

wine-drinking in England, and, indeed, throughout northwestern Europe. The estate of Constantia was established, as the text sets forth, in 1685, "by the great building governor, Simon van der Stel." Besides the three plates relating to it, one of which is a photograph and the other two are apparently lithographic prints, there is one text illustration and a large general plan opposite page 3 of the text. Another estate, almost a rival to Constantia in importance, is that once known as Vergelegen; but of this the more important buildings, at least those more interesting in an architectural sense, seem to have been destroyed and replaced by simpler constructions.

A number of other farms are illustrated in the same way, and there are also house buildings in considerable numbers, one of which is "the Castle" at Cape Town. These buildings succeed one another almost continuously from the middle of the seventeenth century until 1800 or thereabouts, and they are nearly all of the same general character. What that character is would be guessed by any one who might have become familiar with the town houses of the Netherlands erected during the same epoch, or only a little earlier. Just as, in the United States, the buildings of 1680 were copied in 1700, with such changes as the different material made necessary, so in the possessions of the Dutch their native architecture was faithfully reproduced. One who may have visited a Dutch colony, such as the seaport of Willemstad, will have seen a quarter of old Amsterdam faithfully reproduced. So, in the semi-tropical lands of southernmost Africa, the marked characteristics of the Dutch town-halls reappeared, but stripped of the more graceful sculptured ornaments, and presented without that controlling good taste which the older and more truly civilized community retained. There was no older and purer building near Cape Town to check the fantastic vagaries of the native builder; no tradition which was sufficiently close and strong to have its inevitable result of wholesome restraint.

The plates, thirty-four in number, of the thin quarto before us are extremely uneven in merit. Some are very tolerable prints by photographic process, and others are drawn in what is apparently a sufficiently faithful outline rendering, although unskillful, and the work of a much interested and enthusiastic beginner in representative art rather than a master. The oddest pictures are, however, those which are drawn completely with light and shade in lithograph, and which resemble nothing so much as the drawings of the weaker members of an old-fashioned "drawing-school" when all the pupils alike had to make facsimiles as nearly as they could of lithographs prepared for the purpose. The reader will observe that this slightness and inefficiency of artistic process does not imply a lack of thoroughness, or an inaccuracy in the drawings; the design is never of such refinement that a beginner who is minded to be faithful might not follow it with considerable accuracy, nor is the detail itself of very great importance. The exact curves of the "fractable," now convex, now concave, are never of sufficient importance to cause much regret that the illustrator's pencil has not been guided by the highest skill. The large single pictures measure about seven by nine inches, and some of the plates are occupied by two or more smaller illustrations.

There have been several recent contributions, to English periodicals in which the same little-known architectural world has been partly described, but this is the first permanent publication devoted to it which has come our way.

The Teaching of Elementary Mathematics.
By David Eugene Smith. [Teachers' Professional Library.] Macmillan.

This attractive-looking volume makes pleasant reading, too, for it contains many a curiosity. A further merit is that it directs its reader to many books well worth his examination, although others of the greatest importance are overlooked. Most of the recommendations of the writer are well enough; but they are, on the whole, trivial. Vulgar arithmetic is, after reading and writing, unquestionably the most practically important subject taught in the schools. For the immense majority of scholars, it would conduce far more to their success in life to be good arithmeticians and bad spellers than good spellers and bad arithmeticians. The effort of the schools should, therefore, be largely concentrated upon making practical cipherers, at any rate, in the teaching of arithmetic. Yet, having looked over forty or fifty of the arithmetics in vogue, we are in a condition to say that pupils never are made really skilful at figures, and Mr. Smith betrays the fact that he, like the other pedagogists, is not himself a master of this low but necessary art. He discourses about trifling matters, and neglects most of those that are really weighty from a practical point of view.

About teaching geometry, too, he seems to us to be quite at sea. All that is of direct practical importance in the geometry usually taught might be put into a nutshell. But it is an indispensable preliminary to mathematical reading, and has always been acknowledged to be of great value as a mental discipline. If geometry were properly taught, it would train and strengthen a number of faculties: first, an important species of imagination; second, ratiocinative invention; third, logical precision of statement; and, most important by far of all, the power of generalization. But, to those ends, it is requisite that other branches should be taught than merely metrical, or ordinary, geometry—branches not essentially less elementary, but rather more so.

That Mr. Smith should have any notion of the educational treasures of topical geometry is more than we could expect. But we should think that a teacher from whose mouth the names of Desargues and Steiner and Von Staudt drop quite glibly (though we notice that the more available book of Cremona passes unmentioned) might recognize that even projective geometry is more fundamental and nearer the beginning of the matter than metrics, and that at least so much of it as is involved in perspective could advantageously be taught before attacking the somewhat artificial, and therefore confusing, logic of Euclid or Legendre. But even within the old, traditional limits we find nothing very useful in these chapters.

In regard to algebra, it is not easy to go quite wrong, owing to the perfection of the science. But there is here no symptom of a power of inculcating a real comprehension of the methods of analysis. As to the author's objection to applied prob-

lems of algebra, we must emphatically dissent. He quotes the dicta of some English mathematicians; but these are entirely misunderstood unless we are aware to how great an extreme this sort of thing has been carried in England, and that in reference to higher parts of mathematics. In moderation, it is now generally recognized by Continental mathematicians that the English practice is right. Besides, we are at present speaking only of the instruction of school-boys; and, in our opinion, considered simply as logical exercises, those practical problems that Mr. Smith condemns are most useful in training the power of disentangling a state of things.

The volume has an introduction by the editor in three pages, of which two are devoted to the logic of mathematics. We shall not imitate his brevity by undertaking to say here what we think of his views, because to do so might smack of superficiality.

1 Manual of Historic Ornament, Treating upon the Evolution, Tradition, and Development of Architecture and Other Applied Arts. Prepared for the Use of Students and Craftsmen. By Richard Glazier, Associate of the Royal Institute of British Architects, etc. With 470 illustrations by the Author. London: B. T. Batsford; New York: Charles Scribner's Sons. 1900. Pp. iii, 136.

This book, though called a manual of ornament, seems to aspire to the rank of a history of decorative art, including even Roman architecture and an analysis of Gothic building, which latter the author looks at chiefly through an Englishman's eyes. Undoubtedly the whole history of ornament cannot be written without a history of the constructional elements out of which it rose, or to which it adapts itself; but a manual as small as this has not room for everything, and the writer of such a book must really be content to deal with one branch of his subject. The space which he greatly needs for the development of the comparison between one and another form of ornament existing contemporaneously or nearly akin, is taken up by an account too cursory to be of any value, with small and inadequate illustrations of architectural masses and plans of important buildings. When, for Byzantine art, one page only can be given to the text and another to an illustrative plate, it seems unwise to use one-quarter of the text-page for plans of S. Sophia and S. Mark of Venice. Granted that Byzantine ornamentation can never be thoroughly understood unless the way in which it is applied to the vaults and pillars of those two churches is also perfectly understood, it remains true that two pages will not suffice to give a thorough understanding of it, and that the ornamentation, taken by itself, is all that should have been attempted.

We are driven, therefore, to accept the book as an interesting scrap-book of examples not badly drawn, presented in a way not ill calculated to explain their significance, and accompanied by a text sufficiently intelligent to make the little pictures more useful. There is one fault, however, common to such handbooks, from which this one cannot be said to escape—the very brevity of treatment has caused a positiveness of statement which is continually misleading.

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