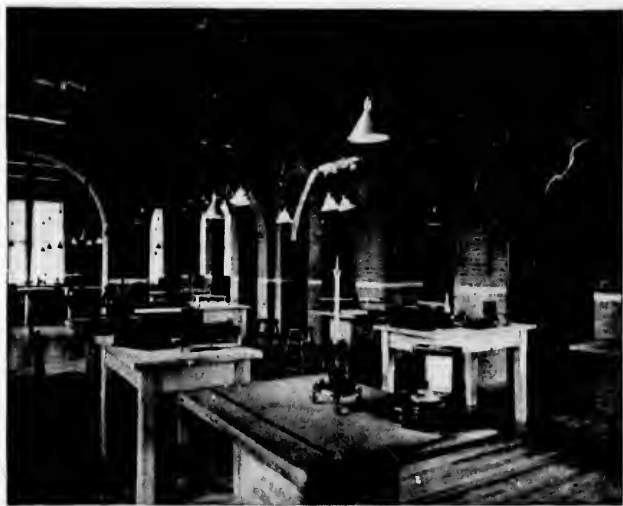




ELECTRICAL LABORATORY

The Mechanics' Lecture Room will seat 80. It can be darkened, and the Lecture Table is supplied with electric current, gas, water, air blast and exhaust, and special sinks for experiments in hydrostatics. There is a heliostat window at the eastern end of the table: the special apparatus room, leading to the Professor's private room, opens behind it.

The highest floor contains, at the south end, a range of rooms devoted to Optics. There is a large room specially planned for a Rowland six-inch concave grating, with separate dark room: a set of three small rooms for spectroscopy and optical bench work; a circular room in the turret for spectrometers; and a long narrow room for photographic enlargements. All these rooms have arrangements for darkening, heliostat-slabs accessible by an external gallery, electric connections for arc or incandescent light, gas and water. The rest of the floor is occupied by a large Elementary Laboratory, 64 feet by 54 feet, with a private room for a Demonstrator, and a separate room which can be darkened for experiments in Optics or with mirror galvanometers. The Elementary Laboratory has a fine open roof, magnificent lighting, and easy access to the outer air by two doors leading to galleries on each side of the Building. From these, or from the roof above, magnificent views may be obtained of Mount Royal, the City of Montreal, the St. Lawrence, and the country to the South stretching away to the Green Mountains and the Adirondacks.

The Basement may next be reached either by the staircase (the well of which affords a vertical suspension of 80 feet accessible at all levels), or by the hydraulic lift, which has been placed conveniently near the store-rooms in the roof, the apparatus-rooms, workshop, and goods entrance on the lowest floor. Its tower

carries the electric mains. The south end of the basement contains a room for optical work requiring great stability: the civil collars, supplied by a shoot from the roof; and the furnaces for heating. These are four in number, and can be used singly or in combination. The heating is by hot water circulating through radiators. At the north end are the Magnetic and Research Laboratories. The floor is laid in Portland Cement covered with asphalt. The drains, water and gas mains are enclosed in trenches covered with open gratings which can be raised at any moment, and all pipes are open to view throughout the Building.

In addition to the usual slate tables, on the walls numerous brick piers have been erected on independent foundations, separated from the asphalt floor by a space 2 feet 6 inches wide packed with sand. The piers are joined in the basement by long slate slabs affording ample table space free from disturbance. The tops of the piers project through the floor to the Advanced Electrical Laboratory above, where they support square slabs of slate. A portion of the Research Laboratory is continued upwards though the floor above, so as to give a vertical height of 30 feet: The upper space is separated from the Electrical Laboratory by glass partitions which give easy access to it. The Basement also contains two rooms for Uniform Temperature, one beneath the Entrance Hall, practically underground, the other lighted from the north, but enclosed in double walls, floor and ceiling, and surrounded by a passage two feet wide which can be maintained at any temperature within moderate limits.

The second floor has, at the south end, (1) Students' Laboratories; (2) a range of 100 separate lockers giving hanging accommodation for winter coats, etc., which, being immediately over the furnaces are practically drying cupboards; (3) a work shop, 40 feet by 18 feet, containing a universal milling machine,



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