

shows that it is unavoidable. A popular flat, only six storeys high, with a hundred feet of frontage; inhabited by marred people chiefly, clerks of some standing; a lawyer or so, a couple of doctors, and people of that sort; shows on its plan but scanty accommodation for children. Most of the apartments have one bedroom or two; none have more than three. Yet, when the rooms available for children are counted up, there appears without squeezing, and there must be a good deal of squeezing done in these apartments—possible room for fifty children. Across the road there is an apartment building of similar size, and others all along the street. This simply means that the children in that street might line both sides of the road; that, if they all played at home, the hundred running feet of street in front of the apartment building examined might have to suffice for the playground of a hundred children. It is not likely there are so many; but that is an evil on the other side, for there ought to be twice as many. It looked a miserable state of affairs. "Boys" John Boroughs says "live in a world that is inhabited entirely by boys;" but the boys in these streets must have another view of life thrust upon them, and perhaps this may have something to do with the elderliness of the American boy, about which his fellow countrymen sometimes complain.

There seems to be a tendency to hail the advent of apartment house building as a solution of every difficulty; but there is evidently something to be said on the other side. If they were regarded only as a final necessity; as something to be avoided as long as there is any other way of convenient housing; it would probably be nearer the truth, and we should turn our attention first to what is more really a development of our own times—the application of the means of rapid transit to enable men who work in the city to live in the country where land is cheap.

W. A. LANGTON.

FIREPROOF FLOOR CONSTRUCTION.

Mr. Frank Caws, F.R.I.B.A., recently gave an address on "Fireproof Floor Construction" before the Edinburgh Architectural Association. Referring to the modern use of Portland cement and iron in floor construction, Mr. Caws said that generally speaking the introduction of steel girders as supports for the concrete has been carried to a very unwise excess, inasmuch as the action of fire upon the steel, causing it to expand, made it most injurious to the concrete floors, and, instead of being a support, it proved in such cases the means of their destruction. Therefore, he advocated a method of constructing floors in large slabs of concrete, with a minimum amount of steel bearers, so disposed and protected from the fire as to give the necessary support without introducing an element of weakness. In this connection the results have been published of a test of two hours duration in October last by the British Fire Prevention Committee of a floor of fire supports and oak flooring. The floor was 22ft. 3in. by 10ft. in the clear, and consisted of two 10in. by 12in. beams of yellow fir placed across the testing-hut, with four 10 in. by 10 in. joists notched into them at 2 ft. 6 in. centres, oak boards 8½ in. wide and 2½ in. thick being spiked on top; a 15 in. by 15 in. yellow fir post supported the floor in the centre. The floor was loaded with 232 lbs. to the square foot, distributed.

In 4 minutes smoke issued from the joint between the parapet-wall and the oak flooring. In 89 minutes flame first came through the floor. In 109 minutes a small portion of the oak flooring fell. The post, beams and joists were considerably reduced in size and charred, the post to a depth of about 1¼ in. and the beams and joists about 2 in. The average temperature of the fire was about 1,400 degs. Fahr.

"SLIP-SHOD TENDERING."

To the Editor of the CANADIAN ARCHITECT AND BUILDER :

Sir,—In reference to your April article "Slip-Shod Tendering," I wish to say that contractors are not alone to blame for this. They are often asked to submit tenders for work which is not clearly described by either drawings or specifications; probably no lot grades are given and sewers and drains which must be connected with, are not located. In many cases several alternative figures are asked for different designs and finish. Now under these circumstances, a contractor must spend considerable time and perhaps money in preparing an intelligent estimate. If quantities were supplied him or compensation for tendering, as is done in some countries, the case would be quite different. As it is however he frequently finds that he has spent his time (which is the same as money to most contractors) for nothing, not even a chance for the job, which either does not go on at all or goes to a previously selected builder, estimates being asked for simply to set the price.

In my opinion these are some of the reasons why contractors are tempted to do so much guessing and why this will continue until such time as both architects and builders are organized to that extent that they can compel clients to pay a fair price for valuable information.

An architect should be competent to estimate to within 10 per cent. of the cost of most buildings; close enough at least to enable his client to decide when and what to build. To call upon perhaps a dozen busy men to give their time gratis to help to decide these points is scarcely honest.

Yours truly,

A. C. C.

VANCOUVER, B. C., May 18, 1903.

A POSSIBLE SOLUTION OF THE SKY-SCRAPER QUESTION AS BEARING ON THE SUBJECT OF CITY HYGIENE.

To the Editor of the CANADIAN ARCHITECT AND BUILDER.

SIR,—Mr. Langton's pertinent treatment of the question of "High Buildings" in your last issue leads me to suggest a possible way out of the dilemma might be for Manhattan and other cities to legislate in a way to limit them to two out of every three of the buildings forming the line of the street tenements.

Two tall buildings could thus adjoin each other—the lots supposed to be some 25 to 30ft. frontage, more or less—leaving a space between for light and air. In this way each of the taller structures could have windows along one side or party wall of the building. This would form a not objectionable crenelated series of tenements; the vertical protuberances starting from above the 5th, 6th or 7th story of the row of structures, according to width of street, as along the Paris boulevards, with a continuous cornice or entablature at that height.

Each proprietor of a high building adjoining the lower structure, should be bound to equalize advantages by making over to the proprietors of the low or stunted block, one-third of the net profits derivable from the upper stories of the higher structures after duly allowing for interest on net cost thereof, and other charges considered fair in the premises.

CHAS. BAILLAIRGE, C. E., Quebec.

Professor Ramsey, in a lecture at Carpenters' Hall, London, said that it is a common practice to attempt to hasten the drying of new buildings by leaving the doors and flues open, but he thought it would be more rational to close these vents, and to use charcoal braziers in the closed rooms. The hot gaseous carbonic acid evolved from the burning charcoal would flow through the walls, and the carbonic acid would materially accelerate the conversion of the lime in the mortar into carbonate of lime; the passage of the hot carbonic acid through the walls would not only dry out the water, but would increase materially the rate of conversion of the lime into carbonate of lime.