an outgrowth from the design of locomotive turntables, while this is an original creation out of hand.

THE EAST WILL BE EAST AND THE WEST BE WEST.

Editor CANADIAN ENGINEER :

Now that the convention held in Montreal last month is a thing of the past, I desire, whilst congratulating those who helped to make it such an immense success as it undoubtedly was, to draw your attention to one cloud, which though only the size of a man's hand at present might, if allowed to spread, assume dimensions great enough to swamp our whole association. I refer to the action at Thursday morning's session with regard to the matter of inspection, when it will be remembered one of the Toronto delegates, first premising that that city was not interested in the matter at all, proposed a committee of four to deal with the matter, consisting of three representatives of electric plant companies (two of which do not do wiring), and one alderman. I have no fault whatever to find with the gentlemen chosen, but I do object to the very class which of all others are interested, i. e., construction men, not being represented. This was pointed out clearly to the mover, and his courteous seconder even asked to add to the amendment such representative, only to be met with the curt rejoinder, "I persist in my motion." Now at the risk of appearing personal, of which I disclaim any intention, I consider the matter is of too great importance to the association to be "mealy mouthed," and therefore have to say (and I am not the only one), that for any member to carry such high handed proceedings, is a state of things the sooner remedied the better. We have bitter experience of West versus East in our own city without wishing to inaugurate it in our association, but I warn the members that if any clique attempts bull-dozing Quebec Province they will find that she is both able and willing to take care of her own interests, electrical and otherwise.

Whilst not altogether agreeing with the main motion I cannot but favorably contrast the fairness of its mover as compared with that of the mover of the amendment, in offering to withdraw his amendment provided a representative of a construction firm was added to the motion.

If the Toronto delegate's intention was to demonstrate that the association was only in the interests of electric plants, he is treading on still more dangerous ground, as the telephone and telegraph representatives will quickly prove to him, or if again, he intends to arrogate to himself the functions of a little pope he will find his following grow beautifully less, so far as this province is concerned, if he interferes in matters in which, admittedly, he has no interest whatever. I would like to ask you, sir, what is the total membership of the Electrical Association? What proportion of the Executive Committee are Ontario members and what Quebec? Apologizing for thus encroaching on your space.

MONTREALER.

Montreal, July 4th, 1898.

ELECTRIC HEATING.

The inventions that have recently been put on the market by the Dominion Electric Heating & Supply Company, Ltd., of Ottawa, mark a distinct advance in electrical heating apparatus. The appliances manufactured by this company relate not only to house and car heating, but to domestic cooking, laundry work, tailoring and clothing manufacturing, hat manufacturing, and other branches of heating where gas and other fuel have hitherto been in use. A representative of The Canadian Engineer called at their works in Sussex street, and saw water boiled in seven minutes in kettles of a size similar to American electric kettles that require 15 to 18 minutes to bring water to the boiling point. The company guarantee to boil water in seven minutes at a voltage of 110. Like efficiency is obtained in their other heating devices. This high efficiency is attained by a new composition which, paradoxical as it may seem, is at once a good radiator and a good insulator, and which moreover will last infinitely longer than the enamel plates and disks hitherto used in electric heating apparatus. In the heaters hitherto in use all depends on the durability of the enamel. Once that becomes cracked or broken the efficiency of the utensil is soon impaired, and finally destroyed. The conductivity of the ordinary enamel disks is from eight to ten as compared with from fifty to fifty-five of the Dominion Heating Company's discs, which can be heated to a degree that would ruin an enamel disc in a few minutes. A test of one of the Dominion Company's discs was made by a continuous use for over a year night and day at a high temperature, and at the end of this time there was no sign of oxidation in the resistance coil. The composition used by the company has a dark and roughened surface and can be applied in such thin coats that there is very little resistance to heat through, which is one of the secrets of its efficiency. Over 2,000 various heaters have been manufactured by this company, and time is rapidly proving their superiority. The catalogue issued by the company describes electric frying pans, sauce pans, pancake griddles, flexible heaters for water bags, tea kettle heaters, chafing dishes, electric tea and coffee pots, broilers or toasters, cake cookers, portable stoves, glue pots, immersion plates for heating baths or wash water, curling tong heaters, tea and coffee urns, bar water urns, milk heaters, plate warmers, foot warmers, flat iron heaters, goose irons, air heaters for bath and other isolated rooms, electric office heaters, library radiators, as well as car heaters, cooking stoves, etc.

Peter McGregor, inventor of this special composition, was born in Glasgow, Scotland, and began to study electrical depositions and japanning while employed in the Milton foundry in that city. He afterwards learned the pottery business and was employed in Moreland's Castle Espie Works, in the county of Down, Ireland. Coming to Canada in 1873 he started the Ottawa Pottery Works in the following year. In 1879 he was awarded the bronze medal presented by the Princess Louis for original designs in pottery.

FRASER VALLEY RECLAMATION.*

BY R. E. PALMER, A.M. CAN. SOC. C.E.

The freshets or floods of the Fraser River, British Columbia, occur as a rule between the latter end of May and the middle of July, caused principally by the melting of the snow upon the mountains. In the reclamation of portions of the delta lands of this valley, from these freshets, the most difficult part of the schemes at present adopted is the satisfactory design and building of the sluice boxes and flood gates. Up to the present time, that portion of the delta reclaimed lies in patches, each portion being protected by itself, and not connected with any other portion. Generally these patches or valleys front on the main river, and are surrounded on all sides, with the exception of the frontage, by high lands, which discharge all their drainage upon the flats. This water finds its way over these flats through sloughs and creeks which discharge into the main river, during the low or ordinary stage of the water, namely, from August to the end of April.

The system of reclamation adopted up to the present day has been that of the construction of dykes or embankments, of different dimensions, along the banks of the river, from high lands to high lands, and of the building in the creeks or sloughs, over which the dykes would pass, of flood gates, and sluice boxes as they are called, which are so constructed as to close during the high water, preventing the river water from backing up the sloughs and flooding the prairies. They are constructed also to open, so soon as the water in the river begins to fall lower than in the sloughs, and drain the prairies, the sloughs during the period when the gates are closed acting as reservoirs, to hold the ordinary drainage from the surrounding hills. In ordinary cases the sloughs have not enough capacity to hold the drainage during the time when the gates are closed, and pumping has to be resorted to, for about a month in the year.

One of the most difficult operations connected with these schemes is the proper designing and construction of these boxes. It is a very difficult matter to keep them tight, and the material in and surrounding these sloughs is such that when once the slightest leakage occurs, under pressure, it is a very short time until the whole box finds its way into the river or up the slough. Again the many and varied kind of sloughs and creeks, the different classes of material through which they pass, varying from gravel and sand to silt and clay, the fact that some discharge into the river where there is a regular rise and fall due to the tide, while others discharge at points where the tide does not reach—(the gates of the former having of necessity to close and open during each tide, while in the

*A papet read before the Canadian Society of Civil Engineers.