

series of sharply outlined and brilliant pictures, the most prominent and often the most unpleasant features of the great struggle out of which it is evident the white race must come victorious.

The regions with which the work is mainly concerned are the Pacific States, especially California, and also the States on the Gulf. In the West, especially, the fight is a regular *mêlée* between white men, red men, black men, and yellow men. Very striking indeed is Mr. Dixon's account of the means by which the Chinese are rapidly asserting for themselves a place of the first importance in and around San Francisco, notwithstanding the disgusting and degrading habits of the majority of them.

When the heat of the struggle is over, when the country is again sufficiently populated, and the people have settled down to a life of steady progress, what will be their characteristics, physical, intellectual, and moral? It is an interesting question, an intricate problem, which we fear it would be difficult to work out beforehand. In a recent number we referred to the valuable paper by Prof. Wilson, of Toronto, detailing his observations on the relations between the whites and the Indians, especially in Canada. His conclusion is, that in accounting for the disappearance of the American Indian, too much prominence has been given to extermination and too little to absorption. He produces data to show that a very considerable amount of red blood has been absorbed by the white intruders, and that aboriginal traces are to be found widespread among all classes of society. Moreover, that it is difficult to find a pure Indian, and that the half-breeds who now mainly represent the old proprietors of the soil have excellent stuff in them, and are being constrained gradually to settle down to a civilised life. The conclusion is, that in the end a homogeneous race will result, having no doubt large white characteristics, but at the same time showing unmistakable marks of a red ancestry.

Where one race intrudes itself forcibly into a country already populated, and has to fight its way to find a place for itself, this mixture is inevitable; the men who do this rough work cannot as a rule take their own women with them. Some of the most impressive pictures in Mr. Dixon's work are connected with this subject, and show how inevitable it is that under the circumstances alluded to, a large half-breed population must arise. We are sorry to see, however, that Mr. Dixon does not speak so well of the half-breeds as Prof. Wilson does, though this may arise from the fact that those of Canada have as a rule more white blood than red in their veins. In the end, which approaches with accelerating speed, when homogeneity is attained, the United States will be populated by a race of very mixed blood indeed, though it is evident to everyone but a pessimist, that the brain and sinew and muscle which dominate in the Old World will, both in quality and quantity, in intension and extension, to use logical terms, bear the sway on the other side of the water. The great stumbling-block in this, as in other respects, in America, is the Negro, the "culler gemm'n," as he now calls himself. Extermination does not appear likely to be his fate, and "absorption" in his case seems a mighty long way off.

Two of the most interesting chapters in Mr. Dixon's works refer to education in America, and will somewhat

surprise those who fancy that America has a system of education as thorough and uncompromising as that of Germany. While Mr. Dixon has evidently presented here almost exclusively the dark side of the education question in America, there is no withstanding his statistics. Still, all things considered, especially looking at the heterogeneous population, ever largely increasing from the outside, with which American educationists have to deal, both the extent and the quality of education in the United States do the citizens infinite credit.

While, we repeat, Mr. Dixon's work makes no pretensions to be scientific, still we are grateful to him for bringing before us so brilliant and attractive a series of pictures of a struggle which is indeed only the continuation, further westwards, of that which was begun far back in prehistoric times by the ancestors of those whites who at present seem likely to be victors and lords all the world over. We fear that after all, however much we may plume ourselves on our superior culture and advanced civilisation, might is still with us, as with our predecessors, right; and perhaps after all, both on scientific and humanitarian grounds, it is only right that it should be so.

OUR BOOK SHELF

Elementary Analytical Geometry. By the Rev. T. G. Vyvyan. (London: George Bell and Sons, 1875.)
Conic Sections treated Geometrically. By W. H. Besant, F.R.S. (Same publishers.)

THERE is little calling for special notice in Mr. Vyvyan's work. The fact of its having reached a third edition is a clear indication that it has met with acceptance. New chapters have been added on focal properties of conics and on abridged notation and trilinear co-ordinates; the central conics are discussed together; and the chapter on the general equation has been enlarged. There is a good selection of exercises. The work is reduced in price, and now forms one of the publishers' series of Cambridge School and College Text Books.

The new matter in this second edition of Mr. Besant's "Conics" is confined to little more than two articles. The errata of the first edition have been carefully removed, and we have detected only some half-dozen simple typographical mistakes. Between thirty and forty new examples have been added. We notice that in consequence of a few slight alterations, in some four or five cases, the same figures come on to opposite pages, a fact easily accounted for when we know that the work is now in its second edition.

We presume that though Mr. Besant in his Introduction still states that "a knowledge of Euclid's Geometry is all that is necessary," he does not thereby mean us to infer that a like knowledge of geometry obtained from other and more modern text-books would not answer as well. It is not necessary to say anything in praise of a work so well known and prized as this as a text-book of Geometrical Conics.

Die Periodischen Bewegungen der Blattorgane. Von Dr. W. Pfeffer, A.O. Professor in Bonn. Mit 4 lithographirten Tafeln und 9 Holzschnitten. (Leipzig: Verlag von Wilhelm Engelmann, 1875. 8vo., 176 pp.) (The Periodic Movements of Leaf-organs. By Dr. W. Pfeffer, Extraordinary Professor in Bonn. With 4 lithographed plates and 9 woodcuts. Leipzig: W. Engelmann.)

THE essential character of periodic movements as defined by Pfeffer is their being recurrent. All "repeated" movements, whatever their cause and mechanism may be, are periodic. Recurrent or periodic movements are of diffe-