possessed of imagination, will find ready to his hand a medium for the expression of artistic feeling, and one which offers unlimited opportunities for originality of conception and for variety and breadth of treatment. Large masses may be so treated that they combine the suggestion of great strength with simplicity, dignity and beauty of form, while smaller masses, as represented by dwelling-houses, can be so designed as to suggest daintiness, comfort and home. But whether for large masses or small, the design should be such that it takes advantage of and emphasizes the characteristics of the material instead of being a mere copy of some existing design or style. By thinking and working on these lines, the architect will realize that science has provided him with a material which, as far as its architectural possibilities are concerned, is in its early infancy, and by means of which he may break away from established tradition, inaugurate a new era in architectural development, and create a new style.

This part of the subject is too wide to be dealt with in detail within the limits of the space at our disposal, but the imaginative mind will perceive in concrete an architectural material full of rich promise, teeming with possibilities, and presenting for consideration and solution problems of absorbing interest.

Next to the general design of a building, its most noticeable features are color and texture. Here, again, concrete presents a wide field for effort in the direction of surface treatment, since it contains within itself the elements for the production of rich and beautiful effects. While the characteristic grey of this material is eminently suitable for large masses, the smaller structure seems to demand more warmth of tone and greater variety of texture-a surface broken by flecks of light and color. These may be secured by various means more or less legitimate, but the method which will appeal most strongly to the advocates of concrete pure and simple, and which alone will be here considered, is that of exposing the aggregate. If this method be adopted it will be seen at once that there is practically no limit to the variety of surface which may be produced with regard to both color and texture. In the ordinary, untreated concrete surface, no matter what aggregate is employed, the particles are so mixed with and coated by the cement as to result in that uniformity of tone to which so many objections have been raised. By a judicious selection of the aggregate, however, and the adoption of means for exposing it to view, a great variety of very charming effects may be obtained. Materials which may be suggested as being suitable for this purpose are marble chippings of various colors and sizes, different colored gravels and sands, red or blue granite, or combinations of these in various proportions which

may be determined by a series of experiments.

The aggregate having been selected and the best proportions ascertained, the whole secret of obtaining, on the surface, the full effect of its richness and variety of color and texture lies in removing the film of cement mortar by which the particles of the aggregate next the face are coated. This may be done by one of three methods, viz., scrubbing, tooling, or sand-blasting.

The removal of the mortar film by brushing is best performed while the concrete is green, and to this end the forms must be removed as soon as may be done without injury to the structure. An ordinary scrubbing brush or a wire brush, used with a liberal application of water, will generally serve the purpose if the concrete is not too hard, but if it is found that the color of the aggregate is not fully brought out by this treatment, a solution of hydrochloric acid diluted with three or four parts of water may be employed. Where this is done, care must be taken that every trace of the acid is immediately removed from the surface of the concrete by well washing with pure water, preferably by means of a hose. By this method the aggregate is brought into semi-relief and its color is fully revealed.

It sometimes happens, however, that the shuttering cannot be removed before the concrete is too hard for this treatment; when this is the case, another method is available, viz., that of bush-hammering. The action of the bush-hammer, whose face is cut into broadbased teeth, produces an effect similar to that obtained in the process of brushing, by cutting away the cement mortar and leaving the aggregate exposed. If necessary, the acid solution may be used as a clearing agent to supplement the effect of the tooling.

Sand-blasting is another means by which the same purpose may be effected when the concrete is hard. In this process a fine stream of sand is forced through the nozzle of a compressed air machine, and by impinging sharply upon the concrete surface removes the mortar from the face of the aggregate.

By either of these methods delightful effects may be produced which will amply repay the extra time and labor expended upon them, and many of these can be obtained by the use of juite common and inexpensive aggregates. Where, however, the cost of a specially selected material would prohibit its use for the whole of the concrete work of the walls, another method may be employed, by which the special mixture is applied as a facing material only, backed by the ordinary concrete of the wall. A simple method of doing this is to apply the facing mixture to the surface of the wall-form to the thickaess of one or two inches, immediately before the ordinary concrete is placed in position. The . tamping should be confined mainly to the back-