

any document to show that the slightest remonstrance was made against the method of erecting this building or of any many similar ones which have been put up in this city? Could the Inspector—if he is not a myth—suppose that a wall, say forty feet in height and only twelve inches thick throughout its whole height, would stand alone if deprived of the joists and beams that braced those side walls together? Would they not fall with the slightest outward or inward pressure? How much less then could it be expected that those walls could stand when the joists, which were built *into* them, became deflected from heavy loading, or when weakened by fire? The joists would then, in bending, become powerful levers to overturn the wall above them. It has been stated in evidence, as some extenuation of the fault of the builder and the architect, that stronger and thicker brick walls have fallen under similar circumstances, and an opinion given that no brick walls of any equal height could resist an intense fire. We say, on the contrary, that if such buildings were properly constructed, brick walls would not fall, and, in fact, would not be in the slightest degree affected by the heat. Had the walls been of different thicknesses from the basement to the roof, and not of one thickness, and had they been corbelled out so that the joists and girders could have rested free of the walls, the burnt timbers would have fallen through into the cellar without in any way affecting their stability. A building of the description of the one burnt down should have had hoop iron running the whole length of the walls at every four feet in height, and angle irons at each story extending at least five feet each way; besides the walls should have been braced and stayed from side to side with iron stays.

It was remarked by some who were called upon to give evidence, that wood was safer in case of fire than stone or iron. A wooden story-post, or bress-summer, may be safer than iron or stone, when so situated that water can be played upon it, but of little use when placed in the centre of a building, or in such a position as to be destroyed or loosened by fire in a few minutes. For any one to pretend that two high brick walls, merely held together by wood joists inserted four inches into the walls, and their ends resting on continuous plates of wood $2\frac{1}{2}$ inches by 4 inches in section, is a strong building, can have little care for his professional reputation, or know very little of the theory and practice of building houses in a safe and proper way. A wall of twelve inches in thickness built in this way is in fact only a wall of eight inches, and as soon as the wood inserted into it is burnt away, would naturally fall from its own weakness alone.

The building law of Great Britain requires that in a building, say 50 feet in height, the first story should be three bricks thick, the two next two and a half bricks thick, and the fourth two bricks thick; and in addition to this standard of strength, the exterior walls must be tied and strengthened with cross walls two-thirds of the thickness of the external ones. English bricks, too, are larger than those made in Canada.

So little rigidity had the burnt building, that when a centrifugal machine for drying clothes would be in operation in the laundry in the rear, and in no way connected with the building destroyed, the walls vibrated exceedingly from the street floor to the upper story.

The question now arises as to what is the surest remedy to guard against future evils of this kind? What system shall be adopted for the future to put a stop—not only

to the erection of dangerous buildings, but to the vile and unsatisfactory sanitary system that is still in force in this city? The surest remedy to this deplorable and imperfect state of affairs is to make the Building Inspector answerable criminally in a court of law for every dereliction of duty of which he can be convicted. Let him, however, be well paid for his services for such a responsible situation, and have assistants, if necessary; but make him examine and report upon every house and drain built in this city; and let every person be liable to a fine who does not notify him, in writing, when he intends to build.

We consider that the English system of making the builder of every house or drain pay a small fee to the Inspector, which shall form part of his salary until it reaches a certain amount, is one of the surest ways to make him lively in attending to his duties. He should have power to sue summarily any one breaking the law laid down for the erection of buildings and construction of drains, and he should in no way be interfered with in the execution of his duties either by Fire, Water or any other Committee of the Corporation. As he should have the power to sue, so, also, others should have the power to sue him for neglect of duty. Why a London Building Inspector would have been tried for manslaughter for such a calamity as befel us in this city last week.

If we had had a proper law regulating building and sanitary affairs, a tenant would not have lost his suit in a recent action in this city. This party threw up his house on account of bad drainage, and was sued by his landlord for rent and lost the case, and why? Simply because the witnesses on the plaintiff's side did not smell the offensive odour at the time they visited the house. In London this is all that would have been necessary for the defendant to have done: simply to have notified the Inspector that the drain in his house was defective, and he would have at once proceeded thither and opened up the whole line of drains until he discovered where the fault existed. If the defect in the drain arose from original malconstruction or from decay, the landlord would have had to pay, and that, too, without appeal. If there were obstructions for which the tenant was to blame, then the tenant would have had to pay, and his household effects are liable for the debt. If in a case where the Inspector suspects a foul drain to exist, his duty is to give a week's notice to the tenant that he will, on a certain day and hour, visit the premises, and if, on inspection, he finds the drain imperfect, the party in fault has to pay to the city the costs. If no defect exists, the city puts everything back in place and proper order. Such is the English law—why cannot we have the same carried out in this city? It is true we have some very good municipal laws already, but where is the man who has the courage to carry them out with energy and strict impartiality? The Inspector's appointment, therefore, should be one that the Corporation should not have the power to annul in order that he might be placed beyond the influence of all interested parties.

Let us, by all means, have a sure and sharp remedy to this abnormal state of building and sanitary affairs. There is hardly an issue of this Magazine which does not contain useful information culled from the highest scientific and engineering authorities on this important subject. Let us then rid the city, as early as possible, of fevers, small-pox, diphtheria, fire-traps, and drones in