CANADIAN ELECTRICAL ASSOCIATION.

The annual convention of the Canadian Electrical Association will be held on the 21st, 22nd and 23rd of June in the rooms of the Canadian Society of Civil Engineers, 877 Dorchester St., Montreal, and bids fair to be a successful one. Among the items of the programme already arranged for are the following: A paper on "Transformers," by R. T. MacKeen, Canadian General Electric Co., Toronto; "Operation of Transformers at Varying Frequencies and Voltages," by M. A. Fammett, Montreal Light, Heat and Power Co.; "Induction Motors," by Mr. Burson, Allis-Chalmers-Bullock Co., Montreal; "Economy of Isolated Plants," by K. L. Aitken, consulting Electrical Engineer, Toronto; "Carrying Capacity of Enclosed Conductors," by Prof. R. B. Owens, McGill University; "Incandescent Lamps," by A. B. Lambe, of the Canadian General Electric Co., Toronto; "Operation of Alternators in Parallel," by A. L. Mudge, formerly of Montreal, now of Milwaukee; "Selection and Maintenance of Service Meters," by Wm. Bradshaw, of the Canadian Westinghouse Co., Montreal.

Those who remember the valuable information brought out through the "Question Box," instituted through the patient industry of A. A. Dion, will be glad to learn that Mr. Dion has prepared another budget of questions, the answering of which will throw fresh light on many difficulties encountered in practice by members. These questions relate to the management of central stations, to rates for lighting and power, to water wheels, boilers, engines, and steam turbines, generators, motors, transformers, wires, cables, meters, lamps, and miscellaneous.

Among the social features arranged for are a luncheon at the Allis-Chalmers-Bullock Company's works, a smoking concert, and visits to the various sub-stations of the Montreal Light, Heat & Power Co. A trip to Shawinigan is also under consideration. The laboratories of McGill University will be open to inspection by the delegates. The local entertainment committee is composed of: H. D. Bayne, Canadian Westinghouse Co. (chairman); R. E. T. Pringle, Prof. R. B. Owens, H. J. Fuller, The Canadian Fairbanks Co.; C. F. Sise, assistant superintendent, Bell Telephone Co.; Edgar McDougall, Caledonian Iron Works; Ed. F. Sise, manager, Wire and Cable Co.; R. S. Kelsch, consulting engineer; Wallace C. Johnson, Shawinigan Water and Power Co.; W. F. Dean, Canadian General Electric Co.; Alfred Collyer, Allis-Chalmers-Bullock Co. The secretary-treasurer of the Association is C. H. Mortimer, Confederation Building, Toronto.

A NEW OPINION OF THE WEST.

While travelling the other day I shared a seat with a keen-eyed gentleman of middle age. Conversation drifted from one topic to another, and as he had just come from Niagara, we got talking about the power developments there. I ventured to remark that we had unlimited water-powers all through this country, especially in the northern portions, many of the greatest falls being in parts of the country that seem now to be beyond civilization.

"Quite true," remarked my companion, "but we have a great many now being utilized, and quite within the bounds of civilization. Kakabeka Falls, the Soo, Niagara, Shawinigan, Montmorency, and Grand Falls, on the St. John, are all powerful falls, and all well within reach. Within ten years these falls and others will be running our railroads for us. Niagara will carry the trains as far as Detroit, and something else will pick them up there. The Temiskaming Commission are already considering the electrification of the provincial line in the north. Out west the mountains will provide power for a great distance."

My friend was now on his favorite theme—the West. "Within ten or fifteen years," said he, "the whole face of this continent will change. The front will shift from the Atlantic to the Pacific. Go to Winnipeg and you will find a large city being built. Dozens of warehouses are going up, but not one man in five can tell why he is building, except that Henry Smith and John Jones are doing the same thing. People are very much like sheep and they are all following the leader in building up Winnipeg. They have the notion that Winnipeg is the gateway to the West; it is not any such thing, it is only the back door. Within ten years there will be a good many empty warehouses in Winnipeg. No, Vancouver is the city of the future. It has the finest climate in Canada, and it has the best harbor on the coast. San Francisco is land-locked, but Vancouver is mountain-locked. Portland is away up a river, and Seattle is too much exposed. Vancouver is in a position to do an enormous trade with the Orient, and when the present war is over there will be an opening up of China, such as no one at present dreams of. Canadian wheat will go to that country in continually increasing quantities. And, of course, our trade with Japan will expand. Then when the Panama Canal is completed, there will be lines of steamers running from Vancouver to Liverpool, and a great portion of the North-West crop will then find its exit by Vancouver."

The Grand Trunk Pacific was mentioned, and my companion gave it as his opinion that though the line might have a terminal at Port Simpson, it would be compelled to build to Vancouver. Port Simpson, in his estimation, is naturally unfitted to become a great city.

In his enthusiasm, this apostle of the West almost missed the station whither he was bound. As he picked up his grip, he said: "You are a young man; by all means go West, but go far West. I am moving there myself now, and expect to spend the rest of my life in Vancouver. I have property in the East, but I am selling everything east of the Mountains." And with that he was off.

CORNELIUS.

HEATING SYSTEM OF THE ANGUS SHOPS.

The magnitude of the Canadian Pacific Railway Co.'s new Angus shops at Montreal is plainly evident from the fact that no less than thirty-seven miles of steam piping was massed in the Sturtevant heaters, which were installed in connection with the blower heating system. Before a decision was reached a thorough comparative study was made of the different systems of shop heating by direct steam and hot water and by blower methods. The latter was finally adopted as being the most efficient and economical where the requirements are so severe on account of the large spaces to be warmed, the high proportion of window area and the low external temperature. The apparatus was built and installed by the B. F. Sturtevant Co., of Boston. Steam is distributed in tunnels to the different buildings from the central power-house, which is about 2,600 feet from the most distant part of the system. The buildings have a combined volume of about 26,000,000 cubic feet. From quarter to half of the wall surface is glazed, besides which there are skylights aggregating 25 per cent. of the roof surface. The specifications require most of the buildings to be heated to a constant temperature of 65 degs. when the temperature outside is 10 degs. below zero. The radiation for this service is arranged at local points in vertical coils with cast-iron bases, which are coupled up in groups. The fans which draw the air through these heaters are calculated to have an hourly capacity of the enormous volume of about 80,000,000 cubic feet, sufficient to completely change the air in every building once in about every twenty minutes. In very cold weather, however, a closed circulation will be maintained, and the air returned to the heaters without receiving any access of cold air from outside. In the planing mill the fan engine and heaters are located on platforms between the roof trusses. In most of the other buildings they are located in one or more separate lean-to brick annexes. Each set of heaters is supplied with both exhaust and live steam mains. In the locomotive and blacksmith shops the hot air from the heaters is distributed partly underground through brick conduits; but in the other buildings and in parts of these the distribution system consists of cylindrical overhead galvanized iron ducts, supported on the lower chords of the roof trusses, having outlets through the vertical pipes carried down beside each of the interior columns. Practically no valuable floor space is occupied by the heating apparatus. The buffing-room in the brass department at these shops presents an interesting illustration of recent advance in the