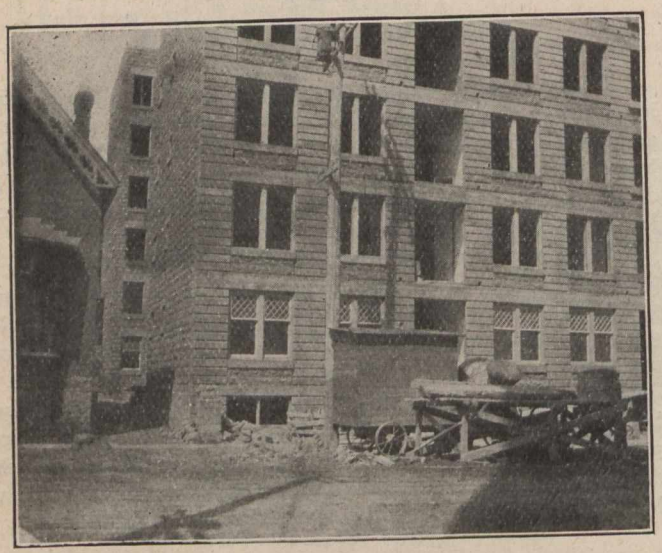
Our most valuable information is gained from knowing how the different materials of construction and methods of construction have served in the past. The mathematics and theory of engineering may be the same the world over, but the climatic conditions in Canada place our engineering problems in a class by themselves. Accurate descriptions of the condition of structures built twenty-five or more years ago would be a valuable contribution to current engineering literature.

CONCRETE FOR APARTMENT HOUSE.

W. L. McLaren.

That Canada is not behind the times in concrete construction is evidenced by the erection in Ottawa of a large apartment house in the centre of the city. The accompanying picture shows a portion as yet uncompleted. The construction is absolutely fireproof, as the plaster is applied directly to the concrete walls. The mixer is shown in the foreground attached to an electric motor which is housed on wheels. A little over half of the frontage of the building is visible in the picture. The floors are laid continuously from side to side of the building, being reinforced by heavy steel



Apartment Block Under Construction at Ottawa.

wires joined together by lighter wires at short intervals, the joint being formed by an electric weld. The ends of the heavy wires are wedged into the spaces in the hollow blocks of one exterior wall, and the whole stretched with block and tackle, and the other end similarly treated, thus with concrete laid four to six inches thick, forming a continuous floor, which for strength can hardly be equalled.

CONVENIENT FREIGHT HANDLING.

All steamboat cargo discharged or awaiting shipment at the Virginia Street Dock in Seattle, Washington, is stored in a warehouse of the company located on the opposite side of Railway Avenue, distant about 250 feet from the dock.

To transfer the large volume of miscellaneous freight handled daily between the dock and warehouse, economically and at the necessary speed without obstructing traffic in the street, the company has recently installed an over-head carrier which performs the work at a cost which is hardly appreciable, and which is capable of handling the freight more rapidly than it is possible to load or dispose of it at the terminal points.

As the equipment is very simple and can be modified to suit practically any industrial condition which involves the movement of packages, or miscellaneous articles, in large numbers between fixed points, a brief description will be of general interest.

As shown by the accompanying illustrations, the dock and warehouse are connected by a light elevated structure

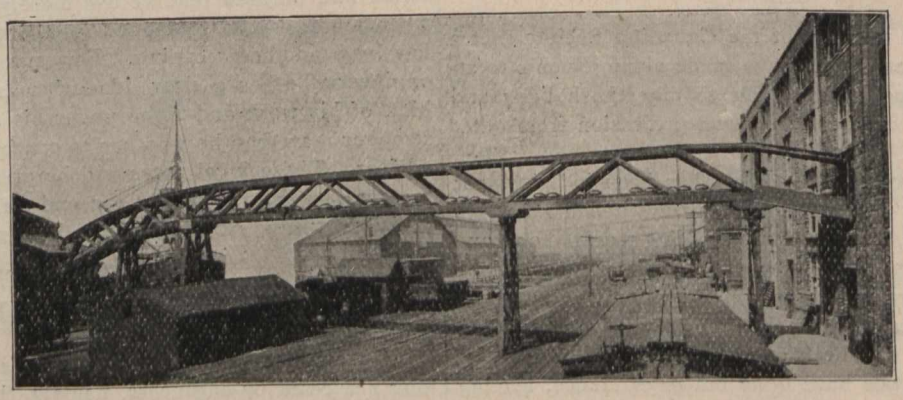
Carrier at Dock End.

which supports a continuously moving carrier of the endless chain type, with terminals on the dock level at one end and on the second floor of the warehouse at the other.

The carrier consists of a series of wooden flights, 9 inches wide by 4 inches thick and 30 inches long, made of Puget Sound fir. These are secured every 12 inches to two strands of No. 180 Jeffrey steel thimble roller chain, forming a practically continuous apron on which the freight is carried. Wedge shaped blocks attached to every third flight serve to push or retard such freight as might otherwise roll down the incline at the dock end.

The machinery is driven at the upper, or warehouse, end by a 10 horse-power electric motor, and being reversible it carries the freight to equal advantage in either direction. It is designed to handle packages not exceeding 3 feet wide and 4 feet high, which normally consist of salmon in cases, sacks

(Continued on Page 61.)



Dock. Railway Avenue. Warehouse