

the work, but supplies the material also, so that there is no chance of scamped work, or jobbery. Long before suspension bridges were dreamed of, every spider had his aerial suspension bridge rocking in the breeze and spanning gulfs, to which in proportion those spanned by man's work were puny.

The mole is proverbially blind, but is a splendid mining engineer, and it had its underground railways and a Mont Cenis tunnel long before these works were thought of by the most visionary and enterprising traveller.

The dams and sluices and locks of our canals and waterworks were all anticipated ages ago by our friend the beaver, whose form and features grace the Dominion arms, and so I could go on adding to the list of man's teachers, but, perhaps, after all, man has in his own body the best model for the mechanic, the constructor, and the architect: such marvellous adaptability of means to end, such grace and elegance, such strength and flexibility. The smallest and most delicate piece of workmanship or machinery is clumsy beside such a part of man as the eye or the ear. Every part of our bodies is designed by the great Creator to be exactly and perfectly suited for the functions it has to perform.

And as in the body, the framework or skeleton is not visible, but is covered with tissues and flesh and skin, and yet the construction is all expressed, so in a building we do not want to see the rough timbering and stonework, but it must be sufficiently outwardly expressed, and after that you may beautify it as much as you please, as long as the ornament emphasises the construction and is not indiscriminately plastered all over the building as if thrown on at haphazard.

The element of *Durability* is an important one to be considered by all who are engaged in the work of construction.

Cynics are never weary of reiterating that superficiality and flimsiness are the characteristic features of the age, and I am afraid there is only too much truth in the statement.

We do not build as the old Builders used to do. Had they constructed as we do, there would have been to-day no Pyramids of Egypt, no rock-cut Temples of Petra, no Greek Parthenon, no Roman Amphitheatres, Triumphal Arches and Baths, no Aqueducts or Roads, no Gothic Cathedrals with "long drawn aisles and fretted vaults;" no heritage of the past centuries would have come down to us. Imagine all these blotted out of existence and only the faint memory of them kept alive by descriptions in literature, how infinitely poorer we should be! We also have our duties to Posterity; even through as a writer has facetiously remarked,— "They have done nothing for us." We have no right to leave them ruins, which Time has not delicately fingered, but our own carelessness and culpability brought about.

There is often a desire for show at the expense of soundness, and engineers and architects are not always able to withstand the clamour; but I would like to urge upon those of you who are or may be in such positions to set your faces like a flint against such suggestions. They are without doubt emanations from the evil one.

I know, I have experienced, that clients expect grandeur, without duly considering that this cannot be obtained without being paid for, and one is some-

times sorely tempted to sacrifice before this heathen altar.

Hence the numerous accidents, which are so often occurring in defective railway bridges and in buildings of various kinds.

If the alternative is inevitable,—then, better a perfectly plain structure and *sound*, than one with the whole "five orders" on it, and flimsy.

And while I am on the subject of a false and flimsy pretentiousness, I would greatly depreciate the system which alas, is too common everywhere, of putting all the money on the front of the building and leaving the sides and back go bare. It used to be the custom in England with certain churches, and the Dissenting brethren were often the greatest offenders to put up a gorgeous front of cement or compo, with porticos and colonnades and pillars and pediments,—all sharr—and if you just looked or stepped round the corner you found a mean, shabby, miserable brick wall, and as this side view was often as prominent as the front, you can imagine the result.

It was as if all beholders were to be brought to one point in the centre of the front and were told to look at, and judge of it, from that point only and to shut their eyes at every other point of view.

Not thus did the great mediæval builders build;—each part was fashioned with care and love's labour was spent on the sides and the back and parts out of sight, for they said—"The gods see everywhere!"

Not that they put equal labour on parts out of sight as on parts prominent and near the eye—not so, but every part was in harmony with the other,—near the eye the mouldings and carvings were delicate and refined, higher up they were bolder and less delicate, and on highest heights they were often but blocked out. Delicate work would have been thrown away and would not have given the effect desired. But in all they were true and faithful to noblest traditions. They were able to hang the Lamp of Truth up, and the searching light fell not on foul falsehood or deceit. Would that I could say the same of all of our modern architecture! The lamp of truth reveals much of sham and petrified falsehood, structure of wood and galvanized iron painted to resemble stone, with sham masonry joints carefully drawn on as if to deceive the very elect. Common pine grained with all the skill and art of the grainer to pass itself off for oak or walnut, or maple, cement splotched all over with the dregs of the paint pots to resemble granite, or costly Italian or Tennessee marbles, and made very glossy with varnish to give the shininess.

These Philistinish deeds are still practiced, but latterly there has been a great revulsion against all such methods, and a "more excellent way" has been adopted and I trust that before long men will wonder how they could have done such things. We are indebted beyond all others to the prince of art critics—Mr. Ruskin—for this return to sound principles, and all honour is due to him for his long and unceasing advocacy of his views at a time when he stood almost alone.

I had intended to have touched on Heating, Ventilation and Sanitary matters, but the subjects are so important and extensive that I must reserve them for some other occasion.

In my next remaining lecture I hope with your permission to view architecture as a Fine Art, and endeav-