

discover the true beauty there is in all building truly and simply done, and to emphasize it, to proportion it, to mould it for the true enjoyment of all. To throw aside the trickeries of paper design, and to realize that such trifles as the small panes of glass of which we have spoken, with many others that are—foolish though it seems to say it—so indispensable to the modern architect, are quite unworthy of ourselves. Let us see that, shorn of a fictitious archaeological interest, our buildings may be beautiful in themselves, as characteristic products of our high civilization. Be natural, as all the great architects have been before you. Learn by the true historical method the motive and spirit of past Art. See if the Greeks, who built a beautiful monument as a temple to Athene, together with the ecclesiastical and military engineers who erected the cathedrals and battlements of the Middle Ages, were not as far removed from you in the way they set about their work as possible. Was not their architecture the pure product of their age? and should not yours be so, too, in spite of that haunting fear of ugliness— indefinite enough for any bogey—which will cease to trouble you when once conscious that you have succeeded in doing simple and beautifully serviceable construction, adjusted and controlled by your trained artistic instinct?

The growth and practice of the great Renaissance of Art in the sixteenth century will bear the closest examination in the service of modern architecture. The motive of its artists is equally good, though widely different; but do not suppose that it was a mere revivalism of archaeology. No restoration of ancient buildings was attempted; a genuine and wealthy architectural genius fed on the beauties of past ages, only to develop itself in the most wonderfully modern achievements, not only of construction and arrangement, but of detail and of all accessory art. Michel Angelo, in Rome, with the Baths of Caracalla and the Pantheon before him, conceived and constructed St. Peter's, and the true historical method of study that discerns how and with what ends he did it will take the idea and motive as its guide to like results. The study of the design, or rather designing, of any one great building at home or abroad is the most fruitful source of profit to the architectural student. The history of the idea of St. Peter's for instance, as it gradually grew from the work of Rosselina and Alberti to that of Bramante, San Gallo, Raphael and Peruzzi, before Angelo commenced his enormously grand and complete conception, is most inspiring and instructive, and of infinitely greater use than a complete calendar of every architect that ever was known, with dates and nicknames. This example of a great architect's power can be studied alongside with the expression of the same ideas of breadth and power of form in his sculptures and paintings, and in fact there is a whole education in the universality of artistic expression in such a historical study of principles. St. Paul's, London, is a similar example as we happily have the whole scheme from start to finish to study. Observe the way in which Wren grasped his problems, and grasp your own little ones with similar firmness, courage and breadth of idea. Take even more ancient buildings. Try St. Mark's, Venice, or an English cathedral and consider the alterations and additions, not as if executed in a delirium of irresponsible building fever, but as having a definite architectural purpose and idea in view. Why were these domes added? is a more important question than who added them. Why was this old front extended beyond all the limits of the buildings behind it? is a more important question than who did it, and did he know that it was a sham? Let us suggest to eminent examiners that the question, why is the Parthenon beautiful? is a much more vital one than in what technical terminology pedants would describe it, or how many columns compose the portico, and other like trivialities.

Until we seek to study the reason why things are beautiful, we shall never know how to design. Some naturally may have an intuitive perception that is denied to others, but for all that the beautiful is but the revelation of unseen truths, and when revealed by this perceptive faculty the lessons of the beautiful are manifest for all. The teachings of the ages are in the effects that their works produce upon our minds, and it is little short of absolute folly to confine the training of architects in design to exposition of the mere forms of the language of architecture and deny them insight into the meaning of the words used. Each stone, each plan embodies an idea that gave it existence at the hands of its constructor. Let us, as we have never done yet, seek to read this out of the stones, and enlarge our appreciation of beauty and the possibilities of the art of design accordingly.

FOREIGN ORNAMENTAL PLASTERING.

ALTHOUGH in England there may occasionally be seen some very handsome ornamental plaster work (principally executed during the last century by the Brothers Adam on the lines of Italian artists), it is not at home that we are to look for the higher examples of what may be done in ornamental plastering. Such work is mostly confined to ceiling spaces with us, and seldom found on walls, while, from India on the one hand to Peru on the other, we find it freely so used in other lands. It is, however, to Spain, whilst the Peninsula was under the rule of the Saracens, that we must look to see the grandest developments of what plaster is capable of. That fairy dream of architecture, the palace fortress of the Alhambra in Granada, built by the Moorish caliphs who ruled in that portion of Spain, has its ceilings and walls covered with decorative plaster work far excelling in beauty aught that Italian or Englishman ever dreamed of executing.

