tenstein, who wrote in vol. vi. of the Linnean *Transactions*, about a century ago, that before he knew Fabricius personally, he thought the latter had been disrespectful to Linné and his other predecessors because he wrote that very little was known of entomology at that time, and that the study, especially as compared with botany, was still quite in its infancy.

Our own conception of present and future progress is doubtless equally imperfect, and it has been well said that no race of mankind is permitted to anticipate the prerogatives of its successors. To our grandfathers and great-grandfathers the very idea of carriages going without horses seemed ridiculous, and the mere suggestion of the wonderful discoveries of the last half-century would have been regarded a hundred years ago as the ravings of a lunatic.

A New Geometry for Junior Forms. By S. Barnard, M.A., and J. M. Child, B.A. Pp. vii+306. (London: Macmillan and Co., Ltd., 1904.) Price 2*s.* 6*d.*

THIS work is a selection from the larger work of Messrs. Barnard and Child published a few months ago. It is, of course, on the modern lines of teaching now almost universally adopted in England. There is no necessity for entering into a detailed account of the contents of the book, for the order and method of treatment are the same as those of the larger volume, which has already been highly commended in these columns. The work is simple, very thorough, and in every way suited to the requirements of junior students.

Although employing instruments and devoting much space to "practical" work at the outset, the authors never lose sight of the fundamental fact that *geometry is a science of strict logic.* Even those reformers of geometrical teaching who have done most to break with the difficult and stilted formalism of Euclid are sometimes alarmed by the methods adopted by the expounders of "practical mathematics"—methods entirely reprehensible because of their ignoring the logical foundations of science. The fact is that the teaching of modern improvements should be in the hands of skilled experts who have a commanding knowledge of scientific methods and results, and who are able to simplify matters for the student without sacrificing any portion of logical reasoning. We must take care that mere manual work, mechanical processes, and slipshod reasoning do not undermine the principles of accurate thought either in pure or in applied mathematics. So far, the works on geometry which give expression to the principles of the British and Mathematical Associations are beyond suspicion. The danger—though by no means absent from pure mathematics—is certainly greatest in physics and applied mathematics.

Fragments from Continental Journeyings. By A. R. Sennett. Pp. vi+516. (London: Whittaker and Co., 1903.) Price 4*s.* 6*d.* net.

WE have all done it; R. L. Stevenson with a prose fancy that would elevate road-metal itself to a place among the humanities; Henry James with a just delicacy, that seems to add a decorative touch to the familiar châteaux and the well-worn ways; the rest of us, in this latter time, at a long distance and in various measure, yet drawn irresistibly into print. And now Mr. (or Miss?) A. R. Sennett is moved also to attempt to give to others some of the abiding pleasure experienced on the open road.

We have doubts as to the writer's sex, mainly on account of the references to female costume at Monte Carlo; the male author, moreover, is usually more circumspect in revealing his ignorance of foreign languages. This little book is crowded with inaccuracies in French and German, in fact, even the single words printed in italics are frequently incorrect. Names, which can be found on the maps in the library of the Automobile Club, are also occasionally misspelt. Hence we can hardly treat the work as a contribution to geography. The ground covered is that dealt with by the post-chaise travellers of the early nineteenth century, when the close of the great wars again allowed of observation. The frontispiece of Grindelwald and the Wetterhorn gives sufficient clue to the scope of the book as a record of continental journeyings. We have no right in this place to deal with it from a literary point of view; nor do we think that the author would welcome the remarks which we reserve. G. A. J. C.

Recueil d'Expériences élémentaires de Physique. First part. By Henri Abraham. Pp. xii+247. (Paris: Gauthier-Villars, 1904.) Price 5 francs.

THIS volume of less than three hundred pages has been produced with the collaboration of 154 physicists from all parts of the world!

The book is the outcome of a request made primarily to the members of the French Physical Society by its secretary, with the authority of its council, that they should aid in the production of a volume describing elementary experiments in physics by forwarding an account of any special experiments forming part of their laboratory courses. M. Abraham is editing these, and this is the first part of the result—a second part is to follow.

The descriptions of the experiments are not accompanied by theory. The only incursion into the domain of theory has been to direct the reader's attention to the degree of precision possible in each measurement, and to the need or uselessness, as the case might be, of introducing corrections.

On the other hand, great attention has been paid to describing the arrangement of the experiments; for example, all necessary sizes are specified in order that they may be reproduced as easily as possible.

No attempt has been made to unify the style of the very various methods which the author selected from; on the contrary, the desire has been to present as great a variety as possible.

The first chapter consists of elementary instruction in workshop practice (including glass-blowing), and has an appendix containing many useful receipts. The second is on geometry and mechanics, the third is on hydrostatics, hydrodynamics and capillarity; the fourth chapter deals with heat.

The experiments described are, in the majority of cases, of a very simple character, less suitable for colleges than for schools, where they should be very welcome. Many of them, indeed, are arranged as they might be by an amateur at home, and the instructions are certainly simple enough for a lad with mechanical and experimental tastes to derive a large amount of useful pleasure in carrying them out with out the aid of a teacher.

Cassell's Popular Science. Edited by Alexander S. Galt. Volume ii. Pp. xii+556. (London: Cassell and Co., Ltd., 1904.)

THIS attractive volume, with its numerous excellent illustrations and its clear type, is calculated to create interest in the study of science. The editor has arranged matters in such a manner that most branches of natural knowledge are drawn upon to provide interesting reading. The first six articles, for example, deal with subjects belonging to physics, biology, astronomy and geology—and the reader's attention is certainly not kept upon one subject for too long at one time.