be interested. No doubt, also, the Canadian Pacific Railway, whose transcontinental line first brought Port