

MR. JOHN KENNEDY, M. I. C. E., M. C. S. C. E.

JOHN KENNEDY, Chief Engineer of the Harbour Commissioners of Montreal, elected in January last as President of the Canadian Society of Civil Engineers, is a native Canadian, having been born at Spencerville, Ontario. He has for many years been a member of the Institution of Civil Engineers, England, and also of the American Society of Civil Engineers, as well as a charter member of the Canadian Society.

Mr. Kennedy, in his long and active career in engineering, has had a variety and compass of experience that fall to the lot of but few in the profession—in fact, that can fall to the lot of those only who are gifted with rare powers.

A very brief and imperfect summary of the steps by which he has risen from a pupil in the office of Mr. Thos. C. Keefer, Past President of the Can. Soc. C. E., at the age of 15, to a foremost place in the highest rank of the profession, may be mentioned. His experience in municipal engineering was gained in the city of Montreal, where at an early age he was deputy city surveyor; in mining engineering, as manager of the Hull Iron Works; in railway engineering, when in four years he rose from being division engineer on the Wellington, Grey and Bruce Railway, to be chief engineer of the Great Western Railway, when at the summit of its activity and expansion; in the specialty of water works, in which he has been more or less intimately connected with nearly all the larger water works in the Dominion; in consultation or designing outright, as in the case of the pumping machinery of the Ottawa water works which, as an example of design would alone establish a reputation; in mechanical engineering in general, in which he is a recognized authority, having been widely consulted in various kinds of mill machinery, and in dredging machinery, his designs being found on the Pacific and the Atlantic, on the waters of Oregon, Charleston, New York and the St. Lawrence. In general hydraulic engineering he is also an authority, his advice having been sought by the Dominion and Provincial Governments and a wide range of municipal corporations and private companies. He has managed the deepening of the St. Lawrence ship channel, and still conducts the Montreal harbour works with marked ability. On arbitrations and commissions his experience and counsel are constantly in demand, as on the Trent Valley Canal Commission, the Lachine Canal Commission, the Commission on remeasurement of construction work on the Canadian Pacific Railway, the Montreal Flood Commission, and many others, and as an expert he has been frequently called before the committees of the Privy Council.

Mr. Kennedy's assistance has ever been freely and fully given to any professional brethren who have asked his advice. His ability as an engineer, his integrity as a man, and the extent of his reputation at home and abroad, give the assurance that in electing him President of their Society, the civil engineers of Canada not only honour themselves and him, but advance as well their own interests and standing as a professional body.

ORNAMENT IN ARCHITECTURE.

ORNAMENT is extremely useful in conferring on buildings a degree of elegance and richness which, without it, would be difficult to obtain; and it also may be made to convey an impression of wealth and magnificence which, in its absence, could only be attained by increased dimensions or massiveness, which would be as expensive and, in some instances, at least, less effective. Ornament is also extremely useful in altering the apparent proportion of buildings. Thus, by the employment of strongly marked horizontal lines, a building which is too tall may be reduced to proportion; one that is too low made to look nearly as high again by employing only vertical features. Buildings that from the inherent necessities of their construction look weak may be made to appear of any desired degree of strength, and sparkling gaiety of effect be given to those that otherwise would be too massive and heavy. Internally the architect very often cannot control the dimensions of his apartments, but by a judicious application of ornament he may always make low rooms look higher, narrow rooms broader, and reduce long rooms to a better proportion. More than even this, ornament enables an architect to give to every part of his design exactly that degree of prominence and dignity, and that class of expression, which suits its position or purposes. These are all legitimate uses for the employment of ornament, and when used for these purposes it is never offensive. It always becomes so

when it is employed to conceal either use or construction, or to make a building try and look like what it is not or cannot be.—*Scientific American.*

HEATING AND VENTILATION.

Mr. S. G. Curry, who has been appointed examiner in the above subjects in connection with the O. A. A. examinations, recently addressed the members of the Toronto Architectural Sketch Club substantially as follows:

I propose to treat my subject in a very general way and not to go into detail to any extent; my object is to discuss heating, but as ventilation is largely bound up with heating it is impossible to treat of the one without the other.

The ordinary fire-place was the first method of heating adopted in our houses, and while it might not have been the most satisfactory method of warming a room, it answered most satisfactorily the purposes of ventilation. A fire-place warms a room by radiation, the heat rays passing through the air and warming the walls, floors, ceilings and any other articles which may be in the room and within range of the fire.

The next method was that of stoves, which warmed the rooms to a slight extent by radiation, but principally by convection or the heating of the air by passing over the heated surface of the stove.

Stoves gave place to furnaces placed in the basement, which heated large quantities of air to a high temperature, the air thus heated being conducted by means of pipes to the different rooms to be warmed.

The ordinary hot air furnace has developed, until we have different forms of hot air, steam and hot water combination furnaces, the object of the combination furnaces being to heat the central portion of the house near the furnace with hot air and the more distant parts with steam or hot water radiation.

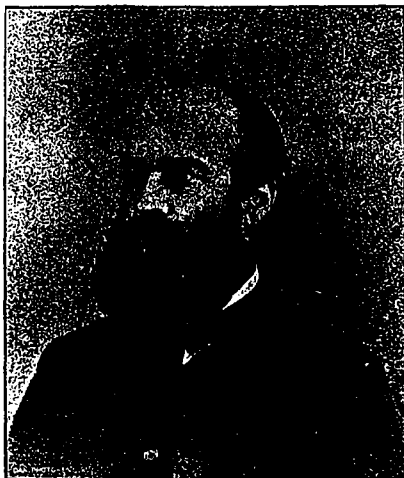
Hot water heating is a favorite method. In this system water is heated in a boiler, placed in the basement and conveyed by means of pipes to radiators placed in the rooms to be heated. The heat which has been absorbed by the water is given off through the radiators placed in the rooms. Indirect heating by hot water is used to some extent; the air being brought in from the outside, warmed by passing through a heater placed in the basement and conveyed through the pipes to the rooms above.

Steam heating in its general principle is very similar to the hot water method, there being a boiler in the basement with radiators placed in the rooms to be heated, the steam being conducted from the boiler to the radiators and the water resulting from condensation being returned to the boiler through

pipes. With steam, indirect heating can be used most satisfactorily.

It may be well to consider the advantages and disadvantages of the various means of heating our buildings. The fire-place is only of service in small rooms, and in this climate is altogether inadequate except in mild weather. The fire-place has these advantages: It heats entirely by radiation, and consequently does not raise the temperature of the room above a reasonable and healthful degree; it is also an effective means of ventilation, as all air required for the combustion of the fuel is withdrawn from the room, thus causing an inflow of fresh, pure air. Its principal disadvantage is, that owing to the fact that the fire-place warms a room by radiation a person sitting near the fire may have the portion of the body exposed to the fire extremely warm, while the rest of the body is proportionately cold. This effect is caused by the heat's rays striking the portion of the body exposed to the fire, while at the same time the temperature of the air in the room may be very low owing to the walls being cold. The air in the room can only be warmed by coming in contact with the surfaces of walls and furniture which have become warm through being within range of the fire and thus receiving heat by convection.

Some manufacturers and dealers have been selling low down grates, claiming that they warm a room better than a grate set high up. Such is a mistake, because when the fire is set low down near the floor, the heat rays cannot strike the floor except at an angle so obtuse that the floor derives very little heat from the fire. A high fire will throw the heat rays at a less obtuse angle, and will consequently warm the floor better. The heat rays from a low fire will pass over the floor in almost parallel



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