

for, by the effort of explaining his ideas, he will clear them up as they never were before. Clear thinking is the fruit of expression, and one reason why it is so difficult to get contributors to professional paper reading and discussion is, that there is so little clear thinking and so much disinclination to the effort of thinking clearly. There ought therefore all the more be a prosperous career for a series of meetings to which members could bring, not their discoveries, but their doubts and difficulties. It is twice as easy to solve a problem in conversation as alone; and if there is no solution, if the designer is up a blind alley, as so often happens in design, a light from outside is the quickest way to show him where he is. Architects could improve one another incalculably by regular meetings for mutual criticism.

THE rumour that the pulling down of a twelve year old steel frame building in Chicago has shown its lower columns to be half eaten through with rust contradicts the evidence of the gridiron foundations of the old post office which after a longer term of years, if we recollect rightly, were found to be in good order inside their cement casing. But if this rumour is true, (and doubt is cast upon the preservation of iron in cement), it will be a serious addition to the uncertainty which is felt as to the life of a steel frame building. This discussion has been revived in the American papers and reports of experts are so contradictory that the question may be said to rest in doubt. In the meantime steel frame buildings are being rushed up more than ever and we may be sure that carefulness does not increase with familiarity. Representations have been made of the danger of efflorescent brickwork in contact with the steel frame. If the corrosive salt is as freely efflorescent on the inside as it is on the outside, the wall can hardly be called a protective casing. Is any brickwork in fact sufficient protection to a metal which must be kept from exposure, not to the weather merely, but to the carbonic acid conveyed in ordinary air. It is possible to blow a candle out through a brick wall, by placing the candle at the small end of a funnel held tightly against one side of a brick wall, while the mouth is applied to the small end of a funnel held tightly against the other side exactly opposite. There must therefore be a continual change of air between the inside and the outside of an ordinary brick wall. How much carbonic acid accompanies the change depends upon the amount detained by the mortar. The affinity of lime and cement for carbonic acid must be taxed by sudden changes of temperature or in a high wind when the change of air in the walls is rapid, and there must come a time of satiation when the mortar can no longer be relied upon to stop the passage of the gas. Brick and terra cotta surrounding a steel frame is supposed to be grouted so as to be impervious to air, but it is doubtful if it can be made so at the best, if we may trust the evidence of tests for the permeability of walls, and there is sure to be much laxity in practice.

On the whole there is not enough certainty about the protection of the steel frame buildings; but they are being built in greater and greater numbers. It is said that twenty-four millions worth of office buildings

have been begun in New York this season and steel frame construction is in progress for uptown buildings also. The centre of commerce has moved up a good deal; and above that apartment houses grow taller and taller, in the effort to accomplish the end of making the same limited area hold an increasing population. About the time New York is solid with steel frame buildings the catastrophe to the earlier buildings of the kind—if there is going to be a catastrophe—will be due. In view of this state of affairs insurance companies are interested and the question of durability is going to be thoroughly tested by an Experiment Station, established by the efforts of Mr. Edward Atkinson, under the direction of a member of the staff of the Massachusetts Institute of Technology.

THE SECOND ANNUAL EXHIBITION OF THE TORONTO ARCHITECTURAL EIGHTEEN CLUB.

The Toronto Architectural Eighteen Club is to be heartily congratulated on the very successful nature of its Second Annual Exhibition which was held during the last week of May in the Galleries of the Ontario Society of Artists.

The exhibits consisted mainly of photographs, a few pen and ink drawings and some pastels and water colors. The subjects were of remarkable range and variety, for the Architectural League of America was well represented and some fine European photographs were loaned; Montreal, Quebec and Vancouver all assisted to lend increased interest to the collection.

Some of the photos were chiefly remarkable as photographs, the subjects being scarcely entitled to such excellent reproduction; on the other hand, photography with its inherent defects of perspective, failed to do justice to many of the subjects.

As the exhibition was by no means confined to members of the Eighteen Club, it is to be regretted that so many of Toronto's architects were not represented. Such exhibitions can have none but a beneficial effect, by bringing architects together, brushing away and good fellowship is generated; if it is good for one to mix with one's fellow men surely it must be still better to associate with fellow workers, to exchange ideas and broaden our views. Every architect to whom the advancement of art is more than a mere phrase should endeavor to be represented at this exhibition in the future.

The real live interest shown by our United States friends in this and similar exhibitions is instructive; they send hundreds of beautifully framed and mounted photographs from many different points widely scattered over a continent to help out a numerically small Architectural Club in Canada; their genuine interest in the welfare of architecture and their belief in the good derivable from such hearty co-operation is quite clearly demonstrated, and it is to be hoped that every Architectural Society in the Dominion will emulate this friendly example.

If I may venture to offer a suggestion, I think the interest in the exhibition could be greatly enhanced if small scale sketch plans more frequently accompanied the photos, more particularly of interiors. The soul of a design lies in the plan and if the true value of the design is to be appreciated its plan must be shown or at least indicated.