bottled up in air tight jars. The idea that these so-called "self-made men" are intrinsically superior to men who have been educated at universities, arises from a false conception of what education really is. It arises from supposing that education consists in having a knowledge of a great many particular facts, and that the man who acquires a knowledge of these facts by himself is naturally superior to the man who gets his training at a university. Our experience with "self-made men" is, that they are, unexceptionally, men who are not made very far. They are men who have never really wakened up to a consciousness of their own limitations. The very fact that men of this character are at the head of our educational system, shows that we as a people, have not yet reached a very high stage of intellectual development. Our educational affairs will never thrive, as they should, until they are managed, not by politicians, but by men of practical knowledge and experience.

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## ELEMENTARY SYNTHETIC GEOMETRY.

A difficult subject treated in a new and interesting manner, by N. F. Dupuis, M. A., F. R. S. C., professor of Pure Mathematics in the University of Queen's College, Kingston, Canada. London, McMillan & Co. ; Kingston, John Henderson & Co.

THIS is not an edition of "Euclid's Elements." It is a work on Geometry. In a neat little book of 290 pages the author has thoroughly developed the substance of Euclid's Elements, books I-VI, with many important extensions, generalizations and applications of the principles enunciated by Euclid. In addition he has treated synthetically many geometric propositions usually treated by modern methods of analysis.

The book is divided into five parts. Parts I-III treat of the substance of Euclid's Elements books I-VI, while parts IV-V are devoted to Modern Synthetic Geometry. The method of treatment, especially in the earlier parts of the work, is unique. Starting with a point and combining with it the idea of motion the author obtains the conception of a line as a locus and a straight line as direction. Adding to the line the idea of rotation, the conception of an angle is developed. Assuming space to be homogeneous, all general spacial relations are continuous. Applying the principle of continuity, many of Euclid's general propositions are found to be but particular cases of a much more general proposition. In many cases, also, the order of development is reversed. In all cases the author has sought the most general form of the truth enunciated, and has, where possible, grouped subordinate propositions as deductions under these most general forms. A valuable feature of the book is the Geometric interpretation of Algebraic forms, which affords an easy introduction to Cartesian Geometry and invests both Algebra and Geometry with new interest for beginners. The principles of *limits*, of *symmetry* and of *continuity*, judiciously applied in the first three parts of the book, are freely used in the two later parts devoted to Modern Synthetic Geometry, and, thus, many propositions are freed from the limitations of a less scientific treatment.

The general make up of the book is good. The type, though small, is clear. The *diagrams* are elegant and the lettering distinct. The subject is treated in sections and paragraphs neatly spaced and numbered for convenient reference, while all references are duly noted. The free use of symbols has enabled the author to comprise a vast amount of matter in a small compass, which must prove of great service to students in an age when so much depends on economizing time and energy.

Written by a mathematician for mathematicians, by a practical teacher of wide and varied experience for the benefit of students, we feel assured this book needs but to be read to be appreciated. Geometry, we think, has long since out-grown its Euclidean garb. Why should it be any longer trammelled by the antiquated logic of its first master? We think Professor Dupuis has by his practical yet elegantly scientific treatment of this subject, made a valuable contribution to the literature of Mathematics and rendered students and teachers of Canada, especially, a service they will not be slow to appreciate.

# LITERATURE.

## THE RED CROSS FLAG.

(John Napaier, in The Moravian.)

"When the smoke of the cannon cleared away, we saw the Red Cross flying over the hospital."

THE shot sped out from our serried ships,
Like the sob of a strong man crying ;
The sun was veiled as with sudden eclipse,
When the shot sped out from our serried ships,
And England's flag fly was flying.

Up from the shore the answer came,
The cry of the wounded and dying ;
A burst of thunder, a flash of flame—
Up from the shore the answer came,
Where the Prophet's flag was flying.

So we dealt destruction the livelong day,
In war's wild pastime vying ;
Through the smoke and thunder and dashing spray,
We dealt destruction the livelong day,
And the hostile flags were flying.

But far through the rolling battle-smoke—
Ah God ! 'mid the groans and the crying—
A sudden gleam on our vision broke ;
Afar through the rolling battle-smoke
The Red Cross flag was flying.