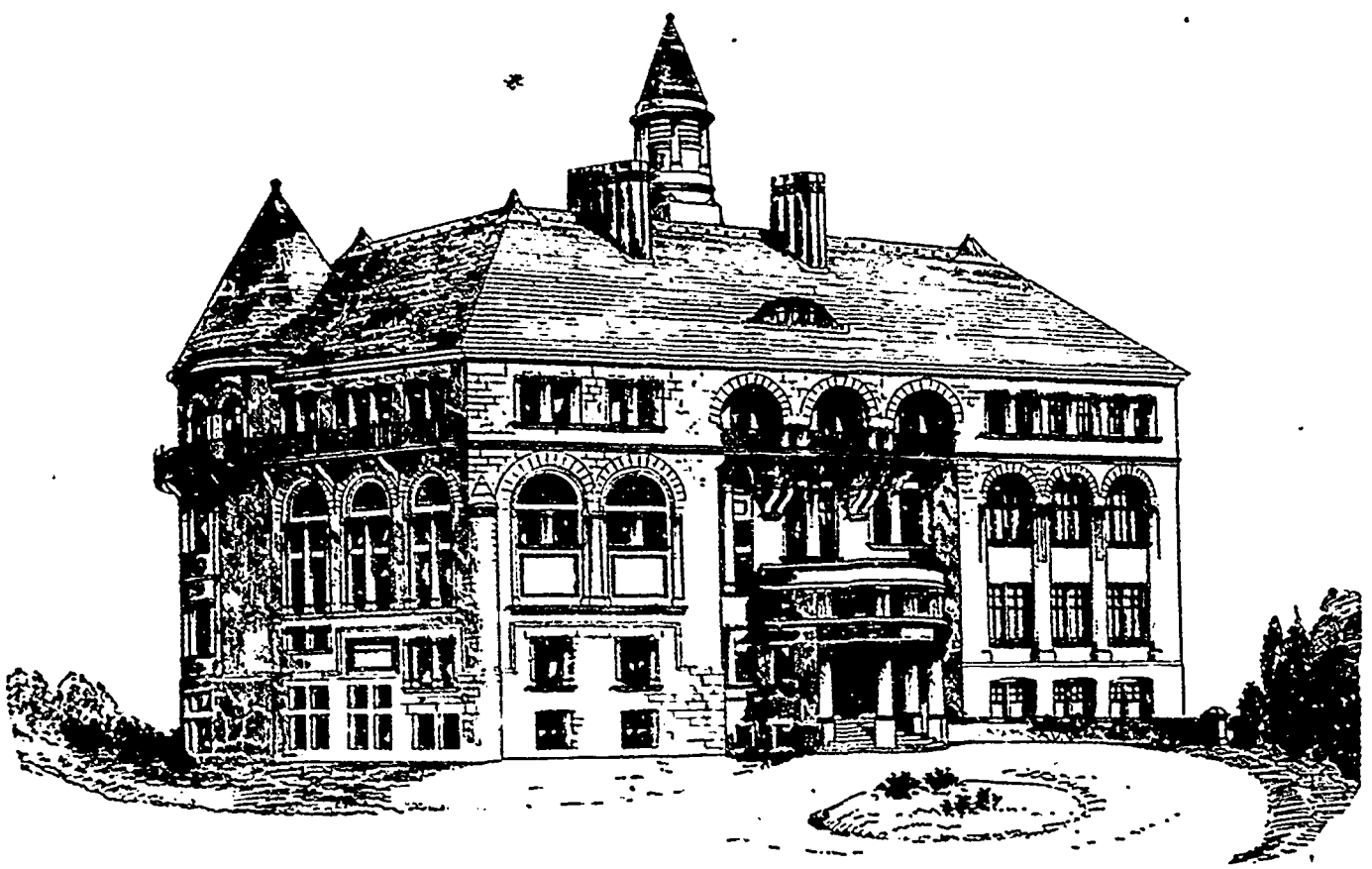
of winding, and also of alternating current dynamos of low tension, and of high tension for use with transformers.

