in architecture and manufactures, of American progress. He writes with enthusiasm and sympathy, aiming to encourage what is good rather than to contemn what is bad. He has apparently in view as his readers the managers of public education, and he strives to incite them by the description of what has been accomplished, and by gently persuasive illustrations, to 'lend a hand' in the new educational movement. His purpose is deserving of the highest commendation; and the facts and figures which he has brought together, with a vast amount of painstaking, will prove to be a store of arguments and examples to be drawn upon by innumerable commissioners, superintendents, and directors of education in schools of every grade, from the kindergarten to the university.

TRIUMPHANT DEMOCRACY.

MR. ANDREW CARNEGIE is well known as a shrewd and successful business man, a capitalist of great wealth, a traveller of experience, and an American citizen of public spirit. He is an excellent type of a class more numerous and more influential in America than in any other country of the world: he is eminently a practical man. There is a wide-spread impression that the practical man is not only more competent to carry on affairs, but that he has a great advantage over the theorist, buried in his books and unacquainted with human nature, in the theorist's own walks in life; that he can, if he tries, run a better newspaper, secure better legislation, and write a better book. When the practical man, therefore, enters the field of literature, and discusses important public questions, much is expected of him: his knowledge of affairs should give him a broader point of view; his observation should be keener; his information should be more exact and more complete; he should have a better grasp of the principles which have grown to be axiomatic, a greater power of combining facts and principles into general statements; his views should be more vigorous and more lucid than those of the ordinary writer.

Judged by this high standard, it must be frankly confessed that 'Triumphant democracy' is not successful. The author's point of view is sufficiently set forth in the dedication, the keynote of the whole work: "To the BELOVED REPUBLIC under whose equal laws I am made the peer of any man, although denied political equality by my native land, I dedicate this book with an intensity of gratitude and admiration which the native-born citizen can neither feel nor understand." To make the native-born citizen appreciate the full measure of his birthright, and to teach the foreigner the blessings of the American system, the first requisite is accuracy of statement. If grave errors of observation and of statement of fact are found, the effect of the book is marred, if not wholly taken away. What will the native prohibitionist think of the statement that 'drunkenness is quite rare' among American workmen (p. 125)? What will the Norwegian say to the assertion that 'the lumber-trade is an industry peculiarly American' (p. 219)? How will the man who remembers the Mexican war accept the glorification of "the American people [who] have never taken up the sword except in self-defence or in defence of their institutions" (p. 265)? Can the author ever have been in Germany without knowing that the United States is not "the country containing the smallest proportion of illiterates" (p. 489)? Does any man who thoughtfully considers the present state of public feeling in France believe that 'the reign of the masses is the road to universal peace' (p. 102)? Is the practical man satisfied that "the theatres and opera-houses of the principal cities in America are, of course, much superior to those in Europe because they were built more recently" (p. 336)? The passages just quoted are fair examples of recurring errors, mistakes, incomplete statements, and hasty generalizations.

The idea of the book — to put into readable, entertaining form the causes of the marvellous growth of America — the idea is not a bad one: the execution is totally inadequate, and inadequate for a very simple reason. Mr. Carnegie has been too busy in doing other things to give the necessary time for reading and reflection: his knowledge is insufficient. That the United States is triumphant we all know: that the triumph is wholly or largely due to democracy may or may not be true; but Mr. Carnegie has not proved it: if it is ever to be proved, it must be by the despised theorists, who are willing to spend a lifetime in grovelling after the dry details of the history of many nations.

A. B. HART.

Triumphant democracy; or, Fifty years' march of the republic. By ANDREW CARNEGIE. New York, *Scribner*, 1886. 8°.

PRESTWICH'S GEOLOGY.

