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HEATING AND VENTILATION OF ST. PAUL'S HOSPITAL, MONTREAL, QUE.

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(Read before the Mechanical Section, 18th January, 1906.)

It is the intention of this paper to describe a system of heating and ventilation at St. Paul's Hospital, Montreal; to outline the ideal aimed at; and to discuss the function and efficiency of the equipment installed.

An ideal system of heating and ventilation should maintain a constant temperature and supply fresh air in large quantities at a proper humidity without dust or drafts. Almost every system of heating is designed to maintain a constant temperature, but very seldom is the humidity given consideration. It is not uncommon to find air in buildings very much dryer than normal pure air, and an explanation is not difficult. Since air saturated at zero degrees will contain about one-half grain of moisture per cubic foot, and at 70 degrees one cubic foot will contain eight grains, it is clear that if air is heated from zero to 70 degrees, the humidity at the higher temperature will be only 6 per cent., and the air will then be dryer than the atmosphere of the Sahara Desert. This extreme dryness is very harmful to the mucous membrane of the human body, and is in a large measure responsible for the prevalence of disease of the nose and throat in cold climates. It is also a noticeable fact that a high temperature is required if per-