

tories, warehouses and retail stores equipped with automatic sprinkler systems.

(i) The fixing of the required strength of concrete blocks at too low a limit.

(j) Inadequate provision for the fire protection of lumber and wood yards in congested districts; insufficient restrictions respecting the storage of hay, straw, ashes and highly corrosive acids.

(k) The permission of wood framing construction for buildings of any size in Fire Limit D (south of the Esplanade).

A critical examination of the present by-law discloses the fact that little or no reference is made to a number of new materials and forms of construction which are now taking an important place in building operations. It is true that some of these are used by special permission of the City Architect, but for the sake of convenience and definiteness the conditions under which their employment is permitted should be inserted in the written code at the earliest possible opportunity. Again, important considerations materially affecting the design are in many instances not mentioned. While under ordinary conditions this would not prove a serious matter, so frequently has the City Architect's Department placed interpretations on the present by-law entirely at variance with generally accepted engineering theory and practice, that it is considered desirable to have all important assumptions of design clearly stated in the code. In this way the inconvenience and loss of time consequent upon learning the unusual methods of calculation adopted by the City Architect's Department would be avoided.

The following are some of the important matters which receive no consideration in the by-law:

(a) Provision for the use of reinforced concrete footings, piles, lintels, pads, retaining walls and chimneys.

(b) The use of cement stucco veneer, as well as brick veneer for frame buildings.

(c) The use of metal lath and cement plaster for the enclosing walls of light and elevator shafts.

(d) The use of hollow concrete walls.

(e) Specification of the requirements of terra cotta or hollow tile, with respect to strength and absorption and permission for its use as an independent material in residences and similar buildings.

(f) The use of radial firebrick chimneys.

(g) Provisions for light forms of construction commercially practicable for greenhouses.

(h) The number of stairs required for given floor areas.

(i) Necessary dimensions of fire escapes.

(j) The relative transverse and longitudinal bending moments on concrete floor slabs; the distribution of loading along beams carrying slabs reinforced in both directions.

(k) Requirements concerning bridges between buildings.

Some of the subjects which are imperfectly or indefinitely treated in the code are as follows:

(a) The classification of buildings.

(b) The reduction of live loads on columns and footings.

(e) Proportioning of column footings to obviate unequal settlement.

(d) Wind pressure on sloping roofs.

(e) Workmanship in reinforced concrete construction.

The above is a fair resume of the chief objections set forth in the memorial presented by the general committee, consisting of architects, engineers, contractors and business men.

Paragraphs follow dealing with the "high cost of building especially in fireproof construction" that is necessitated by what is termed "overly exacting regulations." Another paragraph, an attempt is made to show that through the high cost of building, in addition to unreasonable requirements of the by-law, industries are forced to locate outside of Toronto. Some space is also given under the caption of "limitations or restriction of building projects." It is further claimed that the present building code encourages non-fireproof construction. Another paragraph which may be said is not of exceptional interest to the general public deals with the inconvenience to which architects, engineers and contractors are subjected owing to a faulty arrangement of the by-law and unreasonable regulations. Considerable space has been given to reinforced concrete and the paragraphs devoted to this particular type of construction complains of overly exacting regulations. It may be said in this connection that while a safe and sane code governing work of this character should obtain, it is also of paramount importance that restrictions should not be imposed that would incur an unnecessary expense on the part of the owner. On the other hand, every precaution should be taken, and regulations should not be approved of, or adopted, that would permit of the indiscriminate use of this new type of construction by inexperienced or unscrupulous contractors or engineers.

Mr. MacCullum has been Building Inspector in the city of Toronto for many years, and during his tenureship he has always demonstrated an attitude of caution and careful interest in the type of building construction permitted in the city of Toronto. We might say furthermore that in Toronto, despite some of the inconsistencies in its building code it is generally conceded that this city has a better class of buildings than the average city of its size on the continent. It is to be hoped that Building Inspector MacCallum will give the recommendations in this Memorial full consideration and that he may take advantage of this opportunity to secure a commission of experts to revise the by-law.

CORRECTION.—On page 105 of the March issue, in connection with the advertisement of the Cement Products Company, the name of the architect of the Carling Brewing Company, 47 Simcoe street, Toronto, is erroneously given as Victor Moore. The design for this building should have been credited to Mr. V. L. Morgan, 28 Sparkhill avenue, Toronto. CONSTRUCTION regrets the occurrence of this mistake, which was due solely to a typographical error.