Arrangements have been made for measuring mechanical power supplied to the dynamos and given out by the electromotors, of which there are several types; these arrangements comprise various forms of belt, rope and transmission dynamometers, with a very perfect form of hydraulic absorption dynamometer, with which the accuracy of the others can be checked by readings in absolute measure. The well-known form of cradle dynamometer, for dynamo testing, finds a place here, and special facilities are provided for varying the speed of the dynamos within any required limits.

The instruments for making the electrical measurements will enable measurements of current resistance, and difference of potential to be made with great accuracy, not only in the detached laboratories but in the dynamo room when the machinery is running. In separate rooms there are standard instruments with which the correctness of the working instruments can be readily checked. These include, amongst others, two of Sir William Thomson's electric balances. There are also a variety of instruments for special purposes connected with electrical measurements, such as instruments for determining coefficients of self and mutual induction, etc.



Physical Building, McGill University, Montreal.

The Electrical Department, in which many of our readers will feel an especial interest, has been placed upon a sound basis by the generous endowment of Mr. W. C. McDonald.

In the early years of its history the usefulness of McGill University was largely curtailed by want of adequate means, but of late years, thanks to the benificence of several of the leading citizens of Montreal, it is now in a position to do for the youth of this country what larger institutions of similar character have done and are doing for the young men of America.

FEED WATER HEATERS.

Victoria, B. C., August 3rd, 1891.

Editor Electrical News.

Dear Sir, In the July number of your valuable paper I see a feed water heater, with an article appertaining to the same, which sets forth its advantages, but I cannot see where they come in, as by introducing the feed water into the space, thereby converting that part of the boiler into a jet condenser and getting wet steam for the engine, is the very thing we try to avoid.

As to its being a scale forming preventive, I do not think it has any bearing whatever. My experience has been with salt water, and by observation I find that the hottest part of the boiler has the most scale deposited on it, irrespective of the place the feed water is inserted into the boiler. But I have observed that the circulation is affected by the introduction of the feed, which, in my humble opinion, should be inserted where the current is strongest.

I cannot see how a spray in the boiler would be the means of holding the limes in solution either in fresh or salt water.

The above are my crude ideas. I would like if some of your more able readers would give me more light on the subject. Thanking you in anticipation for your kindness in publishing the above, I remain,

Yours truly,

"Engineer."

BRANTFORD BRANCH NO. 4, C.A.S.E.

Brantford, August 15th, 1890.

Editor Electrical News.

Dear Sir,—The following were recently elected officers for the ensuing year:—Bro. Thos. Pilgrim, President; Bro. C. A. Walker, Vice-President; Bro. Jos. Ogle, Recording-Secretary, Bro. L. A. Fordham, Treasurer; Bro. J. Nichols, Conductor; Bro. H. McKinnon, Door-Keeper.

Bro. Ames, past President, installed the officers, and afterwards made some very suitable remarks, urging the members to attend regularly, propound abundance of questions for discussion, and make good use of the blackboard.

Bro. Ames has filled the President's chair since the organization of No. 4, but has declined the offer of a further term in favor of Bro. Pilgrim. He is ever ready and always willing to work for the interests of the C.A.S.E.

Bros. Pilgrim and Walker expressed their appreciation of the honor and privilege of being placed in a position to work for the interests of the Association. Bro. Ogle having been in office since the inception of No. 4, was praying for a term's rest, but the members think they have the right man in the right place, and therefore have asked him to toil on a while longer. His books are always in good shape and ready for inspection.

Yours truly, Steam.

The John Doty Engine Co., of Toronto, have just opened a branch of their business at Vancouver, B. C., and have placed in charge of their western interests, Mr. O. P. St. John, late Government Steamboat Inspector at Toronto. The venture having been entrusted to such capable hands, should prove successful.