An American traveller, writing in the pages of a contem-

porary, speaks enthusiastically of the "fanciful arabesques and light reliefs which everywhere cover the walls of the Alhambra, and which, changing under the glance, like the patterns of a kaleidoscope, lend their peculiar power to charm and fascinate the eye of the beholder. Like the little stories within each other in the tales of the 'Arabian Nights,' the figures are made up of repeated repetitions, so to speak, and yet, by their suggestive complexity, are ever new and never become wearisome. To the uninitiated the delicate intricacies of the arabesques covering the walls of the Alhambra appear to have been worked out by hand with minute and painstaking patience. Especially is this true of the domed ceilings, which, with their pendants and stalactites, present patterns of labyrinthine and bewildering complexity. When, however, it becomes apparent that all this is stucco work, our astonishment ceases, although our admiration for the design remains undiminished. The patterns are made in plates of plaster of paris, cast in moulds, and, being skilfully joined, form patterns of varied form and size.

"This style of diapering walls with arabesques, and stuccoing the vaults with grotto work, came originally from Damascus, but received its highest development and most pleasing imagery from the warm-blooded Moors of Spain.

"The process employed was simple. Preparatory to applying the decoration, the naked walls were divided by lines at right angles, such as artists employ in producing pictures. A series of intersecting segments of circles were then drawn over these, and by their aid the artist could work with quickness and surety. The great instrument of the Moorish artists was the compass, which, however, was not made in the usual way of two limbs of metal joined. It was a fixed measure, tied by a string, so that for each dimension there was a separate compass.

"Much of the glorious effect of the Saracenic decorations, however, depended on chromatic effect and these Moorish decorators were good colourists.

"Gilt was very freely applied on the stucco, especially on the vaults and cupolas. Brilliant and delicate colors, such as lapis-lazuli and vermillion, were used in the interstices, being applied with the white of egg. The primitive colours prevail in the Alhambra, wherever the artist has been Moorish or Arabian.

"The Hall of the Abencerrages is in the form of a perfect square, and the walls are ornamented with arabesques of the most elegant and intricate designs. The colors still retain their brilliancy, and the delicate beauty of the filagree remains unmarred after the lapse of more than 500 years.

"The Hall of the Two Sisters—so named by reason of two immense marble slabs forming part of its pavement—is exceedingly beautiful. Stalactite roof is said to consist of 5,000, and though all this plaster ornamentation is supported only by reeds, it still remains well-nigh as perfect as when first placed there."

Turning now to quite another quarter of the globe, and one far distant from that of which we have just been speaking, let us glance at some extremely interesting specimens of ancient plaster work still to be found in Peru, in South America. As most people are aware, the Spanish Conquistadores, under Pizarro, Amalgeo, and others, found the natives of that country possessed of a civilization which mounted back to hoar antiquity. But Spain conquered and enslaved these Peruvians, and destroyed their temples and cities.

Quite recently (in 1862) Dr. Le Plongeon went to Peru, under the auspices of the California Academy of Sciences, to study the antiquities of the land, and he has explored a number of the ruins of early Peruvian houses and cities. His researches conclusively established the fact that these Indians were masters of concrete building and plastering. At Chimu Coucha he found the remains of some ancient ornamental stucco on the adobe (or clay-built) walls covered with bassi-relievi (low relief) decorative designs. Of course they are not equal to the marvellous Saracenic plaster at the Alhambra, of which we have spoken. Nevertheless, the designs are extremely good, and the material and the execution are both of high merit—in fact, it is impossible to restrain our wonder that a people ordinarily held to be but little better than savages could have conceived ornamentation so æsthetic and executed it with such high technical ability.

Space fails us to speak of work of a somewhat similar character executed by primitive races in India and elsewhere, while to treat of the production of Italian and other European craftsmen does not enter into our purview.