

materials. To those who favor the restlessness of these styles of design, the added restlessness of abundant contrast in color is an open door.

A 7th suggestion is in regard to the use of veined or mottled material of different colors or shades, such as marbles and some varieties of terra cotta. The general suggestion may be given that veined and mottled materials are for use in plain surfaces, where their variations of color are a help, and not to fine moulded or foliated parts, where their differing color produces confusion with the lines of the design.

And might I conclude with a caution about ascertaining the permanency of the color in any building material before adopting its use. I have in mind an important building, the body of which was built with a dark limestone and the trimmings with light Ohio stone. In process of years the color relations were reversed, the limestone bleaching nearly white and the sandstone darkening with age, smoke and dust.

The President, in expressing his appreciation of the papers read,\* said that it is the color of a building which must impress the mind most forcibly because it is the color that lives most vividly in the recollection. When in the old country two years ago he had been looking at some work of Pugin, whom he had the pleasure of knowing very intimately, notably a building at Queenstown, now approaching completion, but upon which they had been working for forty years, and there were also some churches erected by him. The stone employed was a red trap, chiefly, and a limestone ranging from about a cobalt blue to lighter shades, almost pure white. The main walls of the buildings in question were of the red trap, and it was graduated in the way suggested by Mr. Gordon in his paper, while the trimmings, the cut stone work, the dressings of the windows and some of the salient points were of this blueish gray limestone, a very beautiful effect being produced in that way by the blending of the colors. The cathedral, which was by Burgess, was of light limestone, a magnificent structure. He had himself been a chorister in the old cathedral, and it carried many happy associations for him, but alas! it was gone, and the present magnificent structure was in its place. He thought it looked rather cold in its whiteness. Then there was another building of red brick, with white and grey limestone trimmings, a contrast one would expect to find rather marked, but the effect was anything but glaring, owing to the surroundings of turf and trees, which had the toning effect that green always seems to have. Although the contrast of the material in itself was perhaps rather striking, the combined effect was very beautiful.

Mr. Paull thought the members were very much indebted to Messrs. Gordon and Gemmell for their interesting and instructive papers. He had listened with much pleasure to Mr. Gordon's able treatment of contrasts in color, and drew from its conclusion that it was undesirable to build generally with very dark colored materials. He referred to the Guild Hall in the city of London which was of dark stone, and recalled the cleansing process which had been applied to it some fifty years ago. After having been cleaned it looked remarkably well, and compared quite favorably with the Royal Exchange, the Bank of England and other adjacent buildings.

The President said he remembered the period referred to by Mr. Paull, when there was a general movement in the way of scraping down and cleaning the walls of buildings in London, which spread to the provincial towns and resulted in a kind of crusade of renovation, but which, when enquired into, came to a sudden stop.

As there were other papers to be read and time was pressing the discussion was not prolonged.

Mr. E. R. Rolph, of the 18 Club, contributed a very interesting talk on "The Building of the Crow's Nest Railway," illustrated by a very fine collection of photographs, which were handed around among the audience. Mr. Rolph's description of the wonderful country traversed by the railway, and the methods adopted in the construction of trestle work and bridges was very interesting. The bridge he felt most interested in was one across the St. Mary's River,  $\frac{3}{4}$  of a mile in length and constructed of piles. The average length of the piles was 80 feet, some running to 87 feet, 18 inches in diameter at the butt and 12 inches at the stock, and, as he put it, straight as lead pencils. These were driven by pile drivers having a drop of 100 feet. He described

some wonderful fossil shell fish they discovered, some of them 10 feet in diameter and three feet thick. Specimens of smaller ones were collected and sent to McGill University. Then there was a wonderful bed of transparent oyster shells found at an altitude of 3,000 feet above the level of the sea, and also clam shells, showing that at some remote period there had been a sea there. The bridge over the St. Mary River was completed within six weeks from the time the timber was drawn on the ground, notwithstanding that a large part of the work was carried away by a spring freshet. Among the photographs displayed was one of the framing shop, in which the various erections were fitted together. As an instance of the rapidity with which the work was pushed on, he stated that in this shop on two occasions the entire framing of a 150-foot Howe truss had been completed in a single night. The duties of an architect out there, he said, were very different from what they are in Toronto. He had to get out a bill of quantities for everything, from tacks and nails to bricks and mortar, and order them from wherever he could get them. One piece of work he designed was a transfer slip at Kootenay landing. There was a fall in the Kootenay river there of 28 feet and to get down that 28 feet they had to pile on a grade of about  $2\frac{1}{2}$  per cent, running back for a mile and a half. The pile work ran right down about 8 feet below the lowest known water level. Then there was a top and a travelling stage with three tracks to bring it up to the level of the water or fall back as the water rose. Then from the end of the travelling stage, which was 239 feet long there was an apron 40 feet long, so that the end when it was lowered would go down to the scow loaded with the tram. The detail work of this had taken some eight weeks to do. Then he had to get together his material. The timber came chiefly from Vancouver; the cast steel and most of the rods and bolts from Montreal; the carriages were made in the shops at McLeod. The materials for this structure, indeed, were collected from both ends of the continent. He had not the satisfaction of seeing it completed before he left.

The President here informed Mr. Rolph that he had heard of the structure in question from an engineer who had seen it in operation, and who described it as a very successful piece of work.

Other work he had done in designing and erecting pile drivers and hoisting machinery, and laying out the work for the bridges. He also had to design living cars for the men, called jumbo cars, watering tanks, station and section houses, and coal sheds. A photograph of one of the latter was shown, designed to hold 1200 tons, and which coaled the engines automatically.

The Registrar, Mr. Langton, then read his paper on "The Architect's Part in His Work, as Exemplified in the Methods of H. H. Richardson."

This paper will be printed in a future number.

On motion of Mr. D. B. Dick, seconded by Mr. Kay, the thanks of the Convention were tendered to the gentlemen who read papers, and to Mr. Rolph for his contribution.

A vote of thanks was also passed to the auditors, Messrs. H. Langley and W. R. Gregg.

The election to fill vacancies in the Council caused by retiring members was then proceeded with, and Messrs. A. H. Gregg, W. A. Langton and J. A. Pearson were declared to be elected.

On motion, duly seconded, Mr. W. R. Gregg and Mr. Gemmell were appointed Auditors.

Mr. Power then moved a vote of thanks to the Past President for the assiduity he had shown in conducting the business of his office during the year.

Mr. A. H. Gregg seconded, and the motion was passed.

The retiring President, Mr. J. E. Belcher, of Peterboro', acknowledged the vote of thanks.

A communication from Messrs. Langley & Langley, offering to place at the disposal of the Association bound volumes of the "Builder" and the "Building News," dating back as far as 1868, was read by the Registrar; and on motion by Mr. Kay, seconded by Mr. Power, the offer was accepted.

The Convention was then declared adjourned sine die.

\* Mr. Gemmell's paper, which for want of space is omitted, will appear in our February number.