

find him tripping. He may therefore feel obliged to pass over imperfections of workmanship, lest he should discover his ignorance to his subordinates. The case of the clerk of works is not much better. There are highly trained clerks of works, but there are others who have nothing but a foreman's experience and a good share of mother wit to carry them through. That may be sufficient equipment for many occasions, but there come times when the lack of knowledge, which perhaps they have had no opportunity of acquiring, means conscious loss of power and failure on some critical occasion.

Nor is the case of the employer one wit better. One of the least satisfactory features of the modern building industry is that the master builder has become in very many cases the mere financier, concerning himself only with the commercial aspects of his undertakings, ignorant of the trade processes he directs, and dependent upon subordinates for the carrying out of duties which, under more healthy conditions, it would be an object of pride with the employer to discharge personally. And the unfortunate thing is that there is as yet nothing which could be called a national system for educating the master and his sons. There are opportunities provided by our technical institutes of which the young builder who desires to be a builder indeed, and not merely the "boss," will gladly avail himself. But these facilities need to be greatly multiplied and to be systematised, as is already done in Germany. The elimination of jerry building—a consummation devoutly to be wished by all who are concerned for the credit of the building industry—is very largely a matter of education. There is a certain amount of what is commonly called jerry building which arises from the sheer ignorance of the employer—his inability to detect faulty materials and faulty workmanship, and to direct and control his workmen. There is more which arises from a conscienceless disregard of every canon of good workmanship in the struggle to secure a quick return on invested capital and labour. For both evils the remedy is education, for education that is worth the name means not only the imparting of knowledge, but the inculcation of right business principles and worthy ideals of craftsmanship.

And what shall be said of the architect? The question of the education of the architect is perhaps the most difficult of all. Architecture is an art as well as a profession, and artists are born, not made. But the artistic person who will not, or cannot, concern himself with such prosaic and commonplace matters as drainage and ventilation should choose some other sphere than architecture for the exercise of his gifts. For architecture is the most practical of all arts, and the most exacting of all professions. There is, perhaps, no other calling which demands so varied an educational equipment and so many seemingly incompatible qualifications for its successful following. And yet the professional education of many architects is notoriously deficient. They make working drawings which cannot be carried out, and estimates which have little relation to the actual cost of the building when completed, their plans fail to take account of the requirements of the hot-water or lighting systems, and generally exhibit a lack of that insight into the whole complicated business of house building, which is the result of wide and varied knowledge. The subject of the architect's education is a many-sided one, and has been much discussed of recent years. The work of the Royal Institute of British Architects and of some of the technical colleges and institutions is gradually raising the educational standard of the profession. But the provision made by such institutions is still far from adequate.

Newcastle-on-Tyne now possesses a modern marvel in building, which is scarcely less wonderful than those ancient monuments of architecture which have been regarded as the wonders of the world. No temple, palace, or amphitheatre is this latest achievement; it is merely a prosaic railway station constructed in the Hennebique system of ferro-concrete work by the North-Eastern Railway Company. The "high level" goods station as

well as extensive warehouse accommodation, are all carried out in Hennebique ferro-concrete. The high level goods station occupies the whole of the first floor, and measures something like 430 ft. long by 180 ft. wide by 40 ft. high. This is provided with tracks for travelling and other cranes, and, in addition, the floor has to carry a load of more than 12 000 tons, making the total dead and live load not far short of 20,000 tons. The floor is supported in the centre by a row of ferro-concrete columns, each of which was designed for the enormous load of 1100 tons, and yet such is the elastic strength of the material that the dimensions of each column are scarcely greater than those of a steel column of the same strength, taking into consideration the usual casing necessary for protection against fire.

London is ever abuilding. The new war Office is beginning to create a more favourable impression than was the case three months ago. The total cost will be about £600,000, and the style of architecture differs from that of every other Government building, although there are touches in common with the neighbouring fragment of old Whitehall Palace, now the United Service Institution. It has handsome cupolas and sculptured groups of symbolical statuary representing the horrors of war and blessings of peace. The new wing of the Admiralty buildings with facade to the Horse Guards parade is nearly finished, and is already

partly occupied. The foundations of the official residence of Lord Tweedmouth, First Lord of the Admiralty, and the first Naval Lord, Sir John Fisher, to be erected in the triangular portion of the land in Spring gardens, through which the splendid roadway of the Mall will ultimately be extended to Trafalgar square, have reached the level of the ground. Good progress is being made with the Government Offices in Parliament street, and, after some modification, the building of the towers has been resumed. The building is still surrounded by scaffolding. The Abbey is in course of restoration on the north side. Some of the stonework was so decayed that it was found necessary entirely to remove several of the beautiful windows. Close by, on a portion of the site of the Westminster Aquarium, the foundations of the Wesleyan Methodist Church House and connectional buildings are being rapidly got in. The handsome building erected as the headquarters of the Ecclesiastical Commissioners, near the Victoria Tower of the House of Lords will shortly be ready for occupation.

In a letter appearing in a daily contemporary on a totally different subject we find, remarks *The Carpenter and Builder*, an extract of considerable value in these days of declining apprenticeship. The writer says "The apprenticing of boys—the last remnant of the usefulness of old trade guilds—is fast decaying, and no amount of night



STUCCOLIN DECORATION: THE VESTIBULE OF THE GRAND HOTEL, WELLINGTON.