

carry trusses or girders, are used, then the thickness of the walls may be reduced one-half brick, or about  $4\frac{1}{2}$  inches, provided, however, that no brick walls shall be less than fourteen inches in thickness in any hotel, office building, warehouse, factory or public building.

The thickness of walls specified herein and set forth in the tables for the various buildings are intended to apply to all exterior enclosing walls, and all such interior walls as may be required for the support of floors and roofs.

An increase of one-half brick or about  $4\frac{1}{2}$  inches in the thickness of walls shall be made in all cases where the walls support trussed roofs, and are over seventy-five feet long, and where walls for warehouses and factory buildings are over one hundred and fifty feet long, without masonry cross walls of equal height.

All non-bearing walls of buildings may be four and one-half inches less in thickness than called for in the tables, provided, however, that none are less than nine inches or one brick thick.

The outside walls, if of brick work, of all public halls, theatres, opera houses or other buildings in which the roofs or ceilings are carried on trusses or girders of a span of fifty feet or more, shall not be of less thickness from the bottom of the first or ground floor joists at the lowest point in the main auditorium to the underside of the trusses or girders than the following:

(1) If the walls are over twelve and not over twenty-five feet high, they are to be not less than eighteen inches thick.

(2) If more than twenty-five feet high and not more than fifty feet high, they are to be not less than twenty-two inches thick for the first twenty-five feet, and eighteen inches thick for the remainder of the height.

(3) If more than fifty feet high and not more than seventy-five feet high, they shall be not less than twenty-seven inches thick for the first twenty-five feet in height, twenty-two inches thick for the second twenty-five feet, and eighteen inches thick for the remainder of the height. For any increase in height over seventy-five feet, the thickness of walls shall be increased in the above ratio. An increase of four and one-half inches in thickness of wall shall be made in all cases where walls are over one hundred feet long without cross walls of equal height.

(4) In case there shall be one or more storeys built above a public hall, theatre, or opera house, such storeys being carried on trusses or girders, the thickness of walls shall be increased by four and one-half inches, or one-half brick for each two storeys or part thereof above every such room.

(5) If solid masonry buttresses are employed and placed sixteen feet or less apart, and extended to the foot of the trusses or girders, carrying the ceiling and roof, or if iron or steel pillar are inserted in such walls for the support of the superstructure, and at distances not more than eighteen feet between centres, such pillars extending to and carrying the super-imposed trusses and girders, the thickness of such walls may be reduced in proportion to the increase or strength afforded by such buttresses or pillars; but in no case shall any such wall be less than fourteen inches thick in the top storey, four and one-half inches or one-half brick being added going downward for each storeys or for each gallery, or for each twenty-five feet in height of blank wall. If iron or steel pillars are introduced in said walls, the brick work around the same shall be bonded into that of the connecting walls, and each of such pillars shall have not less than nine inches of brick wall around it, the brick being measured from the extreme outer dimension of such iron or steel pillars.

(6) If a public hall, theatre, or opera house is of skeleton construction, and the steel framework carries the entire super-imposed load of floors, roof and walls, then the enclosing walls shall consist of fourteen inches of solid brick work, with two inches of hollow tile, or four inches of hollow brick on the inside, properly bonded together, the balance of the structural parts to be protected against the effects of fire.

All walls given in the tables shall be increased in thickness or be reinforced with equivalent pilasters or buttresses when the following are the conditions:

When walls are more than twenty-five feet apart, one-half brick shall be added for every succeeding interval of twelve and one-half feet, or part thereof, of distance between them without intermediate division walls or rows of column and girder supports.

When any horizontal section of walls shows more than twenty-five per cent. reduction of area on account of flues, openings, one-half brick shall be added for every suc-

ceeding interval of ten per cent. or part thereof reduction, provided that in walls of uniform thicknesses such reduction does not exceed fifty-five per cent. of the whole, or in masonry pier construction not more than seventy per cent. for each bay.

Wherever walls less than eighteen inches in thickness are utilized for the support of ordinary joists in buildings used for the sale, storage, or manufacture of merchandise, or public livery, boarding or in sale stables ledges four inches wide shall be corbelled out in not less than four courses, of brick for the support of such joists, and in buildings of all classes where furring strips, whether combustible or incombustible, are used on bricks walls, there shall be ledges equal to the thickness of such furring strips upon such walls, and in all cases where such ledges are built, they are to be commenced at the bottom of the joists, and are to be carried up to and levelled off at a line at least one inch above the top of the joists.

All wooden joists, beams or other timbers in the party wall of every building built of stone or brick or other incombustible material, shall be separated from the joist beam or timber entering the opposite side of the wall by at least four inches of mason work.

#### TIMBER IN WALLS PROHIBITED.

No timber except inside lintels, as hereinafter provided, brace-blocks, or wood brick, not more than nine inches in length, shall be used in any wall of any building where stone, brick or iron is commonly used. And the roofing in Limit "A" shall be of incombustible material. All brick walls shall be carried up on the construction aforesaid to the underside of the roof boards, whether front, rear, party or gable walls; and all gable or parapet walls surmounting roofs of mercantile buildings shall be at least one brick and a half, or fourteen inches in thickness, and shall be carried to the full height of three feet above the roof, on a square line therewith. All the exterior walls of sheds abutting on lanes or passages other than streets shall be constructed of brick or stone, not less than nine inches in thickness.

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Section 69 of the said By-law is hereby repealed, and the following inserted in lieu thereof:

"69. All buildings erected in terraces or rows must have one brick party wall to at least every thirty feet in length of frontage, and such party walls must be equal in thickness to that required for outer walls, and be carried eighteen inches above the roof, as before mentioned. The party walls in all semi-detached houses must be carried up close and flush to the roof boards to divide each separate tenement, and to go through the roof to every second tenement, with parapet walls."

#### PERSONAL

Mr. J. W. Siddall, architect, left Toronto recently for a visit to Europe.

Mr. Brydeman, architect, late of New York, has recently opened an office in the Canada Life Building, Winnipeg.

Mr. Robert Wilson, formerly a well known Toronto contractor, is now local manager at Winnipeg for Mr. H. C. Stone, architect, and is also superintending the construction of the new Union Bank Building in that city for Messrs. Darling, Pearson & Over.

Sproatt, Rolph & Chrysler, architects, have established an office in the Thompson block, Main St. Winnipeg, in charge of Mr. Chrysler. The firm have prepared plans for alterations and additions to the Commercial Club, and have also on hand a considerable amount of other work.

Mr. George Browne, one of the pioneer architects of Winnipeg, is about to retire from practice and take up his residence on the Hudson, about twenty-five miles from New York City. Mr. Browne has been a resident of Winnipeg since 1878, and has designed and superintended the erection of many of the important buildings of that city. His removal is very much regretted.

The Galt Art Metal Company, Limited, is a new concern which has recently started business in Galt, Ont., for the purpose of manufacturing architectural sheet metal material. The directors of the company are prominent business men of Galt, the manager being Mr. J. H. Hayhurst who was for a number of years manager of the James Warnock Company, Limited, and who, on severing his connection with that Company, was made the recipient of a gold headed cane by the employees.