THE reputation of Professor Prestwich as a geologist lends an especial interest to the appearance of a general treatise from his hands, embodying the facts and theories that his long experience has led him to regard of the greatest value to the student. The first volume of the work, lately issued by the Clarendon press, treats of subjects chemical and physical. The second volume, not

Geology, chemical, physical, and stratigraphical. By JOSEPH PRESTWICH. Vol. i. Oxford, *Clarendon pr.*, 1886. 8°.

yet published, will include chapters on stratigraphy and paleontology, and a discussion of theoretical questions connected with historical geology and the evolutions of the earth. This will therefore probably be the more entertaining of the two; but the book now before us is attractively written and makes easier reading than most geological manuals. Its style is between the extreme condensation of the encyclopedic text-books, and the more literary form of Lyell's 'Principles.' Except in the chapters that are necessarily occupied with simple definition and tabulation, there is a satisfactory amount of argument and discussion, and a careful presentation of both sides of a question; so that the learner's attention is held to the facts long enough to allow him to acquire them familiarly, and to perceive that their proper understanding requires a higher mental process than mere memorizing. The work is further intentionally a statement of the evolutionary rather than of the uniformitarian view of geology, which Lyell's leadership so long in England placed too prominently before many students: there was under Lyell's teaching no room between uniformitarianism and catastrophism for the safer middle ground which Prestwich clearly states, and which is now certainly the dominant view held by working geologists. The change in the rate of denuding processes and of eruptive action from ancient to later geological times may be named in illustration of this. Under the latter subject, it is an additional satisfaction to see prominence given to the mechanical origin of eruptions, and only a subordinate importance attached to Scrope's theory of the action of steam and other gases; and to find definite statement of the metamorphism of eruptive as well as of sedimentary rocks. Indeed, it would be easy to name many more examples of treatment that must commend themselves to the American as well as to the English taste, while there are only two sections that are likely to excite any general dissent, — one on the origin of valleys, which attributes too much influence to fissures to find full acceptance, at least in this country; and another in which much importance is attached to Elie de Beaumont's extinct theory of parallel mountain-ranges, which is certainly given more space than students in this last quarter of the century should ask for it. The author's familiarity with the geology of this country has not been such as to prompt many quotations from our surveys, nor to change the triassic coloring of the copper-bearing rocks of Lake Superior on the reduced copy of Marcou's geological map of the world, which serves as a frontispiece; so that, as a book for class reference in our higher schools and colleges, this work will hardly gain the reputation of Geikie's text-book: but, if the excellent fashion of placing different books in the hands of every member of a class could be introduced, this one would certainly be one of the most popular.

W. M. D.

PORTER'S MECHANICS AND FAITH.

THIS work is one of those attempts, so common in our day, to 'reconcile science and religion.' The main thesis of the author, which he endeavors through many chapters to prove, is this; that all truth, physical and spiritual, is made known to us by 'revelation,' and could never become known to us by any other means. Thus, he says that in mechanical science, "man, in his conscious ignorance, and with a sense of entire dependence, makes his appeal immediately to the Infinite Source of truth; that the methods of experiment and observation are the divinely appointed way in which this appeal is made and the revelation of physical truth is received" (p. 32). Having established this thesis, to his own satisfaction, he goes on to infer, that, since all other truth is given by revelation, we should naturally expect that religious truth, the most important of all, would be given in the same way. Thus he thinks to establish the doctrine of revelation in the theological sense.

Now, in all this there is great confusion of thought, resulting from the use of the word 'revelation' in two quite different senses. The 'revelation' which the author speaks of in physical science is nothing but the presentation of objects to our senses, and this is not a revelation of truth at all. Truth is not a property of objects, but of thoughts; and all our thoughts, whether true or false, are the product of our own mental activity. It is absurd, therefore, to say that scientific truth is revealed to us from an external source. On the other hand, the sacred books of religion are held to contain religious truth itself in the form of propositions, and we have nothing to do but to receive and assimilate it. At best, therefore, there is nothing more than a poetic analogy between the two cases, and nothing whatever to base an argument on.

Mr. Porter's main doctrine being thus defective, it is unnecessary to criticise his book in detail; but we would call attention to the chapter on 'The revelation of God,' as an example of the author's method. He expressly says that God cannot be known by the intellect, but only by love — with much more to the same effect. It is not by such methods as these that science and religion can be harmonized.

Mechanics and faith: a study of spiritual truth in nature. By CHARLES TALBOT PORTER. New York, *Putnam*, 1886. 12°.